Airstream Link

for IOS

Revision 1.6

Contents

<u>Overview</u>

This manual describes all of the features of the Airstream Link app. You may want to consider downloading this manual into your IPad for easy reference while using the app.

Airstream Link is a lighting control app designed to work alongside the ADJ Link controller. The app and controller work together to make a complete lighting control system that's ideal for small to medium sized venues such as nightclubs, churches, trade shows or anywhere intelligent lighting fixtures might be used.

Both the app and console work together to control fixtures. The app can run by itself but DMX512 output can only come from the Link controller's four DMX512 connectors. The four 5-pin DMX connectors on the back of the Link console allow you to connect to any DMX512 lighting fixture from any manufacturer. Each connector is a separate DMX512 universe giving the system control of up to a total of 2048 DMX512 channels. The Link controller also provides a private dual band 2.4GHz or 5GHz Wi-Fi network to connect to your IPad wirelessly as well as a USB connector if you prefer a hardwired connection.

Lighting changes, effects, fades, etc. all come from the IPad and are sent to the Link controller either over Wi-Fi or USB. If connected using Wi-Fi the operator can use the IPad remotely and can move around the room as long as the IPad is in range of the Link controller's wireless network.

There is a slot on the top of the Link console to hold an IPad in landscape orientation. The viewing angle of the IPad can be adjusted by adjusting the angle of the slot. (Remove the IPad when adjusting the slot angle).

What's New

Version 1.6
> Add online fixture library of over 20,000 downloadable fixtures.
> Can now display channel slots for downloaded fixtures.
> Update and improve audio functions.
> Fix minor bugs.

Connecting to the Link Controller

The Link controller connects to your IPad using either its private Wi-Fi network or the USB connector on the back. When the Link controller is turned on, it will create a local Wi-Fi network that you can join using the Wi-Fi settings on your IPad. The network will show up on the list of available networks in the Wi-Fi section in your IPad's settings. The default network name is "ADJLink". The default password is "link1234". Select and join the network as you would join any other Wi-Fi network from your IPad. *It is highly recommended that you change the password before using it in public. The network can appear on any Wi-Fi device in the vicinity of your lighting system. As an added security feature only one device can connect to the network.*

If you prefer to use a hardwired connection between the IPad and Link you will need a USB cable adapter. There are several types that will work depending on the IPad model. For an IPad with lightning connector, figures A and B will work. Figure B, which is sometimes referred to as the Apple camera adapter also allows the IPad to connect to a charger at the same time. If you have an IPad Pro with USB C connector, you will need something like Figure C along with a standard USB printer style cable.

Fig. A   Fig. B   Fig. C

There are several advantages to using the wireless connection. Mobility is probably the most helpful as you will be able to carry the IPad to different parts of the room as needed when doing setups or when you want to control the lighting from somewhere other than where the console is located, as long as the IPad is within range of the console's network.

The Wi-Fi range between your IPad and the Link will vary depending on the environment but you should expect no more than 75 feet for a fast reliable connection indoors. Walls can shorten the range. The Link Wi-Fi is dual band and its network can run at 5GHz or at 2.4GHz. The band is selected manually from the

settings section in the app. 5GHz is the default band and is faster and usually less congested but 2.4GHz usually has longer range and is better at going through walls but is also typically more congested when other networks are in the area. The Link will try to find the least congested Wi-Fi channel for either band when it powers on. Consult the "Settings" chapter on how to select the Wi-Fi band.

The picture below shows the connectors on the back of the Link controller. From left to right are four 5-pin DMX512 outputs, one for each of four DMX512 universes. In the center is the dual band Wi-Fi antenna encased in the small plastic enclosure. To the right of the antenna is the USB connector and the DC power connector. On the far right is a Kensington slot and the power switch.

The Link comes with a regulated external power supply that is rated for 1A at 9VDC. Always use a power supply with the equivalent rating and connector size and polarity.

A flexible LED work light is included with the Link controller. It is attached to the top panel of the Link in the upper right where it's labeled "USB Light" as shown in the photo below. The light itself has a touch switch on the top with three brightness settings.

Link Controller Top Panel
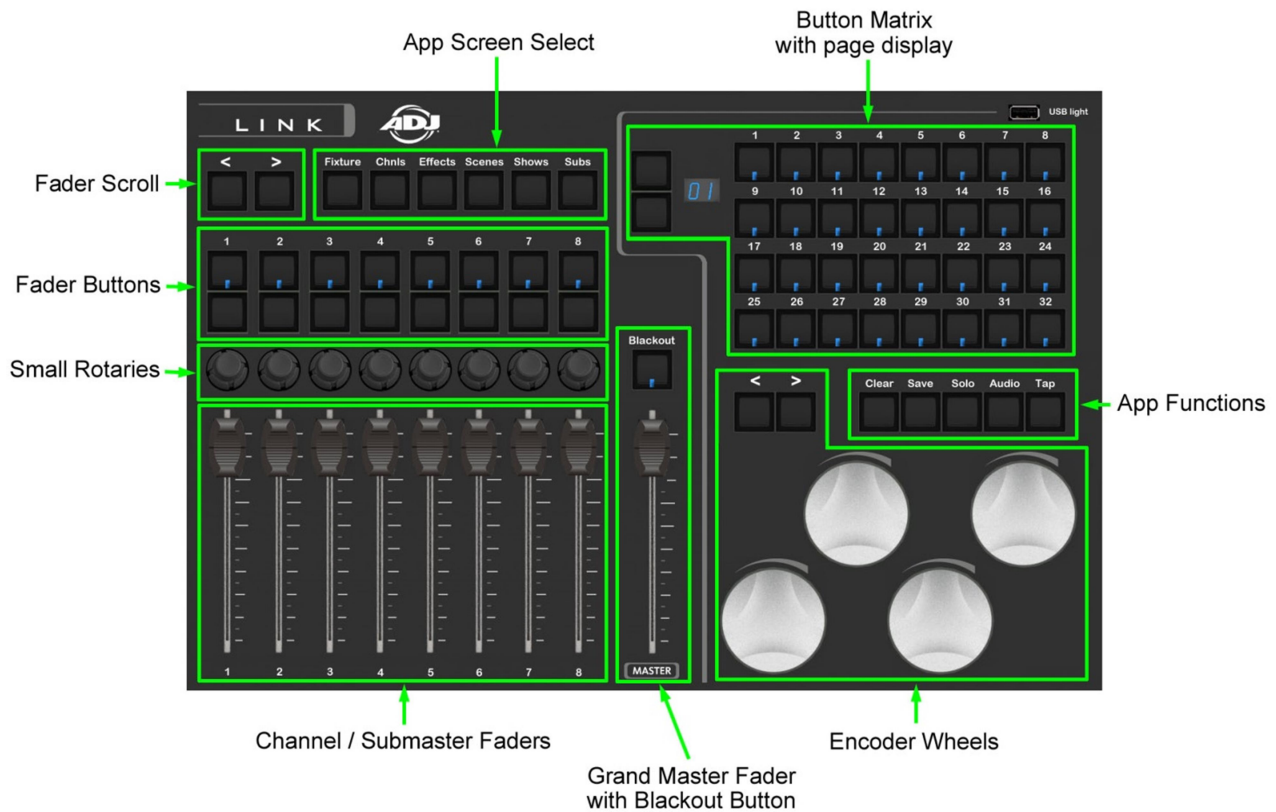
This illustration shows all of the control sections on the top panel of the Link controller. When connected to the Link app each section can control various functions running in the app depending on the current view that is displayed in the app. Some controls are universal across the app and will always work the same no matter which view is currently displayed. This includes the screen select buttons, the grand master, blackout and app function buttons.

Typically controls like the button matrix, faders and wheels will be matched to the current view that is displayed in the app. Any app view that shows a button matrix, for example the fixture select view, will use the button matrix along with the page controls and the LEDs inside each matrix button. The fader section along with the controls directly above will work along with the channel and sub master views in the app.

App Navigation

The app uses a tab bar at the bottom of the screen that's always visible.

Tab Bar

The tabs divide the app into five major sections of workflow. You can move from tab to tab from anywhere within the app by touching a tab icon at the bottom of your screen or by pressing one of the six screen selection buttons on the Link.
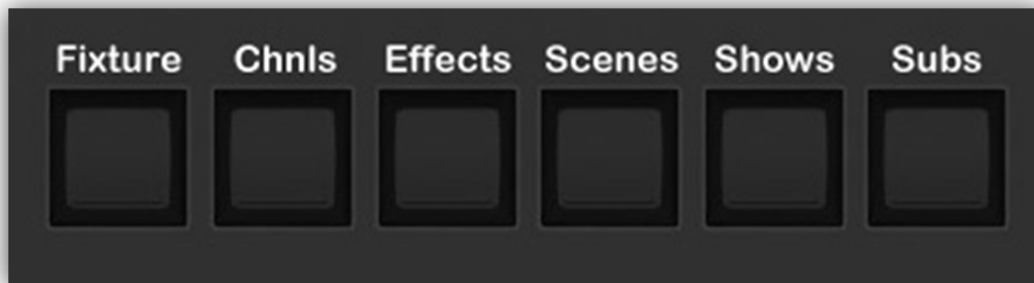
There is one additional screen button on the Link that is not included in the tab bar. The "Subs" button will take you directly to the sub masters view in the app. The sub masters view is an alternate view that's accessible from the scenes view.

From within each view, you can navigate to various sub views by tapping the pull-down menu button in the upper left of the view and then tapping one of the menu items shown.

This illustration shows the menu list that appears when you tap the pull-down menu button from the fixtures view.
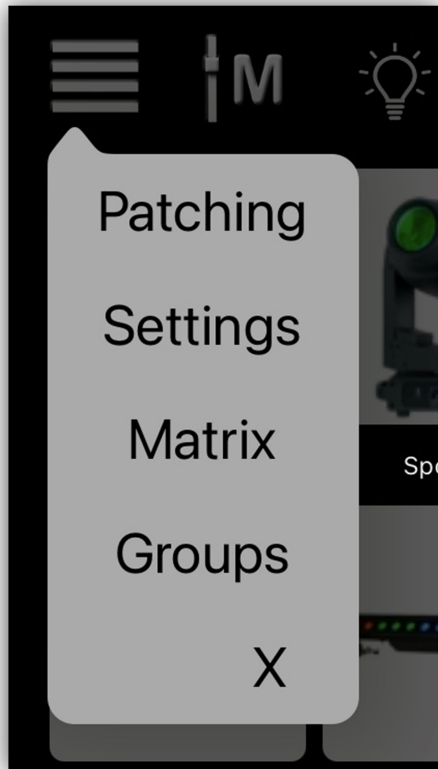
As an alternative way to access the drop-down menus, you can also press down on wheel 1 and then turn the wheel to select the menu item. Press down on the wheel again to go to the selected view.

Fixtures View

The fixtures view is where you select fixtures for programming and where you can configure your fixture layout. The first view you will see is a field of 32 fixture selection buttons. If you are running the app for the first time, your field will be filled with empty buttons. These buttons will correspond with the 32 button matrix on the Link controller.

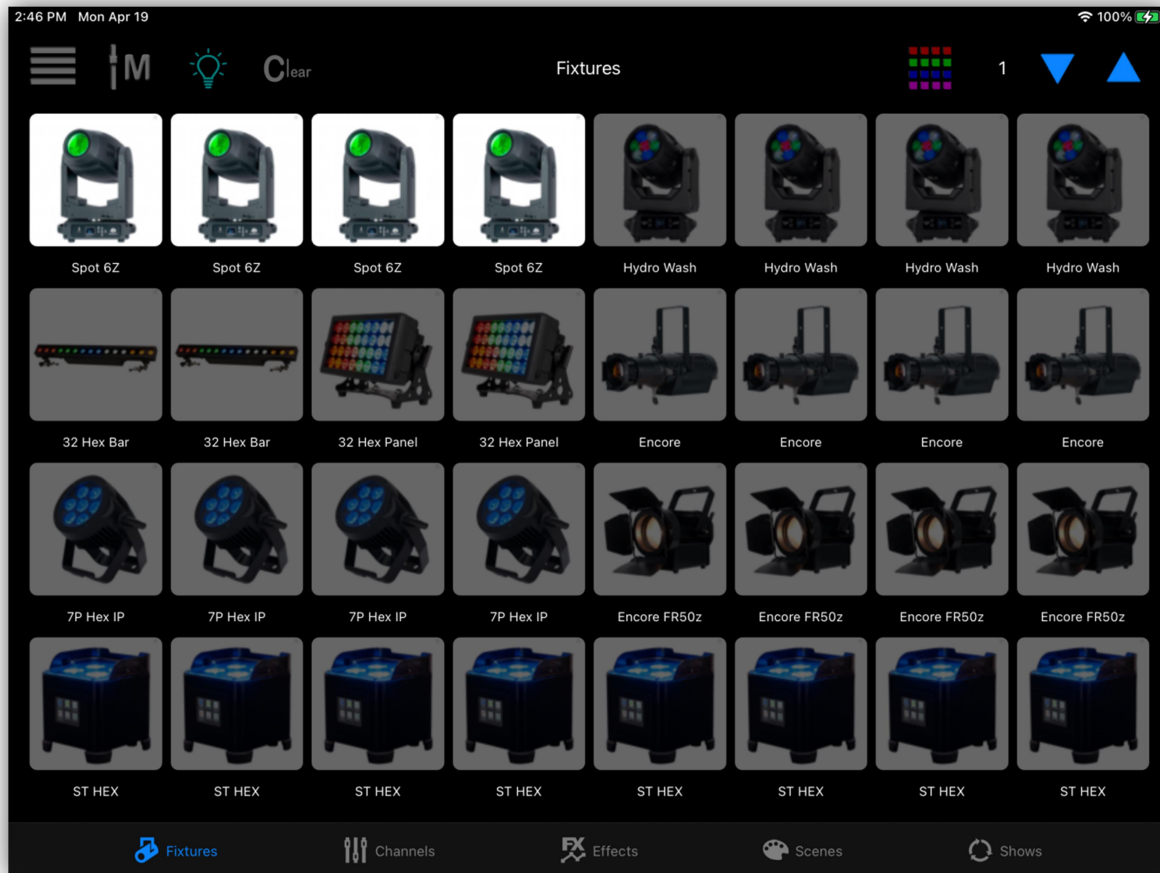You will notice in this example that the first four fixtures in the top row of buttons are highlighted while the other rows are dimmed. The corresponding LEDs on the Link controller will also be lit. This indicates that these fixtures have been selected for programming. Fixture selection is used for setting the fixture channels as well as programming some of the effects. Tap the fixture buttons to select or unselect using either the screen or the buttons on the Link. To select or unselect a group, first press and hold the first button of the group then press the last button of the group. All buttons in between will select or unselect depending on the state of the first button pressed. The order of selection is important for some of the effects that use a sequence of fixtures. Tap the "Clear" button at the top of the view or on the Link to unselect all fixtures on all pages.

Page Buttons

In the upper right of the view there are blue up and down arrow buttons for changing matrix pages as well as page buttons on the Link. You can have up to 24 pages with 32 fixture buttons per page plus one extra page reserved for fixture groups. Page 25 is used for groups. Tap one of the up or down buttons or tap and hold to auto repeat.

At Full Button

The "At Full" button will bring the dimmer, shutter and RGBW channels to full brightness for all selected fixtures. This button does not have a matching button on the Link controller.

Custom Page Names

You can enter your own custom page names for any of the button views including Fixtures, Effects, Scenes and Shows. For example, a custom name can replace the generic "Fixtures" title at the top of any fixtures page. The only exception is the "Groups" page as there is only one page.

To enter a custom name, tap the title at the top of the page and a popup text editor will appear as in the example below. The name you enter will be automatically saved when you exit the editor. To return the title to the default, delete all text from the editor and save.
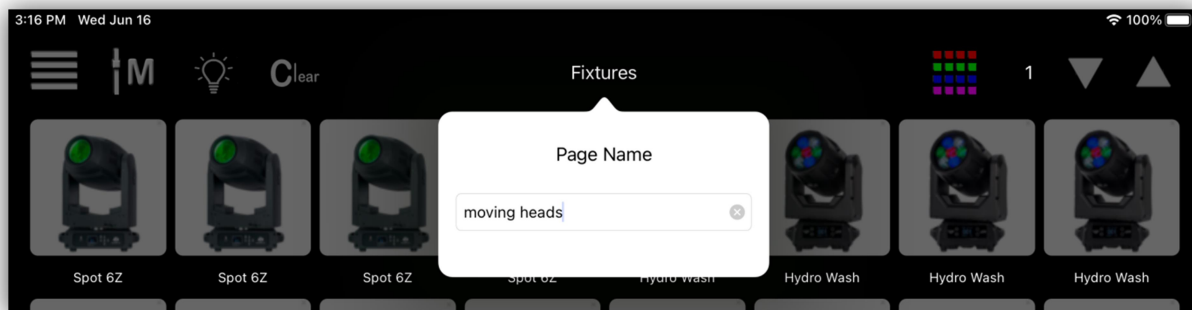
Patching Fixtures

Tap the menu button while in the fixtures view then tap "Patch" from the menu list. You will be presented with a large table of assignments for every fixture button. The fixtures are assigned from a library of lights that is included with the app, from a custom library that you can create using the built-in fixture profile editor or from a library of online fixtures that can be downloaded. DMX starting addresses and universe numbers are automatically assigned to each fixture after selection but you can manually set the address and universe as explained later. The following screenshot shows the patching view. Each row represents one of the fixture buttons on one of the fixture pages. The assigned address and universe are also shown. **Note:** The universe number corresponds to the connector number on the back of the Link controller.
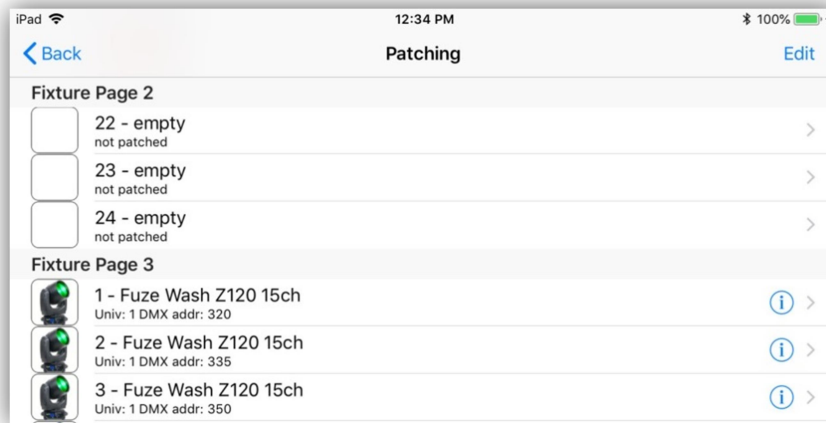
Tapping any one of the empty rows will show the fixture library as in the following example. You can also tap an occupied row to change the fixture selection that is there. Occupied rows will have a detail button (!) as shown above. Tap the detail button to edit that fixture's traits or DMX address and universe. See the following section regarding customizing a fixture for more details on the fixture editor.

The fixture library is divided into sections that can be expanded or collapsed by tapping the arrow to the left of each section title. At the top is a search bar where you can enter a name or partial name to get a filtered list of every fixture in the library that contains the search word.
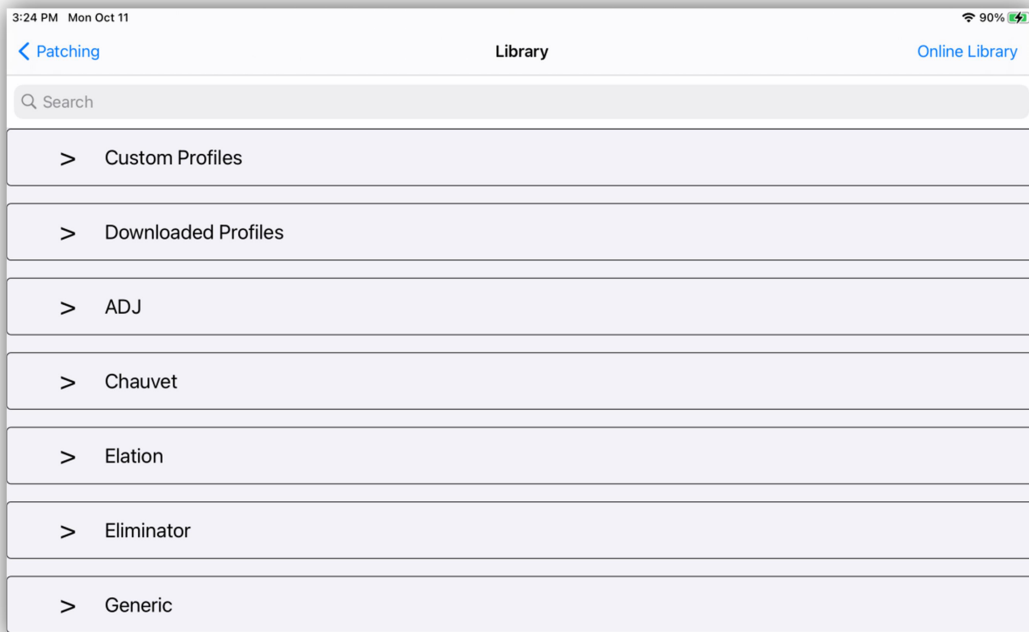
The following example shows the Custom Profiles section expanded. This section will be empty until you create and save some custom fixtures.

When you select a fixture from the library, the selected row will expand to show the quantity selector. Use the stepper button to select the desired number of fixtures to patch then tap the "Patch" button.
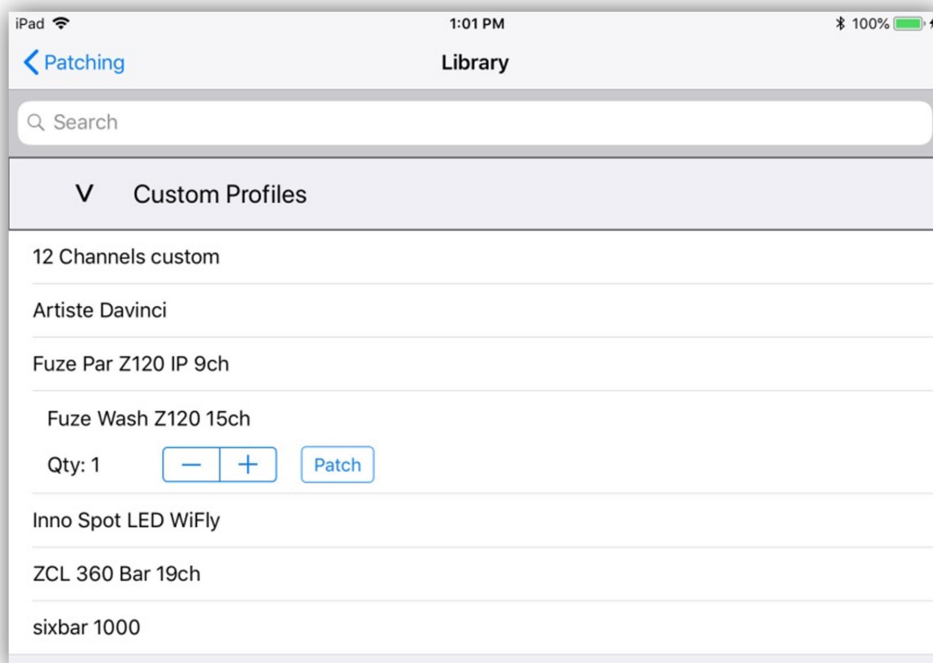
Fixture Identification

When a new fixture is patched it is assigned a unique ID number that it will keep until you remove or replace the fixture. A fixture ID is used by scenes to identify fixtures that are part of a scene. This ID also allows you to move fixtures around on the button field and change a fixture's DMX address without affecting the scenes or effects that use that fixture.

Important Note: If you remove a fixture or change it to a different type, any scenes that used that fixture button will no longer be able to find or control that fixture. The scene will still work for any remaining fixtures that were used. It is possible though to allow replacement fixtures to continue to use an existing fixture ID as explained in the next section.

Replace Existing Fixture

When patching new fixtures in a location that's already occupied by existing fixtures, you will be prompted to keep or replace the fixture ID that was at that location. If the replacement fixture is the same type or very similar, keeping the ID will allow the new fixture to continue working with older existing scenes and effects whenever possible. This can be useful when updating an existing fixture profile to newer version. If reusing older scenes or effects with the new fixture is not needed, use a new ID number. This will prevent older scenes from unintentionally using the new fixture.
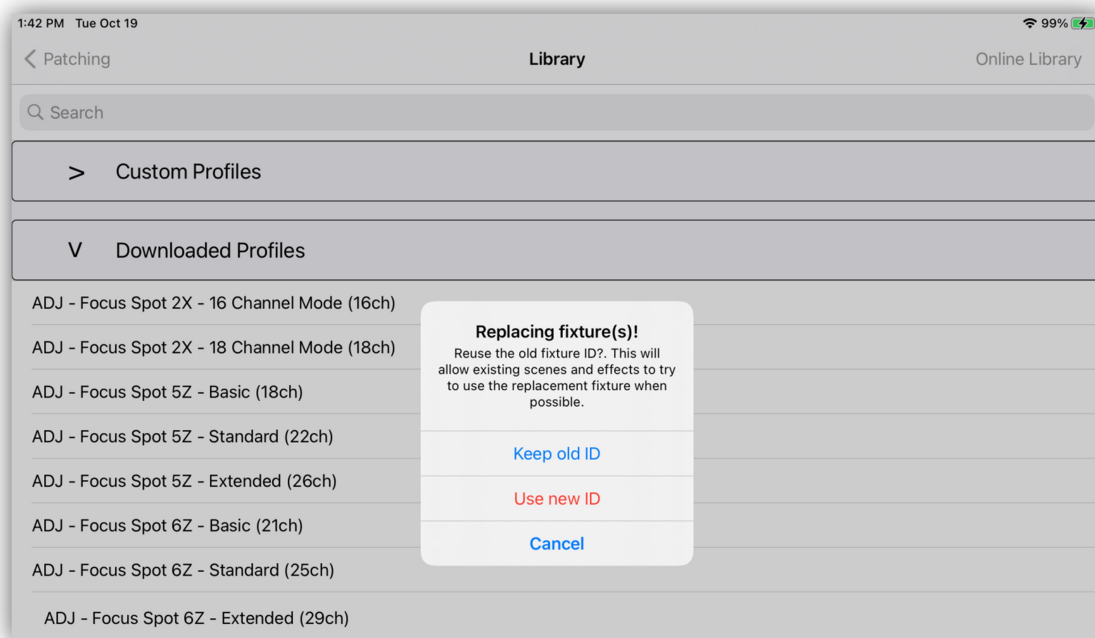
Fixture Not In Library

If your fixture is not in the included library you now have several options. You can search an online library of over 12,000 lighting fixtures or you can make the fixture profile yourself by using the editor.

Online Library

To access the online library tap the "Online Library" button in the upper right of the Library view. **Important Note:** You must be connected to the internet to access the library. If your Wi-Fi is connected to the Link controller you will first need to go to your IPad settings and change the connection to one that has internet access. This feature also requires IOS 14.5 or higher.

A view similar to the one in the example below will appear. This is a web page that manages your access to the library. There is a search bar at the top where you can enter the name or partial name of your fixture to view a list of fixtures in the library that match the search word. In this example the word "Focus" was entered to get a list of every fixture name that contains the word "Focus". Depending on the search word, the list can be quite long. The page can show up to 20 fixtures at a time. Scroll to the bottom of the page to select the next page.
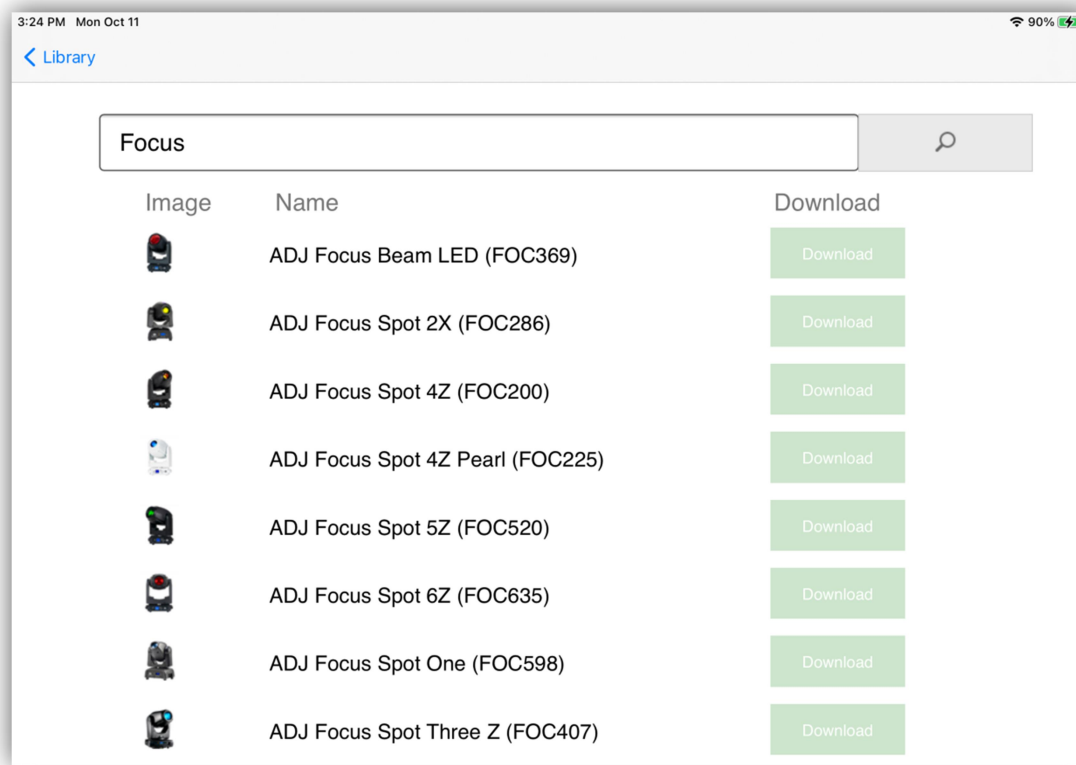
After you find your fixture in the list tap the "Download" button next to the fixture and it will be copied along with an image file to your downloaded profiles folder where it will be available for patching from the Library view. Note that not all fixtures in the library will have an accompanying image for its button. In the example below you can see that the ADJ Focus Spot 2X, and Focus Spot 5Z have been downloaded. Each downloaded file includes all channel modes for the fixture as shown in the example below.
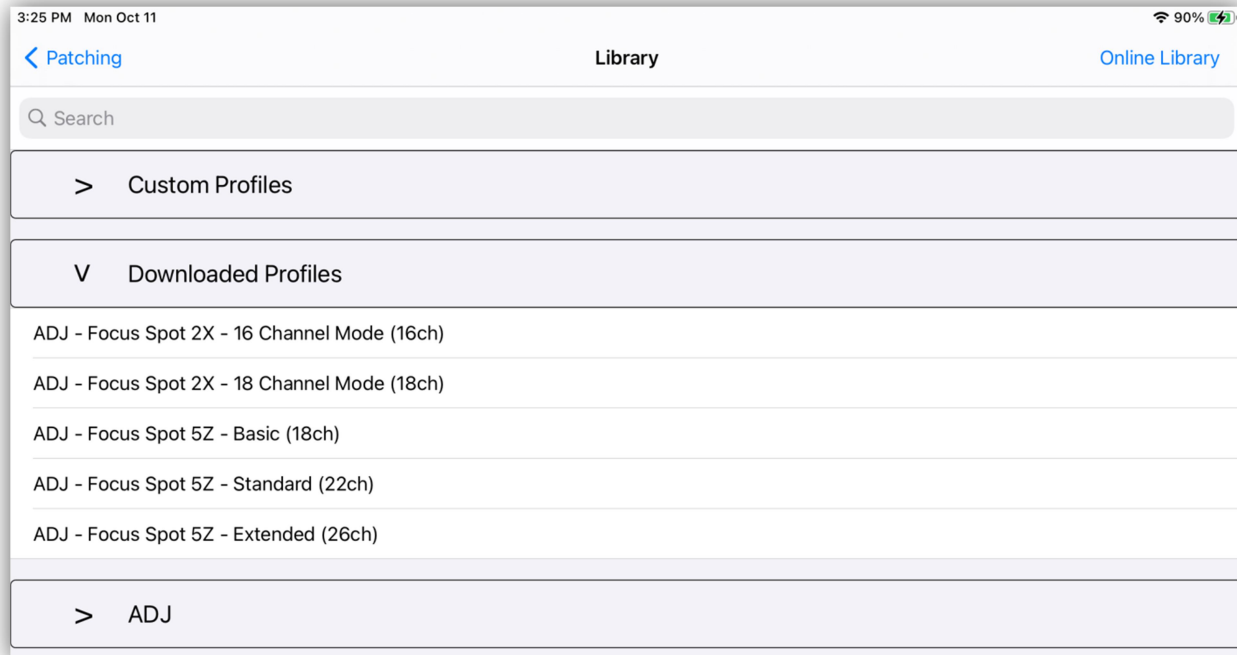
Downloaded profiles are more detailed than those in the internal library and contain detailed information for some channels that will be displayed as text in the channels view. For example color and gobo wheels will show the name of the wheel slot currently selected as well as special function settings for channels that are used to configure your fixture.

Making a Custom Profile

Start by assigning any fixture from the library to one of the buttons. Try to choose one that is similar to the one you plan to use. The "Generic" section contains some basic fixture types. Anything will work as you will be changing the number of channels and details for each of the channels.

Helpful hint: If you are going to customize a group of fixtures that will all be identical, first save a single custom profile as explained in the next section. Once you have created the fixture you will then be able to patch the whole group of fixtures by selecting the custom profile and quantity. Customization can include things as simple as adding a photo to be used for the button. Using a custom profile saves time by not having to repeat assigning the same photo to each fixture button.

Fixture Editor

Tap any detail button (!) in the patching list to show the fixture editor. From there you can customize the fixture, change the DMX address and universe and also save it as a custom fixture profile. The following is an example of a fixture taken from the ADJ library that was modified by adding a custom button image. Any fixture from the library can be modified to make it a custom fixture profile.

Important Note: You can modify the traits for each of your fixtures without saving it as a custom profile. Any changes you make to the fixture will be saved automatically for that individual fixture. Saving it as a custom profile is helpful only if you plan to reuse this customized fixture or want multiple copies of it in your patching list. Tap "Profile" in the upper right if you want to save it as a custom profile in your Custom Profiles library.

The following paragraphs describe the fixture traits that can be edited.

Fixture Name: When saving a custom profile, this will be the file name of your custom profile when you save it.

Button Image: Tapping this row will show the photo picker where you can choose a picture from your photo library to use as the fixture's button. Screen shots from the web page of your light usually look the best. As an alternative you can also use the camera on your IPad to take a picture of the fixture or its subject such as the area it is lighting.

Button Name: This will be the label that appears under the fixture's button. This lets you identify each button with its own name which can be helpful when there are many fixtures of the same type but each lights a different area. Keep the length short enough so that it fits neatly under the button.

DMX Start Address: This is the DMX starting address and universe number for the fixture. Addresses are assigned automatically in ascending order but you also have the option to override the assigned address. Touch "auto" and "override" will appear in red letters. Use the +/- stepper buttons to change the DMX address or the universe number. You can also tap the start address number to enter with a popup keypad. Be aware that when you manually change the start address of a fixture, surrounding fixtures that are set to "auto" will adjust their addresses to the overridden fixture(s). Also be aware that it is possible to accidently overlap overridden fixture channels by setting overridden start addresses too close to each other.

To return a fixture to auto patching, touch "override" and the address will return to "auto" mode.

To force auto patching to start using a new universe (DMX out) override the address for the first fixture in the new universe. This will force auto patch to begin a new universe starting at that fixture. Any subsequent fixtures will automatically follow and use the new universe number.

It's helpful sometimes to lock the DMX address assignment for a fixture by using "override", especially if you want to be able to move the location of the fixture's button in the order without changing its address. Simply press "override" so that

the address is displayed in red. This will prevent the address from automatically changing if the fixture button is moved for example to another page.

Pan and Tilt Home: For moving heads that have pan and tilt channels, you can set a home position so that the fixture will always return to that position when it is cleared. Use the +/- stepper buttons or tap the home number to set the home position. The fixture will respond if connected, allowing you to view the home position as you adjust it. This can also be set in the channel editor.

Number of Channels: This sets the total number of DMX512 channels used by the fixture. When you scroll down the fixture editor you will see listed every channel by name as in the example below. To edit an individual channel tap the channel's row to show the channel editor.

Channel Editor: When you tap a channel row, the channel editor will appear allowing you to edit a list of traits for that particular channel as shown in the next example.

Channel Name: This is the name that will be displayed above the channel fader and used to identify the channel for certain features and effects. Certain colors and also words like "Dimmer", "Pan", and "Tilt" are keywords used by the app. For example, the color picker looks for "Red", "Green" and "Blue" channel names. Letter case is ignored, for example "Red" is treated the same as "red" or "RED". The color picker will also accept "Red 1" as it accepts names starting with the word "Red". "Pan" and "Tilt" channels are used to identify channels for the pan/tilt controller and for the movement effects. "Dimmer" is used by the flash effects editor. Adding the word "Fine" to the end of a name will be used to pair channels in order to use 16 bit fades. For example "Pan" and "Pan Fine".

Fade Mode: This controls how a channel will behave during a crossfade when a scene is called. The choices are "8 bit fade" - a linear one channel crossfade to the new value, "snap before fade" - the channel jumps immediately to the new value at the start of the scene, "snap after fade" – the channel jumps to the new value at the end of the fade, "snap during fade" – the channel jumps to the new value at some point in the middle of the fade, (use the slider to select the snap point), "16 bit fade coarse" – this is the high or coarse channel, for example "Pan" when there is a "Pan Fine", "16 bit fade fine" – this is the low or fine channel, for example "Pan Fine". The last two modes will generate a 16 bit linear crossfade.

Note that the fine channel must use the same name as the coarse channel with the word "Fine" added.

Invert Channel Output: This will invert the channel's output. Use this to adjust things like pan and tilt to match your stage setup.

Scale Output by Master Fader: This will cause the channel to be scaled by the master fader and by the scene sub masters. This will normally only be used on the dimmer channel(s). In some cases where the fixture has no dimmer, e.g. RGB fixture, more than one channel can be set. **Note:** When a scene uses a fade out time, these "Master Fader" channels will be used to fade out the scene.

Home Level: This will be the default output value for the channel when it is inactive or cleared. This is useful for things like "shutter" where you would like it to be always open (set to 255) or if you have a mode channel like "dimming curves" and you want to always use the same curve without having to set the channel every time. Tap the number to show a keypad to enter a new level.

Edit the Fixture Button Order

While viewing the patching list, tap "Edit" in the upper right to rearrange or delete fixtures as shown below. Touch and drag the icons at the far right to move a fixture location. Use this method to drag buttons to other pages as needed. Tap "Done" when finished.
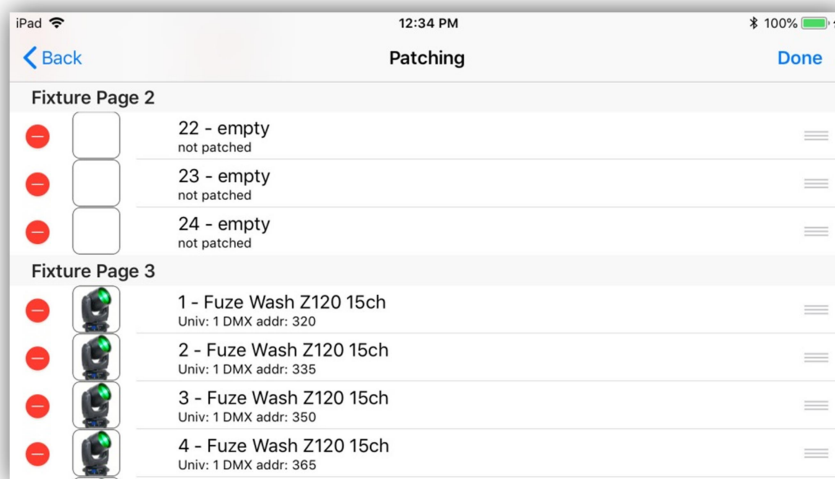
Important: If you rearrange the button order, any fixtures that use auto patch will adjust their DMX address to the new order. To avoid this, lock a fixture's DMX address and universe by setting the address to "override" as explained in one of the previous paragraphs.

Fixture Groups

In addition to 24 pages of fixture buttons an additional page is available for fixture groups. It is easily reached by stepping downwards from fixtures page 1. The example below shows a row of fixture groups (page 25).
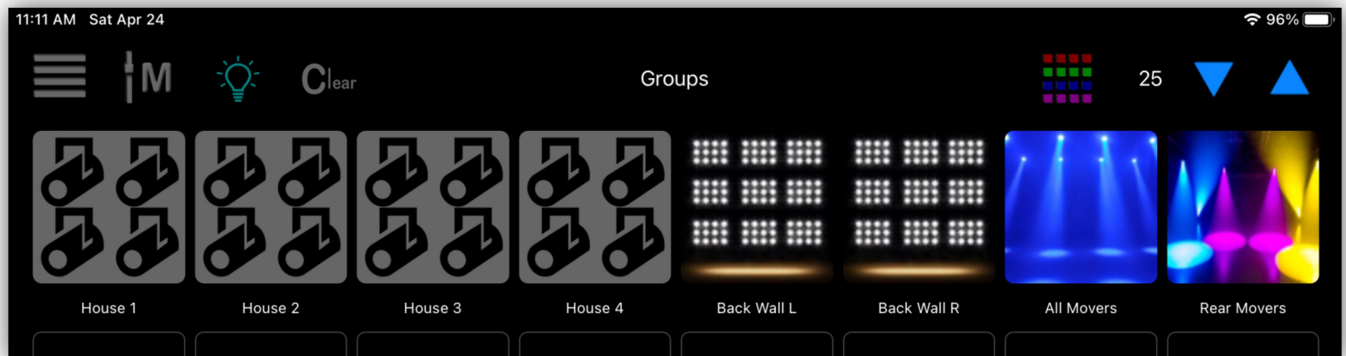
A group can be made from any combination of fixture buttons and will perform the same function as turning fixtures on or off as with their individual buttons.

Save Fixture Group

To save a new fixture group, first select the fixtures to include using the individual fixture buttons on pages 1-24. Use the dropdown menu from the fixtures view and select "Groups" to show the groups assignment list as in the example below.
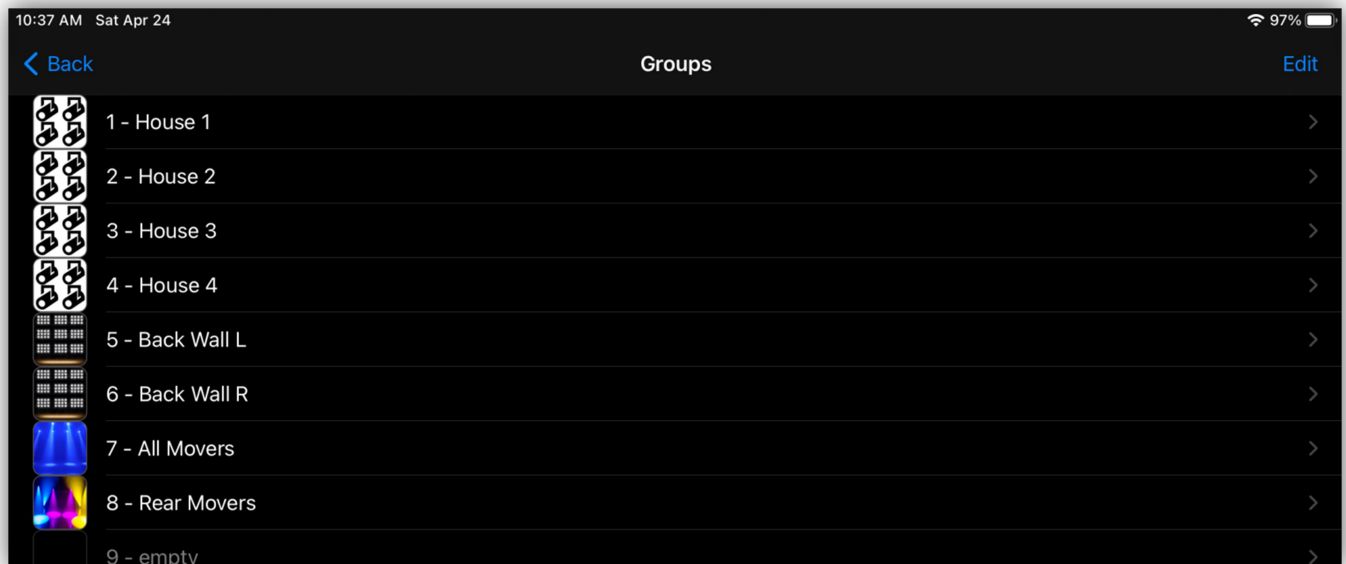
Tap the row in the list that corresponds to the button location you want to use.

The button editor will appear as in the example below.
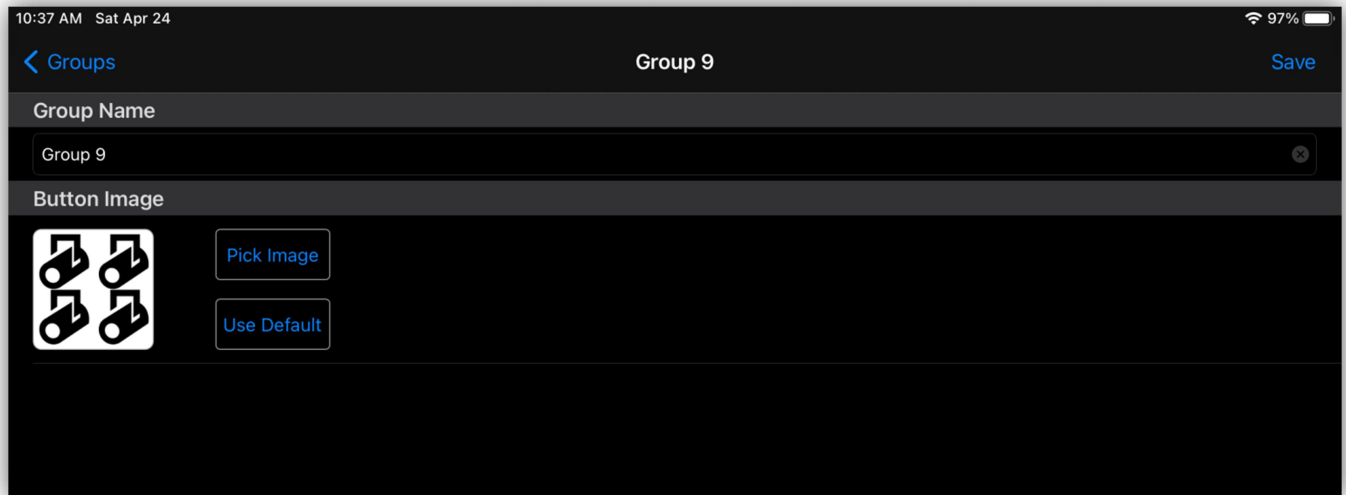
Tap and then enter a name for the button or use the default name provided. You can use the default group button image or select one from your photos. Tap the "Save" button in the upper right after you are through editing.

When you save a group it will always use the current fixture selection. You can choose any button location and will overwrite a previously saved group if you choose an occupied row.

Edit Button Order

From the button list tap "Edit" in the upper right to rearrange the button order or to delete a group using standard IOS list editing tools. You can also use the swipe method to delete a row.

Settings

Tap the pull-down menu button from the fixtures view then tap "Settings" and you will see a table of various global settings used to customize the app. Each setting is described in the following paragraphs.

Archive

Archives let you backup your memory in an archive folder. Things like fixture assignments, settings, scenes, effects and shows are backed up in the archive. All Archive folders are saved in a master folder named "Archives". Custom fixture profiles are not backed up in an archive as they are shared by all archives. Archiving is a way to back up the current setup you are using so that it can be reused again later. Once saved, the archives are accessible from the IOS folders app where they can be copied to a cloud service like ICloud or Dropbox. They are also accessible from Finder running on a mac when the IPad is connected. See the chapters on how to use the IOS files app and Finder for more details.
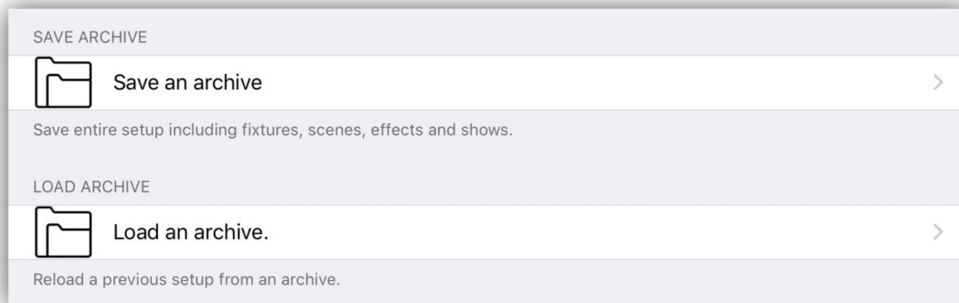
Tap "Save an archive" and you will be prompted to enter a name for the archive folder before saving.

Tap "Load an archive" and a list of previously saved archives will be presented that you can choose from. You will be prompted to allow the new archive to replace the current memory.

Program Lock

This will allow you to lock out all programming features of the app. When lock is turned on, only the Scenes, Shows and Unlock tabs will be visible and the menu pulldowns in the Scenes and Shows view will be turned off. From the Link controller you will only be able to call the Scenes, Subs and Shows views. This may be helpful and necessary in some instances where you would like to keep others from trying to change or edit anything you have previously programmed.

A four digit PIN is required to lock and unlock. Tap this row and you will be prompted to enter the 4 digit PIN. A warning will also appear after entering the pin to prevent accidental locking.

To unlock, touch the "unlock" tab at the bottom of the screen and enter the 4 digit PIN you used to lock the app.
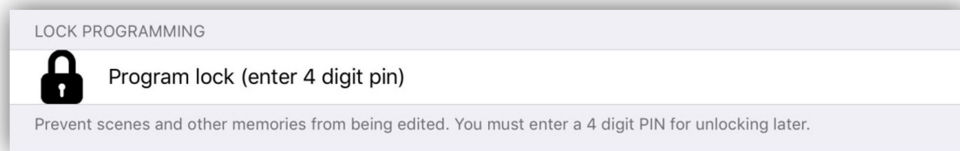
Note: This will not prevent someone from using the IOS Files App to delete files that are used in this app so protection is not 100% foolproof.

Erase All Memory
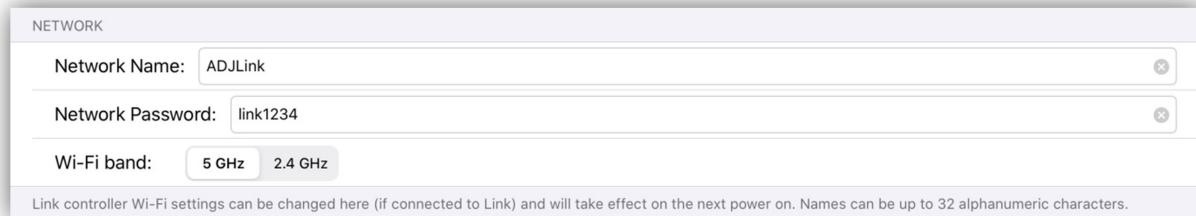
This will erase everything currently in use (fixture selection, settings, scenes, effects, shows) and will set everything to defaults. You will be prompted to type "yes" to confirm so as to prevent an accidental memory erase. You should save an archive of the current memory before erasing in case you ever need to use it again. Custom fixture profiles and archives are not erased as those are essential.
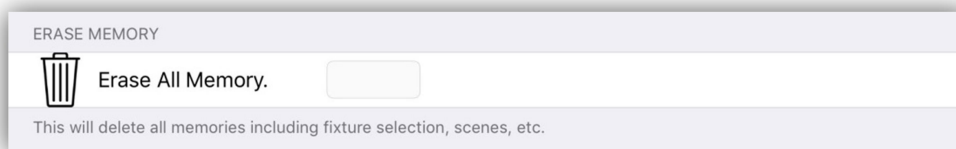
Network Settings

The Link controller's Wi-Fi settings can be changed here. The controller creates its own local network so that you can connect your IPad wirelessly. If the IPad is connected over USB, it will bypass any Wi-Fi connection.

Important Note: any changes made to the network settings will require the Link controller to be reset before they will take effect.

Network Name: You can enter a new name for the network using up to 32 alpha-numeric characters.

Network Password: The password must be 8-32 alpha-numeric characters.

Wi-Fi Band: You can choose between using the 5GHz band (recommended) or the 2.4GHz band. 5GHz is usually less crowded but 2.4GHz typically has more range and is better going through walls.

Snapshots

You can save up to 8 static scenes in the Link controller's memory that will allow it to work in a stand-alone mode without the use of an IPad. These scenes are snapshots of the current output of all four DMX512 universes.
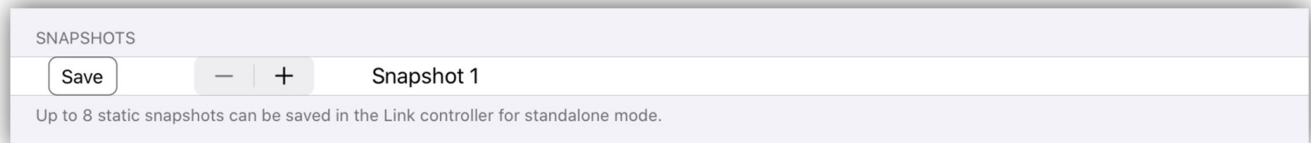
To save a new snapshot, first set all lights to a static scene without running an effect. Select the snapshot number 1-8 using the stepper buttons then tap the save button. The scene will be saved in the Link controller memory.

To run the Link in stand-alone mode, press and hold button 1 in the button matrix on power-up. "SA" will be displayed in the matrix page. Use buttons 1-8 to play back any one of 8 snapshot scenes. In stand-alone mode, the Link will not create its network or connect to any device over USB.

Matrix Editor

Tap the pull-down menu button from the fixtures view then tap "Matrix" to view the matrix editor as shown below. This editor is used to create LED matrices using fixtures from your patch list. You can use any combination of fixtures as long as the fixtures have RGB components that can be arranged in a grid pattern.
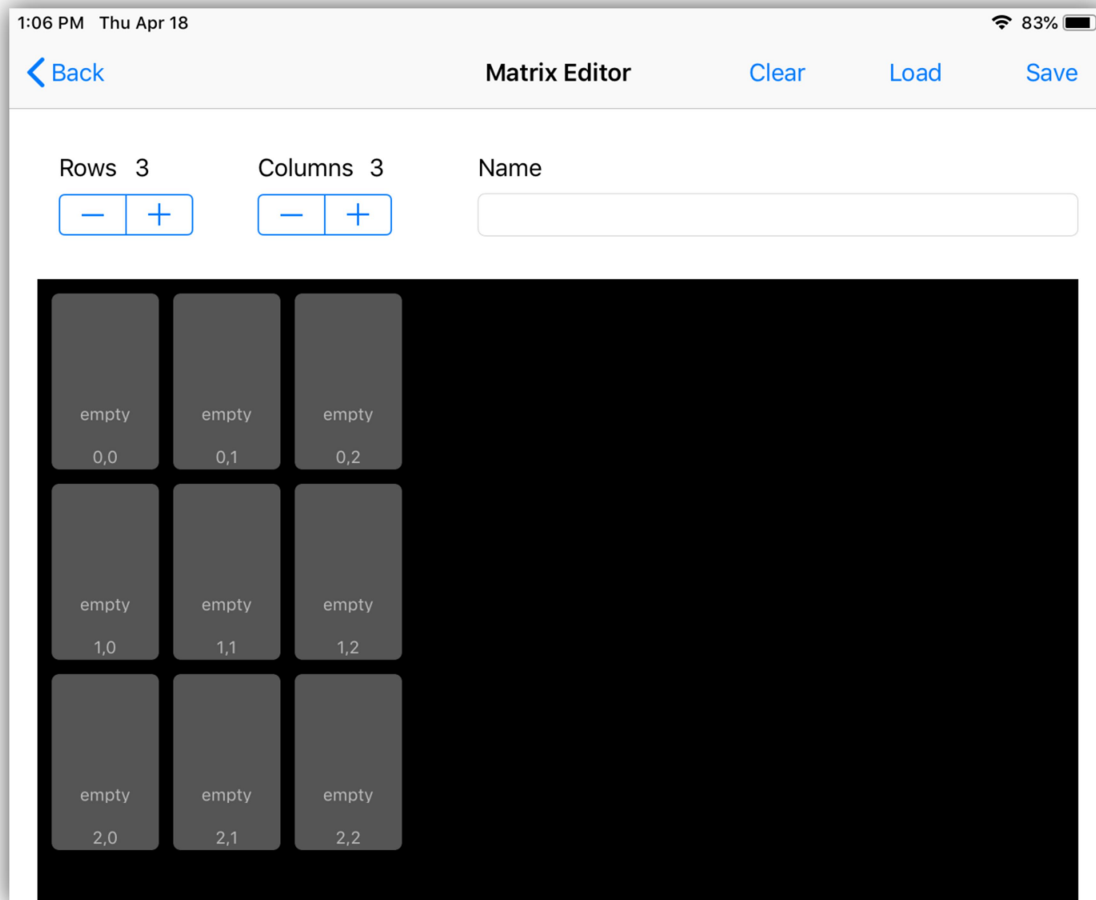
In the example above the editor is showing an empty matrix with three rows and three columns. Tap the +/- row and column stepper buttons to set the size of the grid. Maximum dimensions are 150 X 150 pixels. The editor can scroll in any direction when the grid size exceeds the screen bounds. Tap any of the boxes in the grid to start adding fixtures as in the following example. When you select a box, a list of all patched fixtures will appear with those that have RGB components highlighted. Fixtures that have already been selected will show a check mark. If a fixture has more than one pixel, the editor will try to add every pixel from the selected fixture, for example an LED bar.

In the example above a 4 X 4 matrix has been created using individual RGBA LEDs from an Elation Cuepix blinder. In this example the fixture was patched as 16 separate RGBA LEDs rather than one large fixture simply for convenience. If it had been patched as one large fixture you would only need to assign it to the first box and the rest of the pixels would have been filled in automatically. Each box shows the fixture's button name and image as well as the row and column number.

You can edit the size of the grid at any time by adding or subtracting dimensions. You can also drag and drop boxes to rearrange the order. To drag a pixel, tap a box and hold until it expands, then drag it to a new location. To remove a pixel assignment, tap the clear button at the top. A large X will appear in the corner of each pixel box. Select any box to remove its assignment. Tap "done" at the top when finished. Before saving the matrix, enter a name. Finally tap "save" when you are finished editing. There is a "load" button for selecting saved matrices to load into the editor.

Selecting a Matrix

Matrices that have been saved can then be selected and included in the color effects. Tap the matrix button at the top of the fixtures view to show a list of matrices. Tap any matrix in the list to select or deselect it. A check will appear next to any matrix that is selected as shown in the example below. More than one can be selected. Tap the "Done" row or anywhere outside the list to dismiss.

Refer to the color effects chapter for more information on how to use matrices in effects.
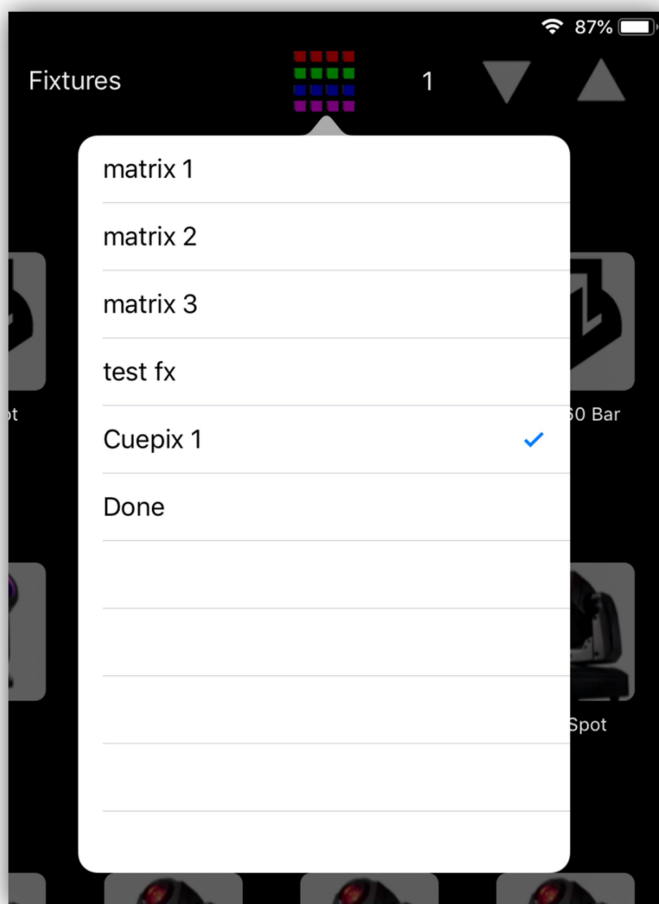
Channels View

The channels view is used for viewing and setting channel levels for selected fixtures. This view requires that you first select one or more fixtures. The channel levels you see on this view will match those of the most recently selected fixture. The fixture's name will appear at the top just above the pan/tilt control. If more than one fixture is selected the levels will always match the fixture last selected. The channels view is illustrated in the screenshot below. There are four main sections in this view, the color picker, the pan/tilt control, the channel faders and the jog wheel group. Only the channel faders and wheel group are controlled from the Link controller, the color picker and pan/tilt control both require touch interaction on the IPad. The channel faders can be controlled from either the Link faders or by touching the faders on the screen.
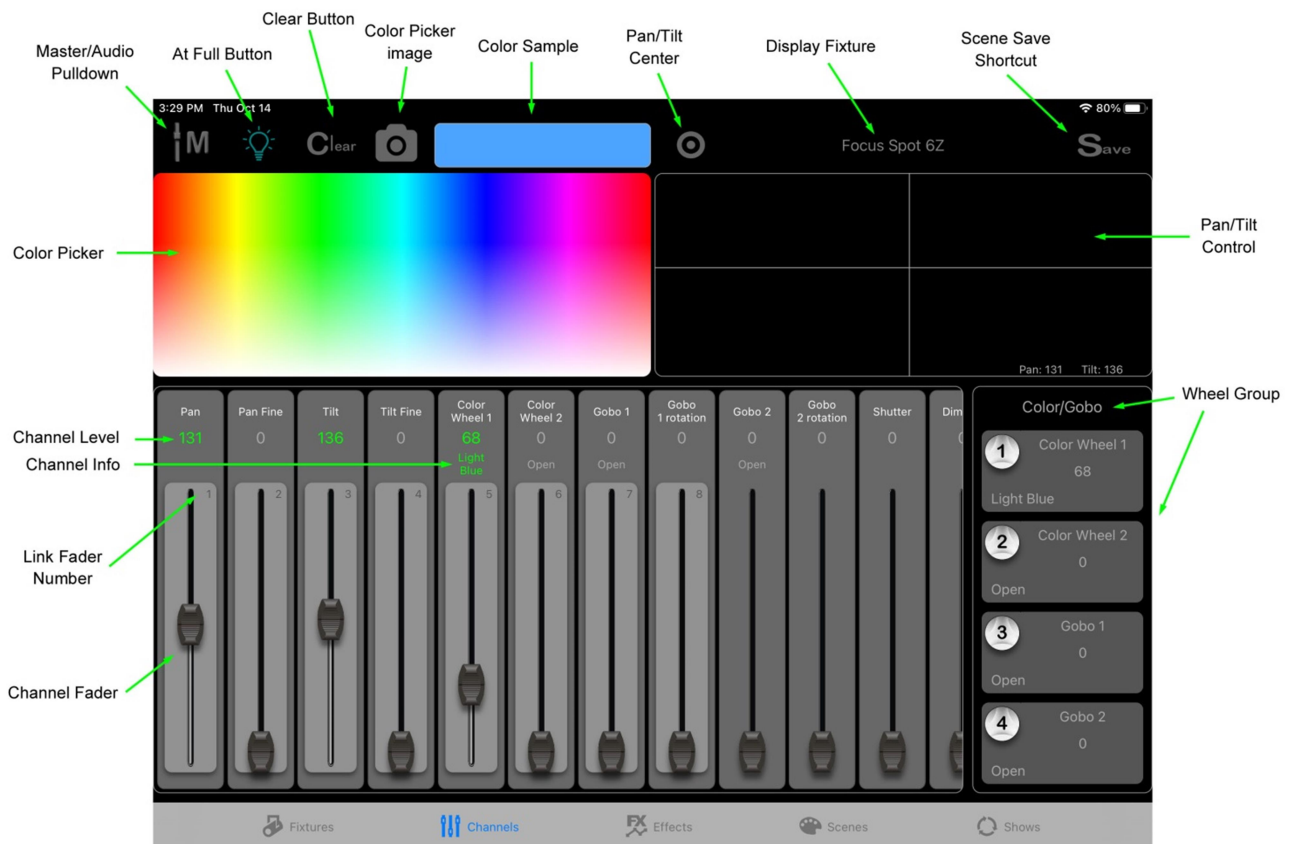
All four sections will control every selected fixture where possible. If all selected fixtures are of the same type, they will all follow any changes as you make adjustments. If mixed types of fixtures are selected, the channel faders will only work on fixtures of the type displayed. The color picker, pan/tilt controls and wheels are more generic so will be able to affect any fixture that has similar functions or features.

Link Matrix Buttons

The Link controller's matrix buttons and matrix page buttons can be used to select fixtures for editing when in the channels view. You will notice that the button LEDs will show which fixtures are currently selected. The buttons will work the same as when the fixtures view is showing. This is an added convenience that lets you select new fixtures for editing quickly without having to switch back and forth between the fixtures and channels views.

Channel Faders

The lower half of the channels view shows the channel faders. Each fader is assigned to a channel in the selected fixture(s). When there are more faders than can fit on the screen, you can scroll left or right by using the fader shift buttons on the Link controller or by swiping the screen over the faders. You will notice that the first eight faders on the left side of the view are highlighted with the numbers 1-8 in the upper right of the highlighted area. This shows which channels are currently attached to physical faders on the Link controller. Shifting left or right allows you to assign the Link faders to any group of eight consecutive channels. Press and hold one of the fader shift buttons on the Link (upper left above the faders) to scroll the view or press once to shift one step.

To adjust a channel level, simply move one of the eight faders on the Link or touch the fader knob on the screen and drag. You will notice the DMX level and channel info (when available) will be displayed just above the fader image on the screen. When the channel value is shown in green, it indicates that the channel is now included in the current scene. When the channel value is gray, it's not included in the scene. The blue LED in the top button above each fader on the Link will also light to show included channels.

Rotate any one of the small rotary encoder knobs above each fader on the Link to bump the channel levels up or down a step when you need to fine tune the level. Press in on any rotary while turning to move the fader in larger steps. You can also enter the channel level directly by tapping on the level number on the screen to show a keypad pop-up. You can use the keypad to enter a value between 0 and 255. You can also remove the channel from the current scene by tapping the "clear" button on the keypad. Tap the "done" button on the keypad when finished.

The two buttons just above each fader on the Link controller can also be used to adjust channels. Pressing the top button will set the channel to full (255). Pressing the bottom button will lower the channel to 0. Pressing the bottom button a second time will clear the channel from the current scene.

At Full Button

The "At Full" button in the upper left part of the view will bring the dimmer, shutter and RGBW channels to full brightness for all selected fixtures. This does not have a matching button on the Link so is only available using touch.

Wheel Group

The wheel group is displayed to the right of the channel faders. It shows the functions that are currently assigned to the four large jog wheels on the Link controller. Notice in the example below the wheels are set to control pan and tilt for all selected fixtures. The group is titled "Position" shown at the top of the group.
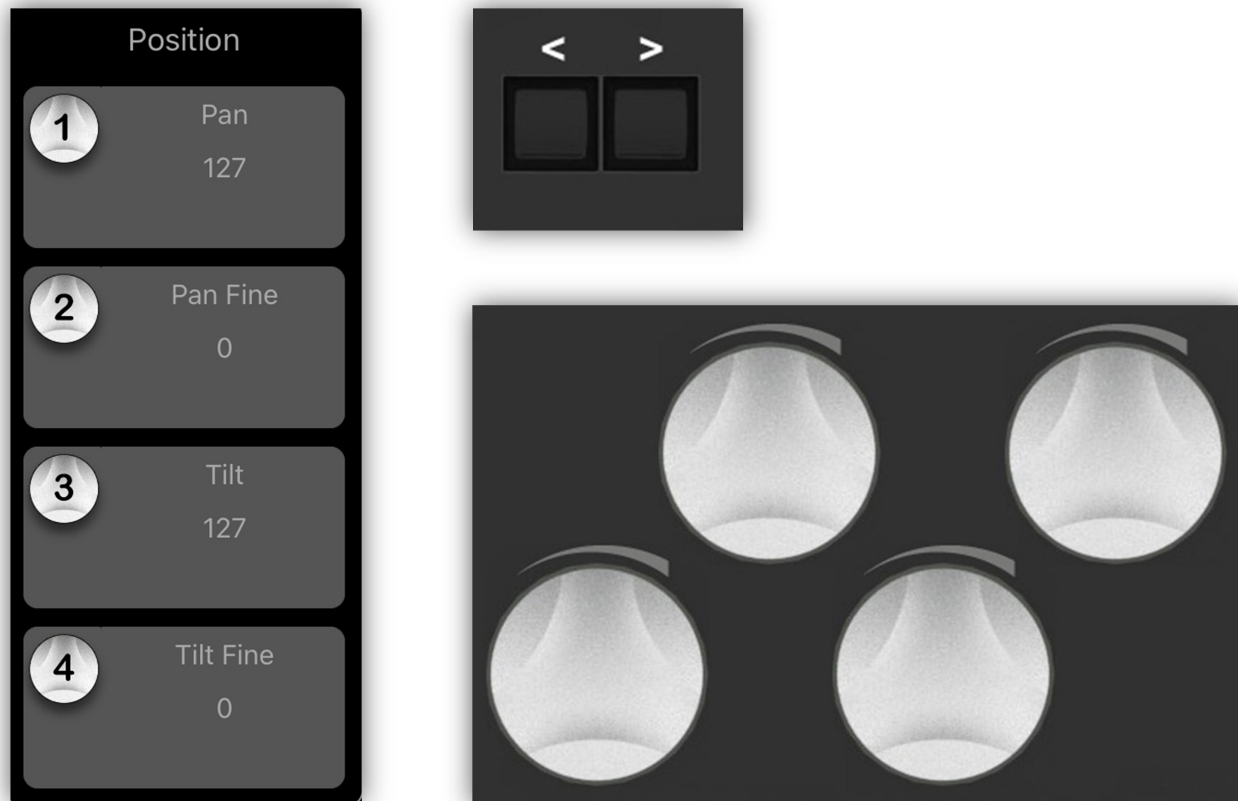
The Link's jog wheels are numbered 1-4 from left to right. As you turn the wheels, the numbers displayed in the wheel group on the screen will increment or decrement. Pressing in on a wheel clears that channel on all selected fixtures.

There are a variety of generic wheel groups you can select from. Use the wheel shift buttons just above the wheels on the Link to select a different group. You can also swipe with your finger up or down over the group on the screen.

When a new fixture is selected, the app will try to match a wheel group to the displayed fixture based on the fixture's channel names and features or will use any custom group you have saved for that fixture type.

Custom Wheel Group

You can also edit and save your own custom wheel groups. Tap any of the four wheel sections on the screen to show a text editor where you can enter a new function name for a wheel. Pick a function name that exactly matches the channel name on a fixture. In the example below "Iris" was entered along with "Zoom", "Prism" and "Prism rotation" to make a new Beam wheel group.
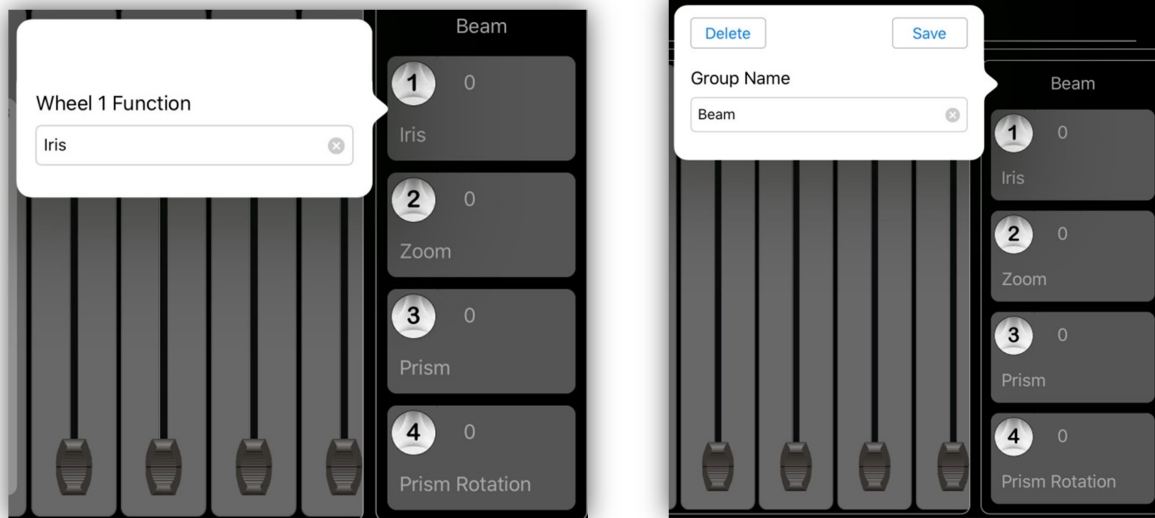
After you enter the name for the group by tapping the title (at the top of the group), tap the save button. This will add a new custom group to the list of default groups already provided. When editing a custom group there is also a delete button that lets you remove any old custom groups that are no longer needed. Default groups can't be deleted.

For most custom groups you will want to choose wheel names that match channel names that aren't provided in the default groups. There are some special case names that can also be used: "Hue", "Saturation", "Brightness", "Pan Fan", "Pan Center", "Tilt Fan" and "Tilt Center". Some of the default groups make use of these. These special case names are used for RGB color mixing and also for fanning rows of moving fixtures and will only work with fixtures that have those abilities.

HSB Wheels

Wheels labeled "Hue", "Saturation" and "Brightness" affects all selected RGB channels. The values can range from 0 to 1 and generate standard RGB color mixing values.

Fan Wheels

The fan feature allows you to spread pan or tilt values across a group of selected fixtures. For the fanning feature to work requires a fan jog wheel and a center jog wheel. The fan wheel, e.g. "Pan Fan" controls the amount of pan spread between each selected fixture. The center wheel, e.g. "Pan Center" controls the location of the center of the spread. Two or more fixtures with pan or tilt channels are required for this to work. The fanning function will be called as soon as you enter a value by moving one of the wheels. Pressing in on a wheel will reset either the fan value to 0 or the center value to the middle (127).

Color Picker

Any selected fixture that that has a red, green or blue channel will respond when touching the color picker that's in the upper left area of the screen. Hue values can range from 0 to 360 degrees starting from left to right. Full saturation is achieved by touching the top third of the control with decreasing saturation as you move to the bottom. The selected color will be shown in the color sample box just above the color picker.
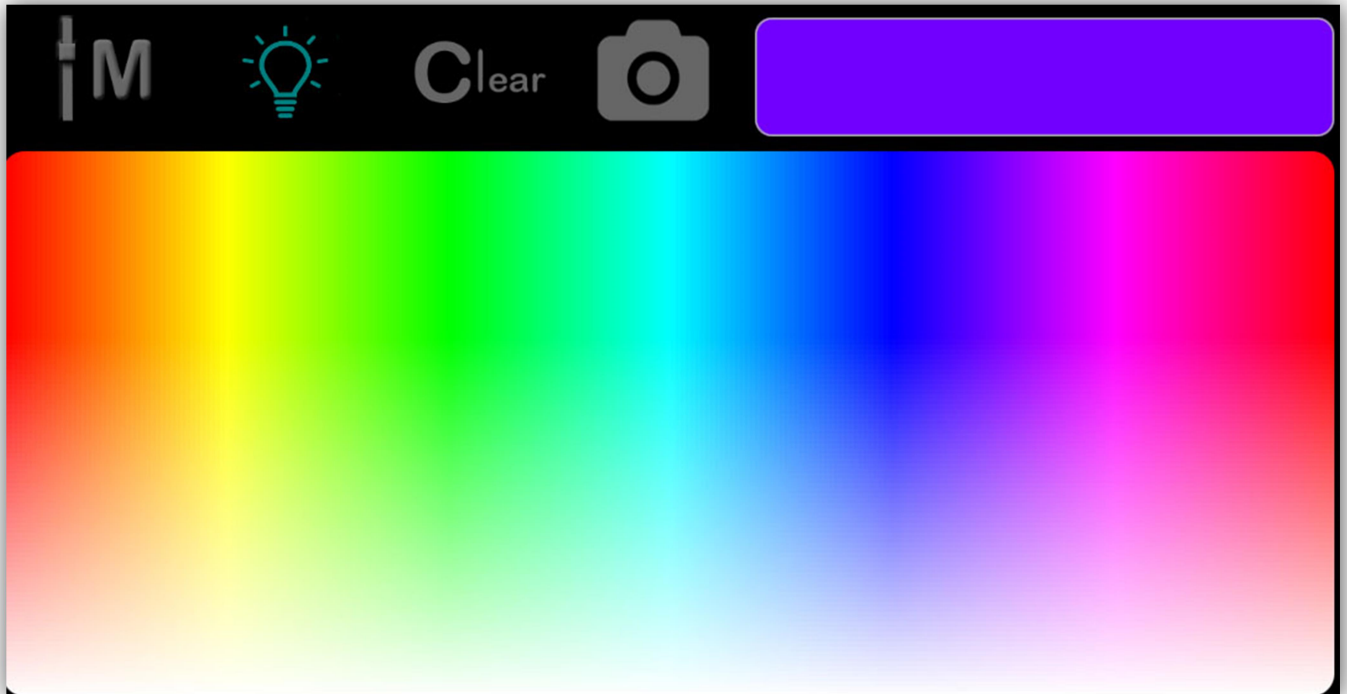
Custom Color Picker

You also have the option of installing your own color picker from your photos library. Tap the color picker image button (camera icon above) to access your photo library to pick a photo. There are many types of color picker images available on the internet or you can use the camera on your IPad to take a picture of colors you would like to copy. The screenshot below shows an example of a color picker that was downloaded from the internet. You will notice that when you use an image the color picker button at the top changes to show the default picker so that you can switch back and forth between the default picker and a custom one.

Pan/Tilt Control

Any selected fixture with a pan or tilt channel can be controlled by touching the pan/tilt control and moving the crosshairs by dragging. The pan and tilt numerical values will be displayed in the lower right area of the control. There is also a Center button just above the control that will set the pan and tilt to the center position.
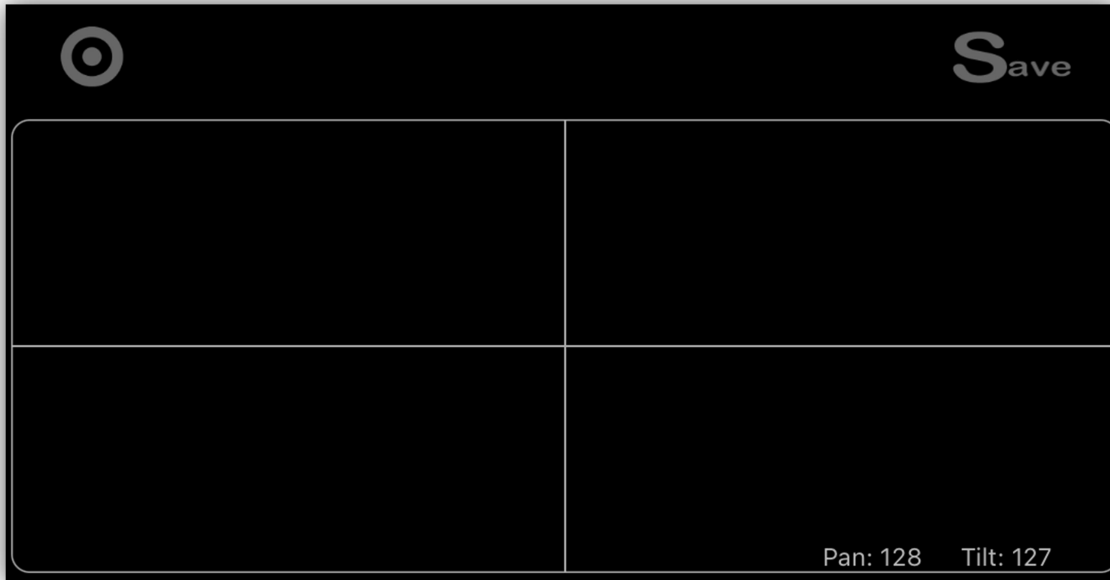
Clear Button

In the upper left of the screen is a button labeled "Clear". There is also a clear button on the Link just above the wheels. These buttons provide a "clear all channels" function. When you clear a fixture or group of fixtures, all of the fixture's channels will be set to their home values and they will be removed from the current scene. Tap the button to show a popup as in the example below then tap either "Clear Selected" to clear only the channels of the currently selected fixtures or tap "Clear All" to clear every channel. Press the clear button on the Link to show the pop-up then press a second time to clear all channels.
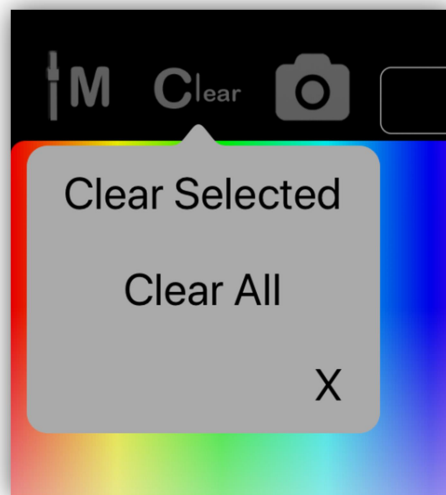
Important Note: When you move a channel slider, that channel is automatically marked for inclusion in a scene. Its level number will be shown in green to show that it's included. To remove all fixture channels from inclusion in a scene, use the clear button. To remove only certain individual channels within a fixture from inclusion, use the clear button on the channel keypad pop-up (touch the number above the fader image). Channels that are not included will show their values in gray. A channel can be set to 0 and still be included in the scene. You will often want to force a channel value to be 0 for certain types of scenes.

Save Button

Tapping "Save" on the screen or pressing the save button on the Link will take you directly to the scene assignment table view. From there you will be able to quickly save a static scene to one of the scene buttons. For more information on scenes and how to save them, see the "Scenes View" chapter.

Scenes View

Scenes are how you save the channel settings you have programmed. Scenes are stored in the IPad memory as a collection of fixtures with selected channels set to a static value. Scenes can also include any running effects. You can save a fade-in time with a scene as well as a separate fade-out time. A scene does not necessarily control every fixture and every channel on the stage, only those channels that are included when the scene is saved. A scene can be as small as a single channel from a single fixture.

The example below shows the scenes view with 16 scenes assigned to the first 16 scene buttons. The first button is highlighted showing that the scene is active. The LED for button 1 on the Link will also be lit.
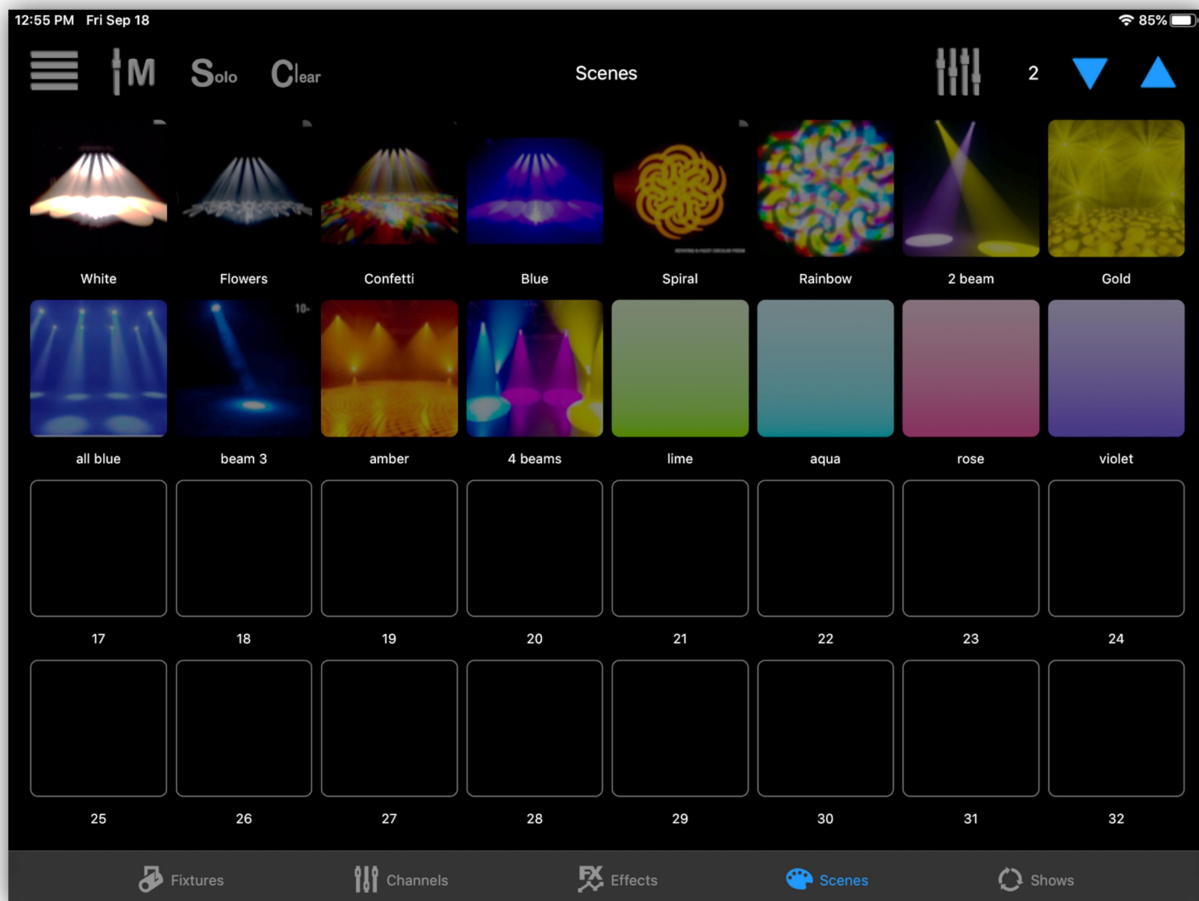
There are 99 scene pages available with 32 scene buttons per page. The 32 button matrix on the Link will correspond with each button on the screen. Tapping any button on the screen or on the Link that has a scene assigned to it will toggle the scene on or off. When turning on, the scene's channels will fade in using the fade in time that was saved with the scene. Tapping again will fade the scene out

using the fade out time that was saved with the scene. To change pages use the page up or down buttons in the upper right of the screen or use the page buttons on the Link.

As you can see in the example some buttons have images while some show a solid color. You can configure the button appearance and button label when you save the scene.

Create a Scene

When creating a new scene it's usually a good idea to first clear all channels. Next, select fixtures for programming and then change channel values by either moving a fader or wheel on the Link or by using the color picker or pan/tilt controls on the screen. Only channels that have been changed since the last clear action will be included in the scene. Included channel values are displayed in green while those not included are gray when displayed above each channel fader on the screen.

Another way to include channels into a new scene is to first turn on some other scenes that are already saved. When you save the new scene, the other scenes will automatically be merged together into a new scene.

Saving Scenes

Once you have set channel levels for a scene you can then save it by tapping one of the "save" buttons, either in the menu from the scenes view as shown in the example below, in the upper right of the channels view or on the Link controller. This will show the list of scene button assignments. You will notice in the scenes menu popup as shown in the example below there are two choices, "Save" and "List". Use "Save" when you want to save a scene to one of the buttons. Use "List" when you only want to view or edit the scene button assignments list without saving a new scene.
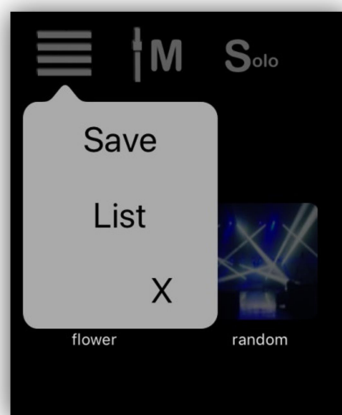
The scene button list will appear similar to the example below. Each row represents a scene button assignment or an empty unused button. At the left is the image or color assigned to the scene button followed by the button number followed by the button label. In small print under the button label is the file name for that scene. Select an empty row to save the scene.

You can scroll to any scene page by swiping up or down on the screen or by using the Link's page up and down buttons. Select the button location by tapping a row on the screen or by pressing a matrix button on the Link. Buttons on the Link will be lit if there is already a scene on that button.

Select a row that is occupied to replace that scene or pick an empty row for a new scene.
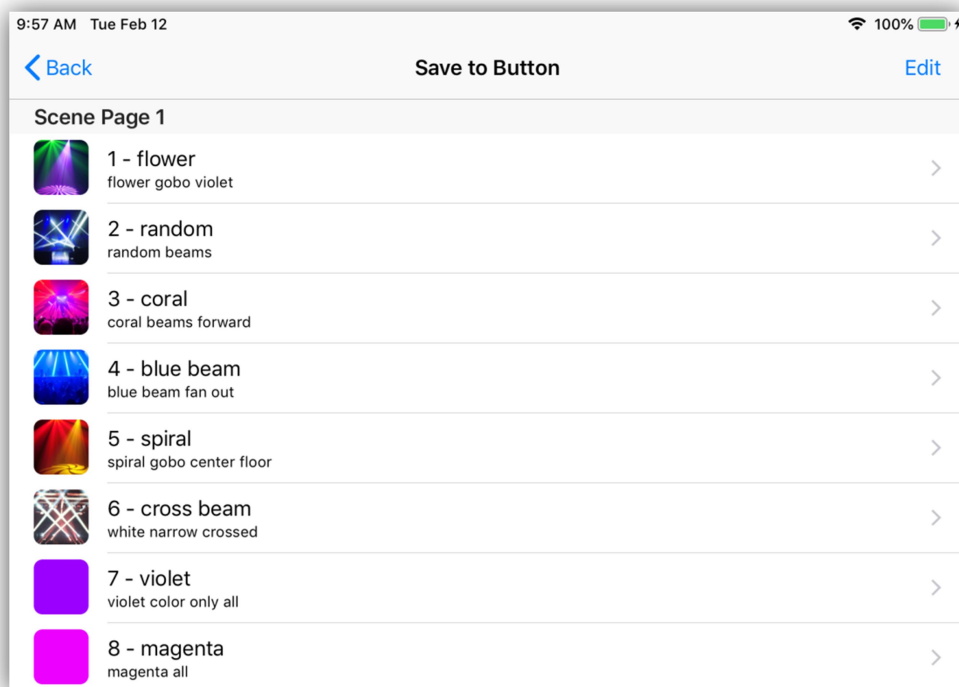
After selecting a row in the list the scene button editor will appear as shown in the following example. Each section of the scene button editor is explained in the following paragraphs.

Scene File Name: You can enter a new file name or use the default name. Typically a long descriptive name should be entered here.

Button Appearance: Scene buttons can be a solid color or you can use an image from your photos library. Tap or drag over the color picker to the right of the button image to change color. Tap the "image" button to show the photo picker to select an image from your photo library. You can switch between image or color at any time by tapping either button.

Button Label: A button label can be entered here, preferably a name that will fit neatly under a scene button on the screen page. This can be a shortened version of the file name or anything you like or left blank if you prefer.

Fade Times: Tap the fade-in time to present a keypad pop-up where you can enter the fade-in time for the scene. The time is entered in minutes and seconds or fractions of a second.

The maximum fade time is 99 minutes. The minimum is .1 second. Tap the "Sec." button or "Min." button to enter seconds or minutes. Tap "Done" to complete. Fade-out time is entered in the same manner.
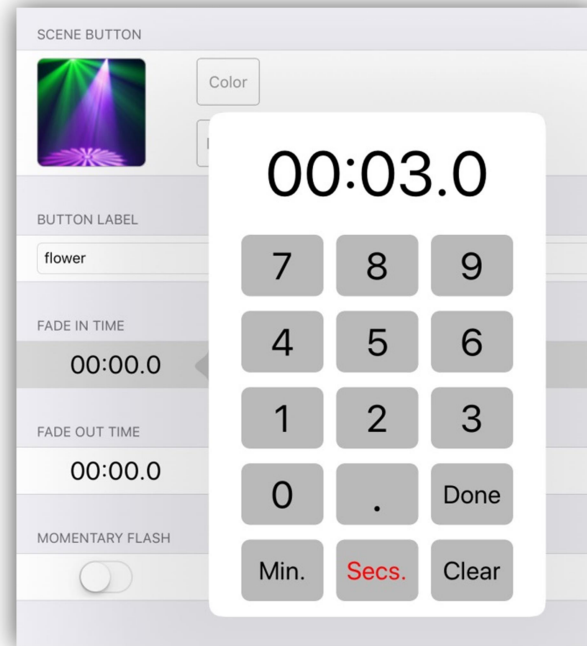
Momentary Flash: Turning this on will allow a scene button to act as a momentary style flash button.

Save: After everything is set, press the "Save" button in the upper right of the view to save the scene to a file. You will see an alert confirming the save or warning that another scene file is already using that name. If another scene is using the name you can overwrite and replace the old scene or cancel and go back and enter another file name.

Edit a Saved Scene

To edit a scene that's already been saved, simply call the scene by tapping its button, (use solo mode to isolate the scene if needed), make any changes to channels then re-save the scene. You can also combine several scenes into one by calling multiple scenes then saving the combined scenes as a new scene.

Edit the Button List

If you only want to edit the order of the buttons or delete a button, tap the "Edit" button in the upper right of the button list view. This will allow you to drag or delete a scene's row using the standard IOS list editor.

Important Note: If you delete a scene button you are only deleting the button assignment and not the actual scene file the button is using.

Scene Files

Scenes are stored in their own "Scenes" folder in the app's documents. The folder can be backed up in an archive or copied using Mac Finder or the IOS files app and a cloud service. See the chapters at the end of this manual for more details on backing up files.

You can view all of the scene files by using the "List" selection in the scene view menu. The list view shows the same list of scene button assignments as shown in the previous example but will then present a list of scene files when you select a row. This allows you to assign scene files to buttons using previously stored scenes. You can also use this to assign the same scene to more than one button or page. The file list will show a checkmark next to the scene file that is assigned to that button. To choose a new scene for the selected button, tap any scene file row to move the checkmark to a new file. You can also use the swipe feature to delete scene files from memory although you can keep as many scenes as you like in the folder without assigning them to buttons.

10:00 AM Tue Feb 12	📶 100% 🔋⚡
‹ Button List	**Scene Memory Files**
Scene 1-21	
Scene 1-24	
Scene 2-12 fx test	
Scene 2-13 fx test	
aqua 2	
blue 5	
blue beam fan out	
clr fx scn	
coral beams forward	✓
fire effect scn	
flower gobo violet	
gold uplighting only	
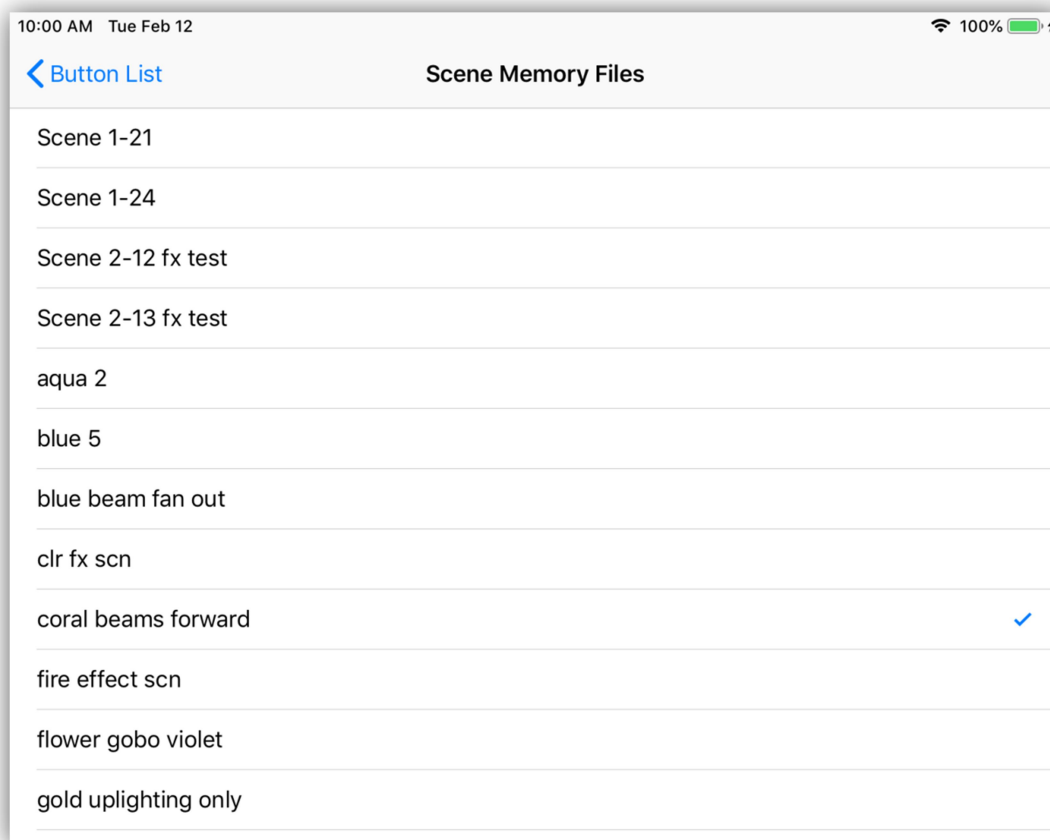
Solo Button and Scene Playback

At the top of the scenes view and on the Link controller is a button labeled "Solo". "Solo" will be displayed in red when turned on and gray when off. When solo is turned on only one scene at a time can be recalled. Any other scenes that are running will be replaced by the new scene. Only the channels that are included with the new scene will be activated and all other channels will be cleared to 0.

When solo is turned off more than one scene can be turned on at a time. Whenever a new scene is called that completely replaces all channels of another scene, the replaced scene button will turn dim showing that it is no longer active. A new scene can partially replace an old scene. This happens when the new scene only uses some of the channels in the old one. In that case both scene buttons will stay lit indicating that there are still active channels in both scenes.

Toggling a scene button from lit state to dim turns the scene off by fading it out using the fade-out time assigned to the scene. A fade-out requires that a scene contain at least one fixture with a dimmable channel that can fade to black. If there are no included dimmable channels in a scene's fixtures, the included channels will be released and set to 0 without fading. Any effects attached to the scene will also stop.

Clear Button

Tap the "Clear" button to turn off all scenes.

Effects in Scenes

Any effects that are running when you save a scene will be included in that scene. Turn effects on or off by tapping effects buttons from the effects view. A scene can be made up of effects without including any static channels. This allows you to combine any number of effects onto a single scene button.

Important Note: A scene only keeps a list of effects names. When a scene starts, it will try to start all effects in the list. If you edit an effect or delete it, any scene that uses the effect will reflect those changes.

Important Note: Each fixture has a unique ID number assigned to it. A scene will look for the ID of each fixture that was included in the scene when the scene was saved. If you have removed or replaced any fixtures it may affect certain scenes. In other words, if you change your fixtures, old scenes that used those fixtures may no longer work as expected.

Sub Masters View

Scenes can be recalled in two ways. Either by using the scene buttons as described in the previous chapter or by using the scene sub masters. You can select between the buttons view or sub masters view by tapping the mode button at the top of the scenes view as shown in the examples below or by selecting the view from the Subs button on the Link. The scene buttons and sub masters always share the same page.

The following screenshot shows an example of the sub masters view. Each scene on a page is represented by one sub master strip on the corresponding sub master page. Scene buttons on the scenes page that are empty will not show up on the sub masters page.
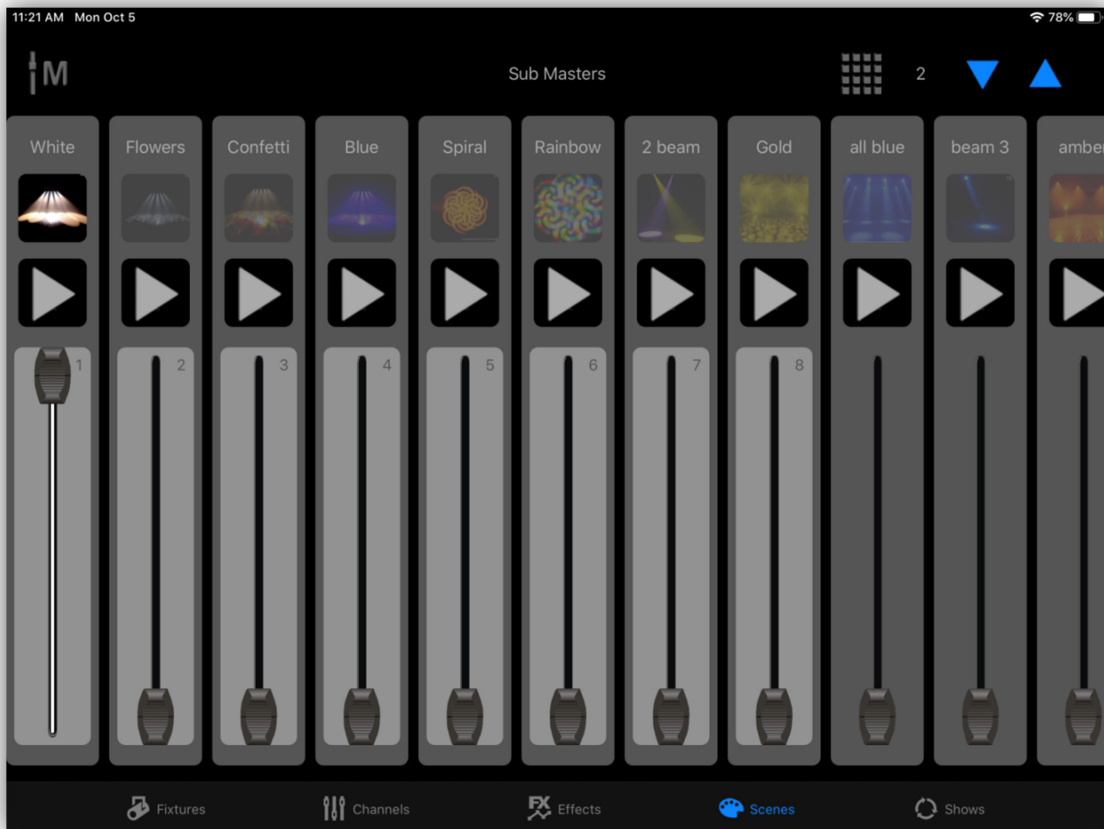
As with the channels view, the first 8 faders are highlighted showing that they correspond to the 8 faders on the Link controller. The two buttons above each fader also correspond to the two buttons above each fader on the Link. You can swipe with your finger over the view to shift the faders left or right in order to align the Link's faders with a different set of 8 faders on the view. Also from the Link you can use the fader shift buttons located in the upper left to scroll the faders left or right.
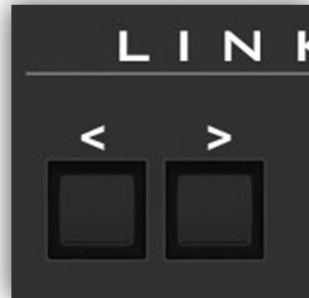
Each sub master has two buttons and a fader. The upper button is a flash button, sometimes referred to as a bump button, and shows the scene image or a color just like the regular scene buttons. Tapping this button will bring the scene to full intensity instantly without a fade and will hold the scene for as long as the button is touched or pressed. The sub master fader on the screen will also go to maximum intensity while the button is pressed.

The lower button is a play button. Tapping this will fade up the scene and sub master fader on the screen using the scene's fade-in time. Tapping it a second time after it has reached the top will fade out the scene using the scene's fade-out time. Tapping it while the fade is in progress will pause or continue (if paused). Touching the sub master fader knob on the screen while fading will also stop the fade to allow manual control. On the Link you will need to move the fader to gain manual control.

Typically the sub master fader is used to start and manually control the intensity of any scene. In the example on the previous page, the scene labeled "White" is active as shown by the fader being up to full intensity with the top button highlighted. The brightness of the top button will match the intensity of the scene as the sub master fader is moved up or down.

There are major differences between how scenes are called when using the sub masters versus pressing the scene buttons in the scene buttons view. Using sub masters gives you more control over how a scene is presented. The scenes view buttons will always fade in and fade out scene channels using the saved fade times. The sub masters will allow you to manually fade in or fade out channels

that are flagged to "scale output by master" in the fixture profiles. These channels are intensity channels, for example "dimmer" or in some cases channels like "RGB" when there is no dimmer channel on the fixture. When a sub master starts a scene, either by pressing one of the sub master buttons or by moving the sub master fader from 0, the scene will snap all non-intensity channels to their saved values quickly. Any effects attached to the scene will also start. The sub master fader will control the brightness or intensity of the scene as you move the fader with your finger. The scene is released when the sub master fader is returned to the 0 position. On release, all scene channels will revert to their home position or to the most recent sub master scene that is still active.

More than one sub master can be active so that you can bring up several scenes at the same time. It's also possible to have more than one sub master controlling the intensity of a particular fixture. In that case the sub master that's highest will have control of that fixture's intensity.

Important Note: In order to start a sub master, the sub master fader must start from 0. If the fader on the Link is not at the bottom of its travel, you will need to pull it down and then move it up to start the scene. This is so the scene will fade up from 0 rather than jump.

If a sub master fader on the screen is set to a level that doesn't match the fader on the Link controller, you will have to move the Link fader to the position of the screen fader to gain control of the sub master. This is to prevent the levels from jumping when the fader is moved.

Small Rotary

The small rotary encoder just above each sub fader will control the speed of any effects that are owned by that sub master. Turn the small rotary clockwise to speed up and counterclockwise to slow down. Press in on the rotary to return the speed to the saved value.

Effects View

The effects view shows a button field of the effects that you have saved. As with the scenes view you have 99 pages of 32 buttons. The example below shows four rows of effects with each row containing different types of effects. In this example the top row contains pan and tilt movement effects, the second row contains color effects, the third row contains flash effects and the bottom row contains basic wave form effects. Buttons 1, 16, 21 and 26 are lit indicating that those four effects are currently running.

When you view the effects buttons for the first time, all buttons will be empty until you create some effects and save them. There are effects editors for making and saving several types of effects.
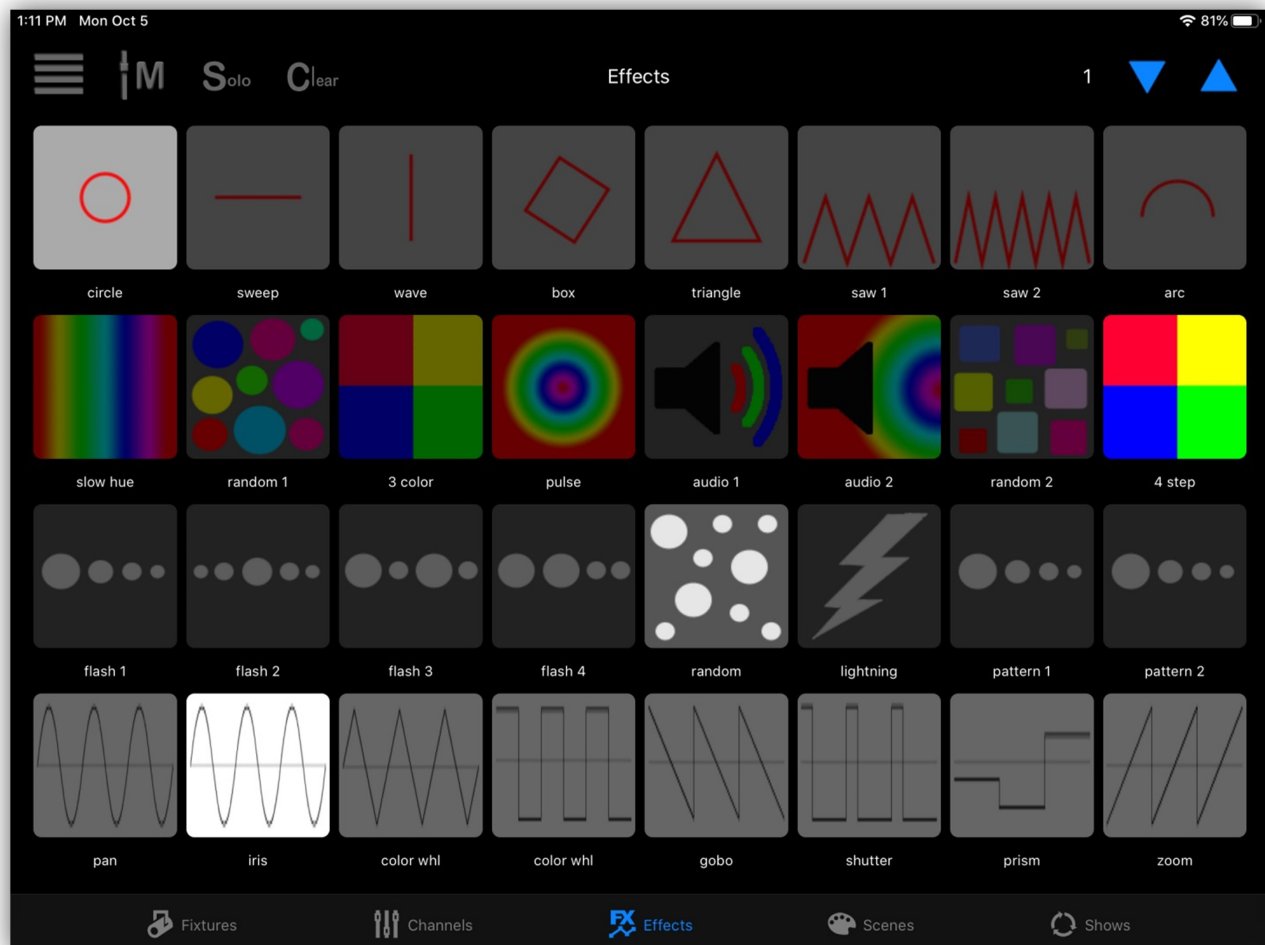
Once you have some effects saved, tap an effect button to toggle an effect on or off. If an effect replaces all channels of one that is running, it will automatically turn off the old effect. Tap "Clear" to turn off all running effects.

To get to the effects editors, use the pulldown menu in the upper left of the effects view as shown below. There are five items in the menu. The Pan/Tilt effects editor, the Color effects editor, the Flash effects editor, the Basic effects editor and the list of button assignments. Tapping any of the editors will bring up that editor's view. Tapping "List" will show the list of effects button assignments. Use the list view to rearrange the button order or to change the button assignments. The list view will allow you to access all of your effects files. Tap any button row in the button list to show a list of all effects files. This works the same as the scenes list and scenes files views.
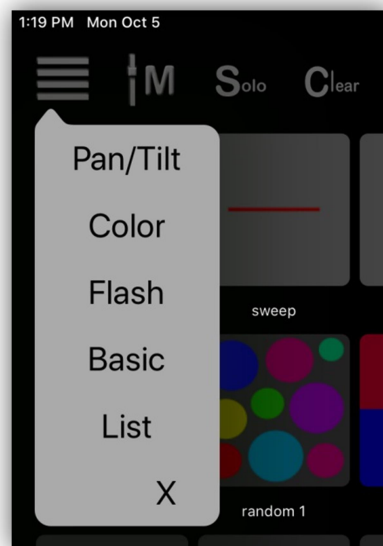
Pan/Tilt Effect Editor

This editor is used to create pan and tilt movement effects. Before starting you must first select some fixtures from the fixtures view that have pan and tilt channels. The order that you select the fixtures is important as this will affect how the phase and fan parameters work. Typically if you are viewing the fixtures on the stage you would select them from left to right.

The editor will appear similar to the example below. Notice that the vertical line preset is selected and displayed in the shape draw area. It's running five fixtures that are slightly out of phase and slightly spread out (fanned). The five white dots represent the beam positions and the red line represents the path of the movement. The shape draw area represents the full range of pan and tilt, with pan 0 and tilt 0 in the lower left corner.
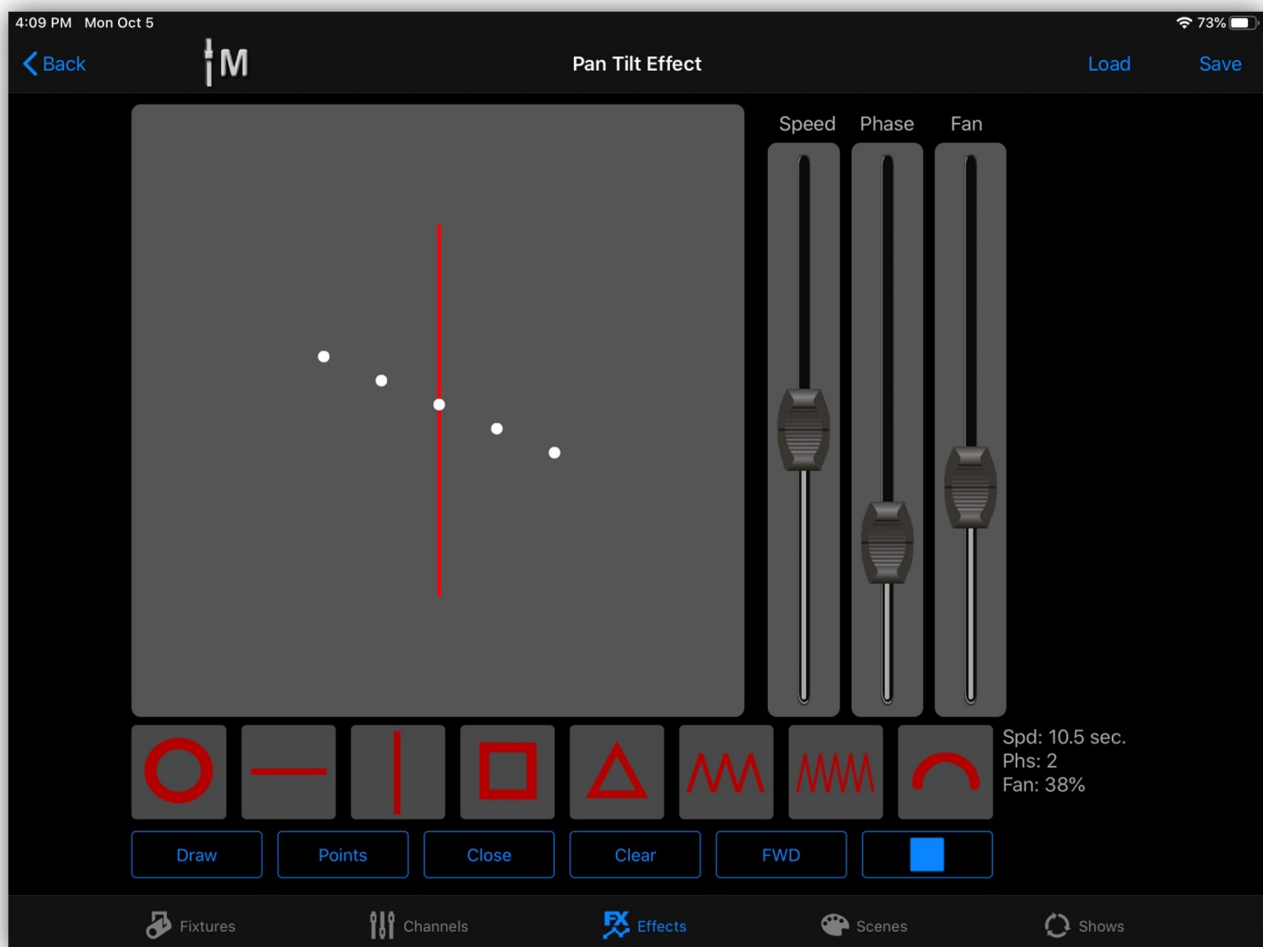
Editor Controls

The editor has eight preset shape buttons just below the draw area plus some assorted function buttons below those for drawing and playback. You can select from one of the eight preset shapes or you can draw your own shape. Once you have a shape in the editor you can move it around, resize it or rotate it even while the effect is running. It can be helpful to see actual lights moving while editing as typically the shape needs to be sized and located to match the mounting positions of the lights relative to the stage. If you have lights connected, the beams will follow the white beam dots in the draw area.

There are three faders to the right of the draw area to control speed, phase and fan. Use the play/stop button in the lower right to run the effect. The effect must be paused to select a new shape or to draw.

Editing a Shape

You can go back and forth between the FX view and the Fixtures view if you need to change the fixture selection for the effect you are editing.

To move the shape use a one finger touch to drag the shape around on the editor. To resize the shape, pinch or expand using two fingers. You can resize horizontally or vertically. To rotate the shape use a three finger touch and rotate your fingers in a circular motion. You can edit any of the preset shapes or one that you draw yourself.

The bottom row of buttons is described below:

Draw: This button will let you draw a shape path with your finger. The initial path will appear as a dotted line until you tell the editor to finish the path by tapping the play button or by tapping the close button. When finished, the path will become a solid red line. "Close" will connect the path end to the start.

Points: This is similar to draw. You enter single points by tapping the screen. The editor will automatically connect the points as you tap. Finish by tapping the play button or the close button.

Close Button: Tap this to connect the end of your path to its start. It will create a path that will loop continuously. If you don't want the path to loop, don't close the path, the beam will travel from end to end of the path (bounce).

Clear Button: Tap "Clear" to erase what's on the drawing area.

Fwd/Rev Button: This button controls the direction that the beams will follow along the path. This will only affect a closed path that is looping. An open path that is bouncing will automatically change direction at the endpoints.

Play/Stop Button: This is used to end drawing mode and to run the effect. For shapes that are finished, you can start and stop the animation. A white dot will simulate each fixture's beam on the drawing area.

Speed Fader: Speed can vary depending on the size of the shape and distance between points. Speed can also depend on the responsiveness of the light fixture. Some moving heads cannot move at high speeds. Adjust the speed fader based on how the lights react rather than the screen animation.

Phase Fader: This allows you to spread fixtures out along the shape path. For this to work, you need to select more than one fixture. The selection order will determine the order of the beam positions inside the shape. With phase at 0, all beams will follow the same point in the path. With the phase at full, the beams will be spread out evenly along the entire path. Adjust the phase slider to see the relative beam positions in the editor.

Fan Fader: This will fan the beams apart horizontally. You will need to have more than one fixture selected for it to work. Adjust the control to your liking while observing the lights rather than relying on the screen animation. Fan order will follow the order that the lights were selected from the Fixtures view.

Helpful Hints: When drawing, the speed that you move your finger will affect the speed of the effect. The slower you draw, the more points will be included in the path making it run slower. Experiment until you get the feel for what works best. Don't worry about the initial size or location of the path as you can resize or move it later. The fade time between points is always equal so keep point to point distances close when using the point draw method. This will make the effect appear more even looking. The phase control uses the number of points to set the distance between beams so more points means finer control over the phase.

Link Controller

The faders, wheels and buttons on the Link controller can be used with this editor. Buttons 1-8 (top row of matrix) will select the shape presets. Buttons 9-14 (second row of matrix) will duplicate the bottom row of buttons on the screen. Faders 1-3 and wheels 1-3 will control the screen faders.

Save the Pan/Tilt Effect

Tapping the "Save" button at the top of the effects editor screen or on the Link will show the button assignment list similar to the next example. To save the effect to one of the buttons, tap a button row on the screen. Scroll down to reach the higher page numbers. **Note:** You can select a row that's empty or occupied; if occupied the effect that's there will be replaced with your new effect. Only the button assignment is changed, the replaced effect will still remain in the effects files in case you want to use it again later.
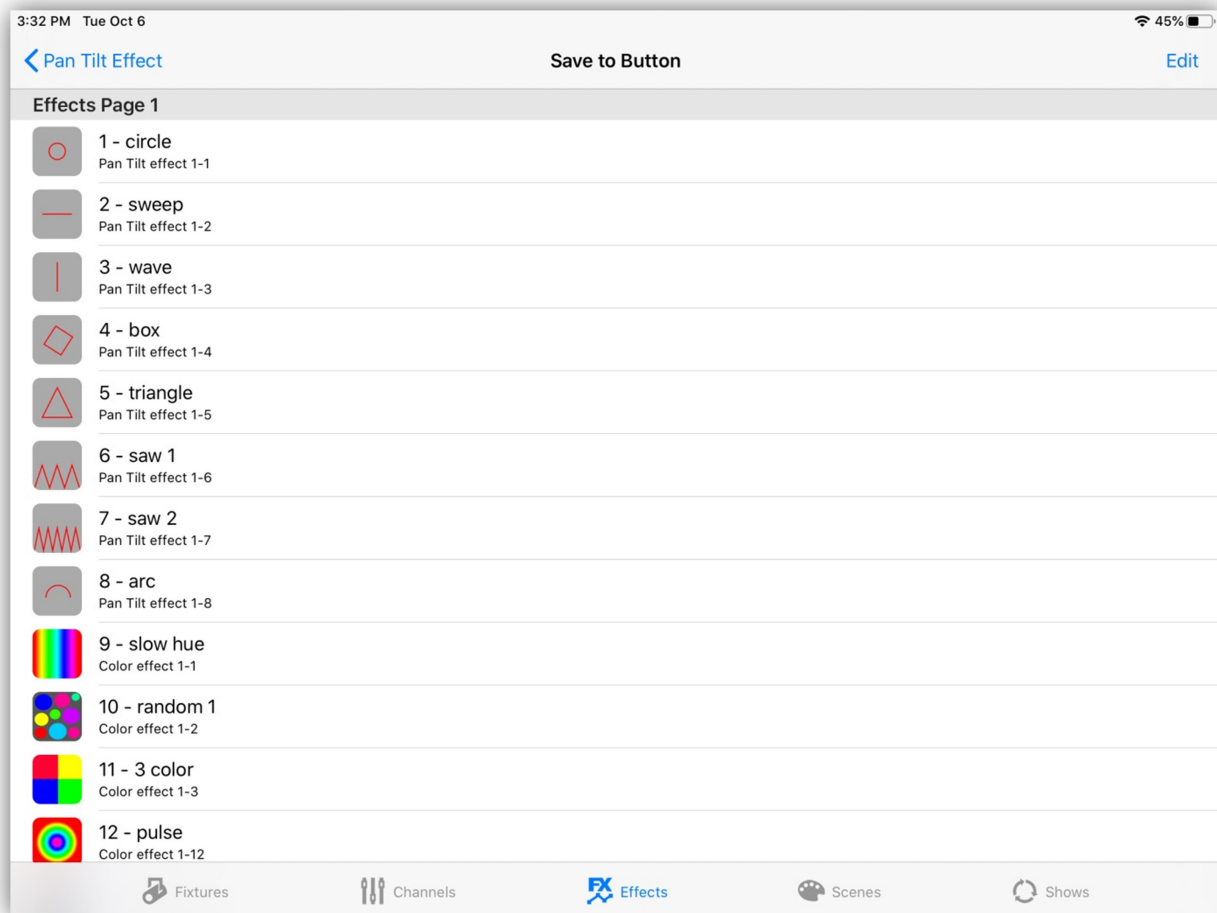
Note: You can reorder the buttons at any time by tapping "Edit" at the top of the screen using the standard IOS style list editor.

You can also use the Link's page up and down buttons to select the page and you can select the button location by pressing a matrix button on the Link. Buttons on the Link will be lit if there is already an effect on that button.

After selecting a button location to save a new effect, the button editor will appear similar to the example below. In this example a circle shape effect was created. The default button image will show the shape on a gray background. You also have the option of choosing an image from your photo library. Tap the "image" button to call the photo picker to choose a different image for the button.
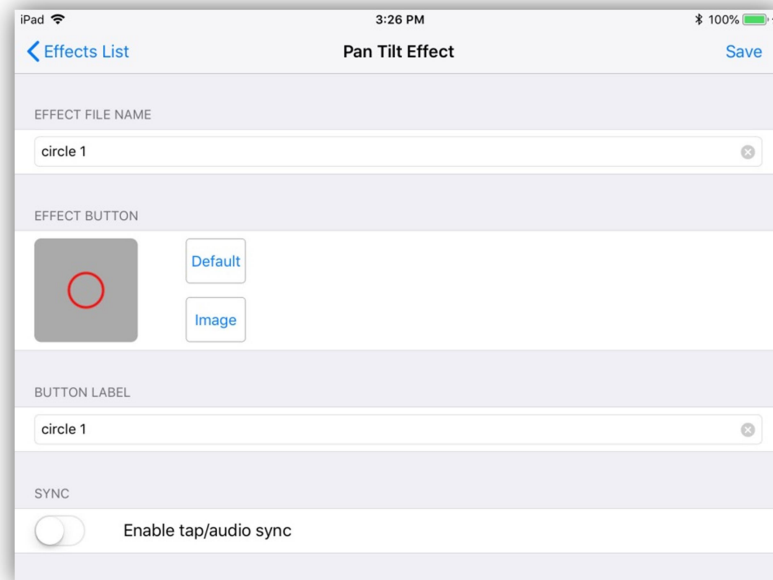
Enter a long descriptive file name for the effect and also a short button label that will appear under the button. A default name and label is provided. After you have entered the names, tap "Save" in the upper right or on the Link to save the file and button assignment. Effects files are stored in their own folder in the app's documents directory.

There is a tap/audio sync enable switch that allows the effect to be controlled by the tap sync button or audio beat. Enable this if you want to be able to override the stored speed using the tap sync or audio sync.

Load Pan/Tilt Effect

You can load a saved pan/tilt effect into the editor. Tap "Load" at the top of the button editor screen then select from the list of effects buttons. Only pan/tilt effects can be loaded into the pan/tilt effects editor. Once loaded you can then modify the effect then save to the same location or copy to a new button location using a different name.

Color Effect Editor

This editor is used to create color effects on fixtures that have RGB color mixing channels. The editor will appear similar to the example below. Before starting you must first select fixtures or matrices from the fixtures view that will be included in the effect. Only fixtures that have color mixing channels can be used. The effect does not support color wheels. The order that you select the fixtures is important as this will affect how the phase control will work. Typically if you are viewing the fixtures on the stage you would select them in order from left to right. When using pixel matrices, the order of display is already established inside the matrix so selection order does not matter. You can use combinations of single RGB fixtures and pixel matrices when editing the effect.
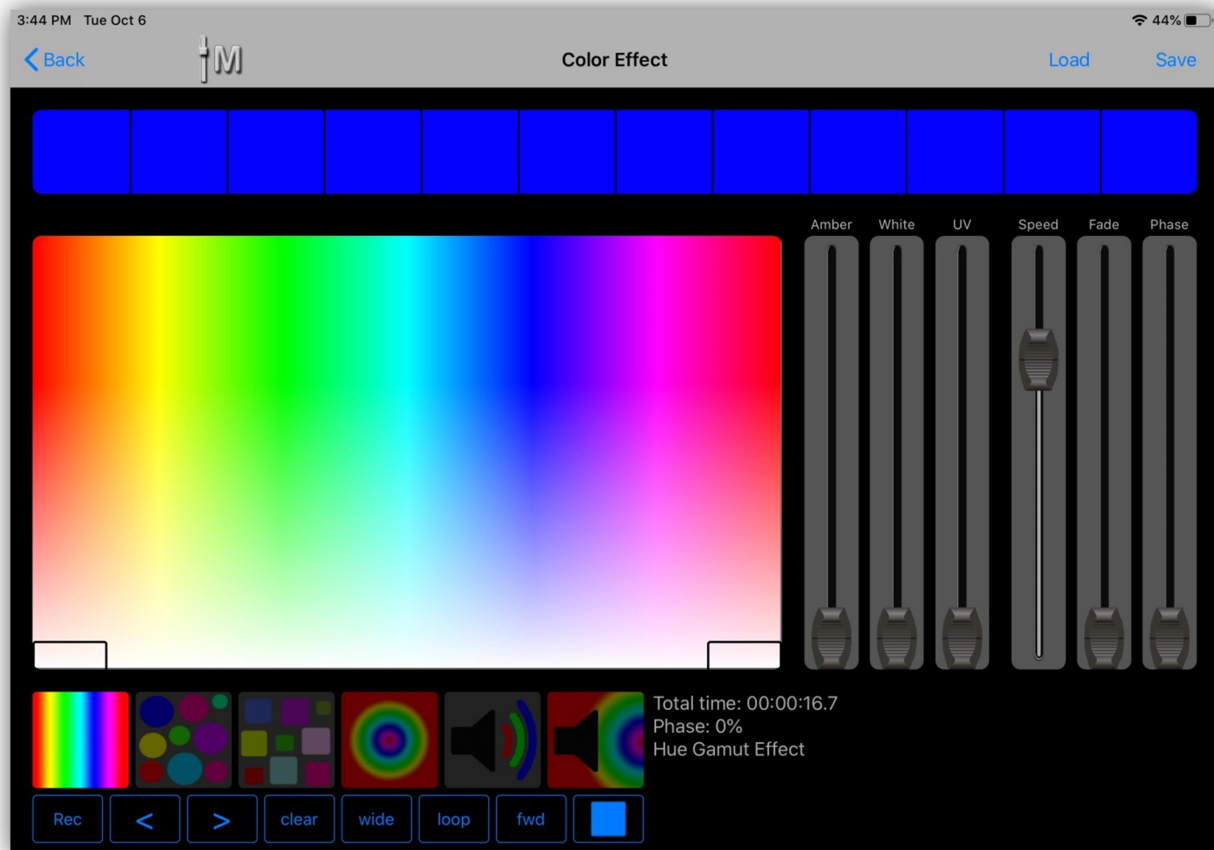

In the above example the Hue Gamut effect is running. Its button is the first color preset and is highlighted showing that it is selected. The color sample bar across the top of the screen will show the color that the effect is currently running.

There are six preset color effects available plus the ability to record your own color chases.

The large color picker control in the center is used for selecting RGB colors when recording color chases and also for confining the range of some of the hue based effects. There are tabs in the lower corners of the picker for adjusting the hue range. To the right of the picker are faders for amber, white and UV that can be used when recording color chases. To the right of those are speed, fade and phase faders used to control the behavior of the effect.

Setting the Hue Range

Drag the small tabs in the lower corners of the color picker to confine the hue to a smaller range as shown below. The tabs will only be visible for effects that are hue based.
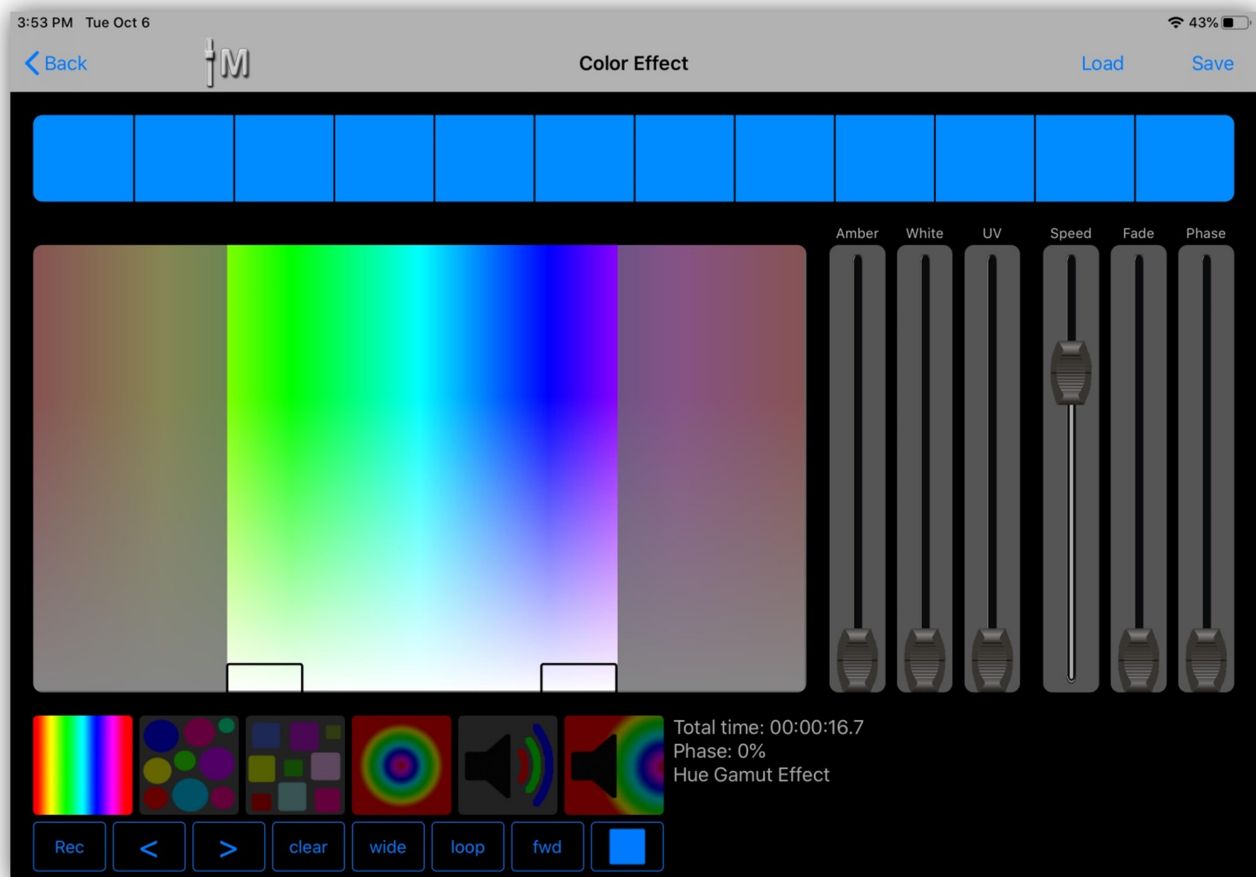
Phase Control

With phase added to an effect, the sample bar will display the phase offset for all pixels within the selected fixtures. In the example below there are twelve pixels active. The order of phase from left to right will be the order that the fixtures are selected or the order of control channels within a fixture that has multiple pixels, e.g. pixel 1 through pixel 12 is displayed below for a twelve pixel LED bar.


Pixel Matrix

When any matrices are selected for inclusion in the effect, the editor will display a grid popover representing the pixel colors of the largest matrix selected. The popover will appear when the effect is running as in the example below. In this example, a 4 X 4 matrix is selected and the random RGB effect is running with the phase set so that each pixel gets a random color.
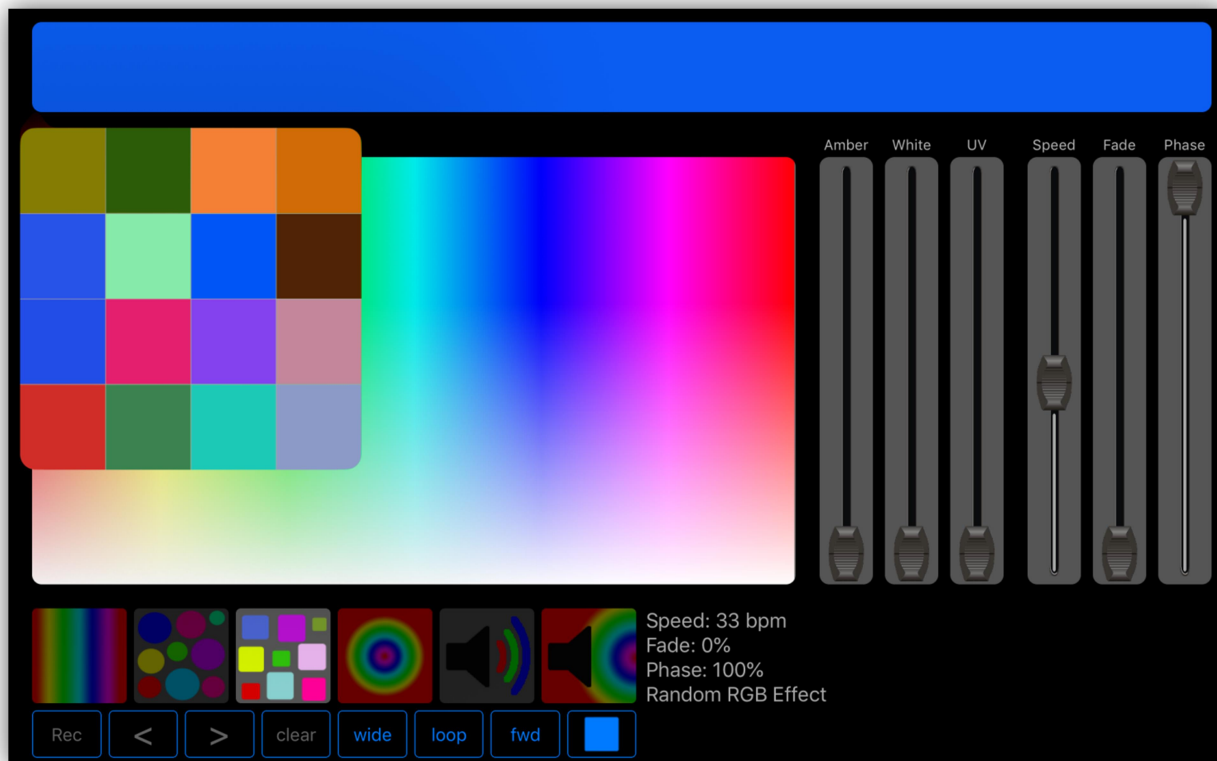
In the next example, the hue gamut effect is running on the same 4 X 4 matrix with the hue confined to the range shown on the color picker and the phase set so that each colomn in the matrix is slightly out of phase.
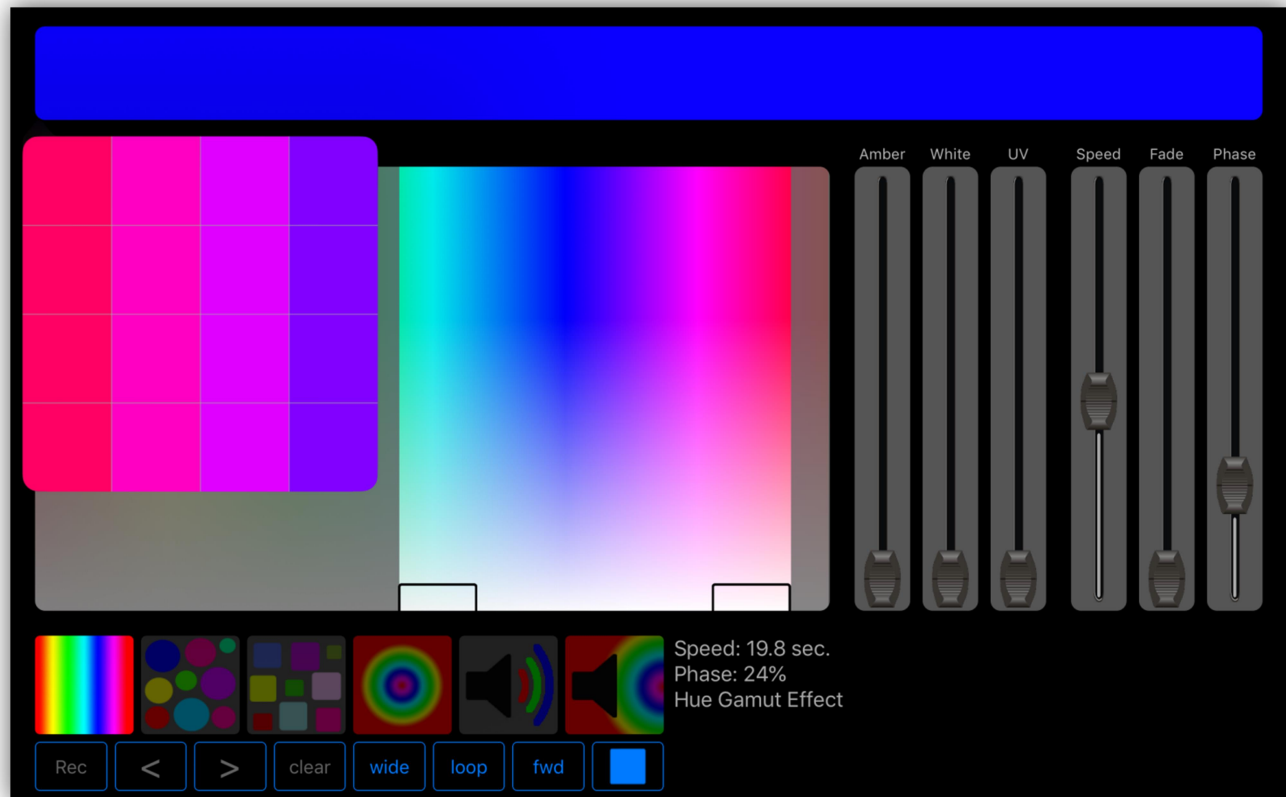
Note: When several matrices are selected, the largest dimensions of any matrix will be used in the sample display and any matix that is smaller than the sample will essentially be placed in the center and follow those colors.

The phase control will behave differently depending on the type of color effect you select and differently for linear fixture selections (color bars, etc.) versus pixel selections (matrix). You can have both single fixtures and matrices selected when running a color effect but the phasing will not necessarily appear the same across the two types.

Note: Some fixtures may require dimmer and shutter channels to be turned on to see the effect.

Color Effect Presets

Hue Gamut Effect: The color will gradually change hue across the entire gamut unless you confine the hues by using the control tabs in the color picker. Speed is displayed in hrs:min:sec. This is the time it takes to run the entire gamut. The range is 2 seconds (fast) to 2 hours (super slow). The fade control has no effect. Adding phase will offset the color between fixtures and also between pixels in a LED bar or matrix. When using a narrow hue range the effect will look smoother if you set it to "bounce" instead of "loop".

Random Hue Effect: The color changes randomly but is confined to the hues in the picker. The hues will be at full saturation. The speed is set in beats per minute and can be synced to the tempo tap or audio beats. Fade is a percentage based on the time between beats. Phasing will change the number of pixels per random color with higher phasing causing more pixels to change randomly.

Random RGB Effect: The color changes randomly but unlike the random hue effect, red, green and blue channels are picked at random. This will give a much wider range of colors. The speed is set in beats per minute and can be synced to the tempo tap or audio beats. Fade is a percentage based on the time between beats. Phasing will change the number of pixels per random color with higher phasing causing more pixels to change randomly.
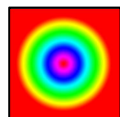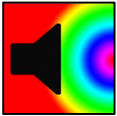
Hue Pulse Effect: This effect is similar to the hue gamut effect except that by adding phase the colors will appear to move from the center outwards. This works best with a LED bar or matrix. It will also work when you select a row of individual LED fixtures. Speed will control the length of the pulse in seconds. Set the "wide/inside" button to "inside" to confine the pulse effect inside an LED bar. Setting the direction button to "rev" will make the pulse appear to move from the outside inwards. The example below shows how it might appear in the editor using a twelve pixel LED bar.

Audio RGB Effect: This effect uses audio from the IPad mic input to filter high, mid and low frequencies to assign them to control red, green or blue intensity giving you a range of colors based on the audio content. Audio gain is adjusted from the master pop-up as explained in the Master Fader chapter. The speed fader controls how quickly the effect responds to audio changes. The fade control has no effect. The phase control will change the frequencies assigned to the colors.

Audio Pulse Effect: This effect is similar to the hue pulse effect except that it uses low frequency audio pulses as triggers. When a low frequency pulse is detected at the mic input as from a pulsing music beat, the effect will trigger a new pulse. You can adjust the color range of the hue pulse from the color picker. Speed will control the length of the pulse. Fade has no effect. Phase will work similar to the hue pulse effect where the pulse will appear to move from the center outwards as you add more phase. The mic gain is adjusted from the master pop-up as explained in the Master Fader chapter.

Recording Color Chases

You can record your own multi-step color chases. To start recording, first select the fixtures and/or matrices to include in the chase from the fixtures tab. Tap the "record" button in the lower left of the editor. It will turn red to indicate record mode is on. Use the color picker along with the amber, white or uv faders to assign a color to the first step. Advance to the next step by tapping the ">" button and repeat. After entering all of the steps, tap the record button to toggle record mode off or tap the play button. While recording, you can use the "<" or ">" buttons to select and edit steps in the chase. The current step number is displayed in the lower right of the editor. Speed is shown in beats per minute. You can also enable the tap/audio sync when you save the chase. Fade is a percentage based on the time between beats. Phase will offset the steps across fixtures and pixels. More phase will cause more pixels to be out of phase.

Function Buttons

There are eight function buttons across the bottom of the editor. Here is a brief summary of each from left to right:

Record: Used for recording custom color chases.

<>: Two buttons for selecting chase steps while recording.

Clear: Used to clear the entire chase while in record mode.

Wide/Inside: "Wide" spreads phasing across all selected fixtures and pixels. It essentially treats all selected fixtures as one large linear fixture whereas "Inside" confines phasing within each fixture. This is only useful with fixtures that have multiple RGB pixels like LED bars. The effect will essentially try to run "inside" each of the selected fixtures. Matrices will always run inside their grid and are not affected by this setting.
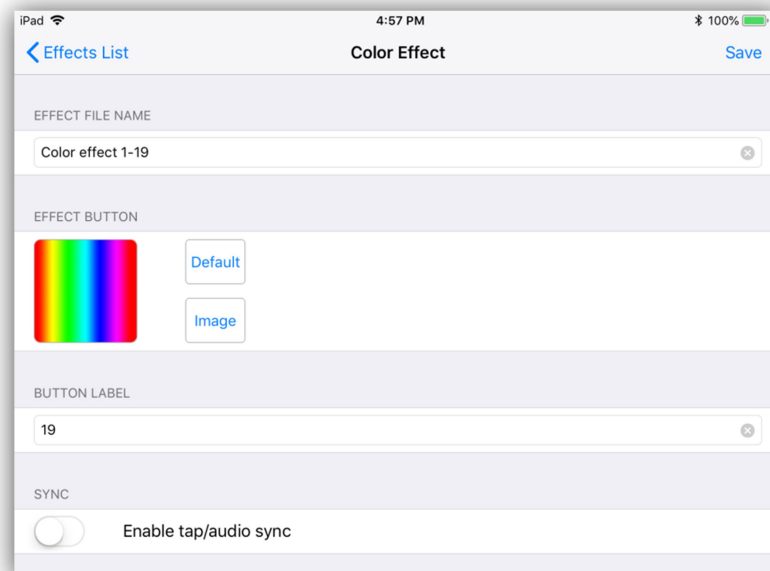
Loop/Bounce: "Loop" will make patterns play in a continuous loop by returning to the start of each sequence when the end is reached. "Bounce" will make patterns reverse direction at each end point essentially bouncing from end to end.

Fwd/Rev: This controls the direction of playback. This will only apply to looping patterns since bouncing patterns reverse direction automatically at each end.

Play/Stop: Use this button to run the effect or stop it while editing.

Save Color Effect

To save the effect, use the same method as described in the previous section for the Pan/Tilt editor. Tap the "Save" button at the top of the editor screen or on the Link. This will present the buttons list. Select a button location to save the effect by tapping its row on the screen or the button on the Link. The button editor will appear similar to the example below.

Enter a new file name or use the default name provided. You can use the default button image or select a new one from your photo library. Enter a label that will appear under the button. Enable tap/audio sync if you want to be able to control

the speed of the effect that way. This will only work for stepped type effects that run at beats per minute. Press "Save" to complete the process.

Load Color Effect

You can load a previously saved color effect into the editor. Tap the "Load" button at the top of the screen then select from the list of effects buttons. Only color effects can be loaded into the color effects editor. Once loaded you can then modify the effect then save to the same location or copy to a new button location using a different name.

Link Controller

The faders, wheels and buttons on the Link controller can be used with this editor. Buttons 1-6 (top row of matrix) will select the color presets. Buttons 9-16 (second row of matrix) will duplicate the bottom row of buttons on the screen. Faders 1-6 control the screen faders and wheels 1-3 control the speed, fade and phase.

Flash Effect Editor

The flash effects editor is used to create various types of flash chases. It will work with fixtures that have dimmer channels. The effect looks for the channel within a fixture that has the "dimmer" label. The effect will then flash the fixture on or off using that channel. Before starting you must first select fixtures from the fixtures view. The order that you select the fixtures is important as this will affect the chase order when using the preset flash effects. Typically if you are viewing the fixtures on the stage you should select them from left to right. The editor should appear similar to the example below.
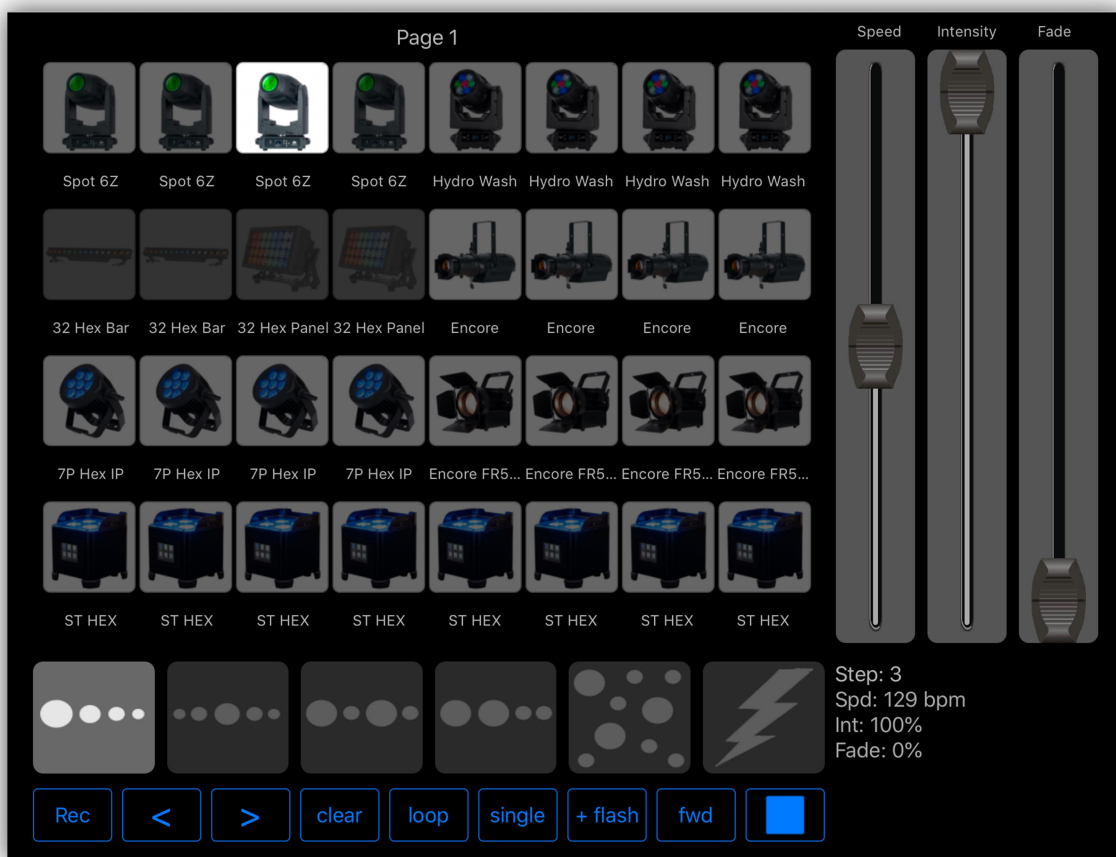
The editor contains a scrollable view of every fixture button. You can swipe the view left or right to view all of your fixture pages. The view will show the fixtures that are being flashed while the effect runs. In this example the first preset is running. It flashes all selected fixtures one at a time in selected order. To the right of the fixtures view are three faders for controlling speed, intensity and fade. Speed is shown in beats per minute and can also be controlled from the tap/audio sync if you enable it when you save the effect. Intensity will set the brightness of the flash. Fade will set the fade time for a flash as a percentage of the time between flashes.

Flash Effect Presets

The following describes the six preset flash effects. In addition to these presets you can record your own custom flash chases.
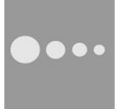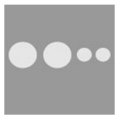
This preset will flash each selected fixture one at a time in the order that the fixtures were selected.

This preset will flash the fixtures from the center outward based on the order of selection. You can reverse the direction to flash inward and also use the bounce button to flash out then back in.
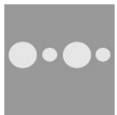
This preset will alternate between odd and even fixtures. Even and odd is based on the selection order.

This preset will alternate between the left and right group of fixtures. The first half of fixtures selected will be left and the remaining fixtures will be the right half.
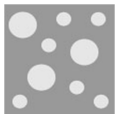
This preset will flash single fixtures in random order.

This preset will create a lightning effect. All fixtures flash together at random times and random intensities. Use the speed and intensity faders to control the look of the effect. Adding a little bit of fade also helps.

Recording Flash Chases

You can record your own multi-step flash chases. For this you will use the flash buttons in the editor rather than the fixture buttons from the fixtures view. Tap the "record" button in the lower left of the editor. It will turn red to indicate that you are recording. Select fixture buttons in the scrollable view to add fixtures to the first step. You can have any number of fixtures in the step. The view can be scrolled left or right if you have more than one page of fixtures. Advance to the next step by tapping the ">" button and repeat. After entering all of the steps, tap the record button to toggle record mode off or tap the play button. While recording, you can use the "<" or ">" buttons to edit steps in the chase by toggling fixtures on or off. The current step number is displayed in the lower right of the editor. You can run the chase at any time by tapping the play button in the lower right.

Empty Steps

In some cases you may want to have empty steps in your recorded chase to achieve the look of an old style flash chase. This will give you the type of chase that has a brief pause in between flashes. When recording, skip a step by tapping ">" without selecting fixtures. Remember to add one empty step at the end of the chase.

Function Buttons

There are nine function buttons across the bottom of the editor. Here is a brief summary of each from left to right:

Record: For recording flash chases.

<>: Two buttons for selecting chase steps while recording.

Clear: Used to clear the entire chase while in record mode.

Loop/Bounce: Loop mode will make patterns play in a continuous loop by returning to the start of each sequence when the end is reached. Bounce mode will make patterns reverse direction at each end point essentially bouncing from end to end.

Single/Add: "Single" mode will solo each flash step while turning the previous flashed step off. This is typical for a flash effect. "Add" mode will keep steps active until the end of the sequence is reached then will turn all steps off. This is essentially adding or piling on each step till the end of the sequence.

+Flash/-Flash: This is used to create a negative flash effect where lights flash off instead of on.

Fwd/Rev: This controls the direction of playback. This will only apply to looping patterns since bouncing patterns reverse direction automatically at each end.

Play/Stop: Use this button to run the effect or stop it from the editor.

Link Controller

The faders, wheels and buttons on the Link controller can be used with this editor. Buttons 1-6 (top row of matrix) will select the flash presets. Buttons 9-17 (second row of matrix) will duplicate the bottom row of buttons on the screen. Faders 1-3 and wheels 1-3 will control the speed, intensity and fade.

Save Flash Effect

To save the effect, use the same method as described in the previous sections for the Pan/Tilt and Color effects. Tap the "Save" button at the top of the editor screen or on the Link. This will present the buttons list. Select a button location to save the effect by tapping a row on the screen or button on the Link. The button editor will appear similar to the example below.


Enter a new file name or use the default name provided. You can use the default button image or select a new one from your photo library. Enter a short label that will appear under the button. Enable tap/audio sync if you want to be able to control the speed of the effect that way. **Note:** The lightning effect will ignore tap/audio as it is random. Tap "Save" to complete the process.

Load Flash Effect

You can load a saved flash effect into the editor. Tap "Load" at the top of the screen then select from the list of effects buttons. Only flash effects can be loaded into the flash effects editor. Once loaded you can then modify the effect then save to the same location or copy to a new button location using a different name.

Basic Effect Editor

The basic effect editor provides a versatile way to build effects using any channel. It's essentially two types of effects in one. You can assign standard waveforms to individual channels and you can also record a stepped chase using any combination of channels. As with all the effects editors, before starting you must first select some fixtures. The order that you select the fixtures is important as this will affect how the phase offset will appear in the effect. Typically if you are viewing the fixtures on the stage you should select them from left to right. The basic effect editor should appear similar to the example below.
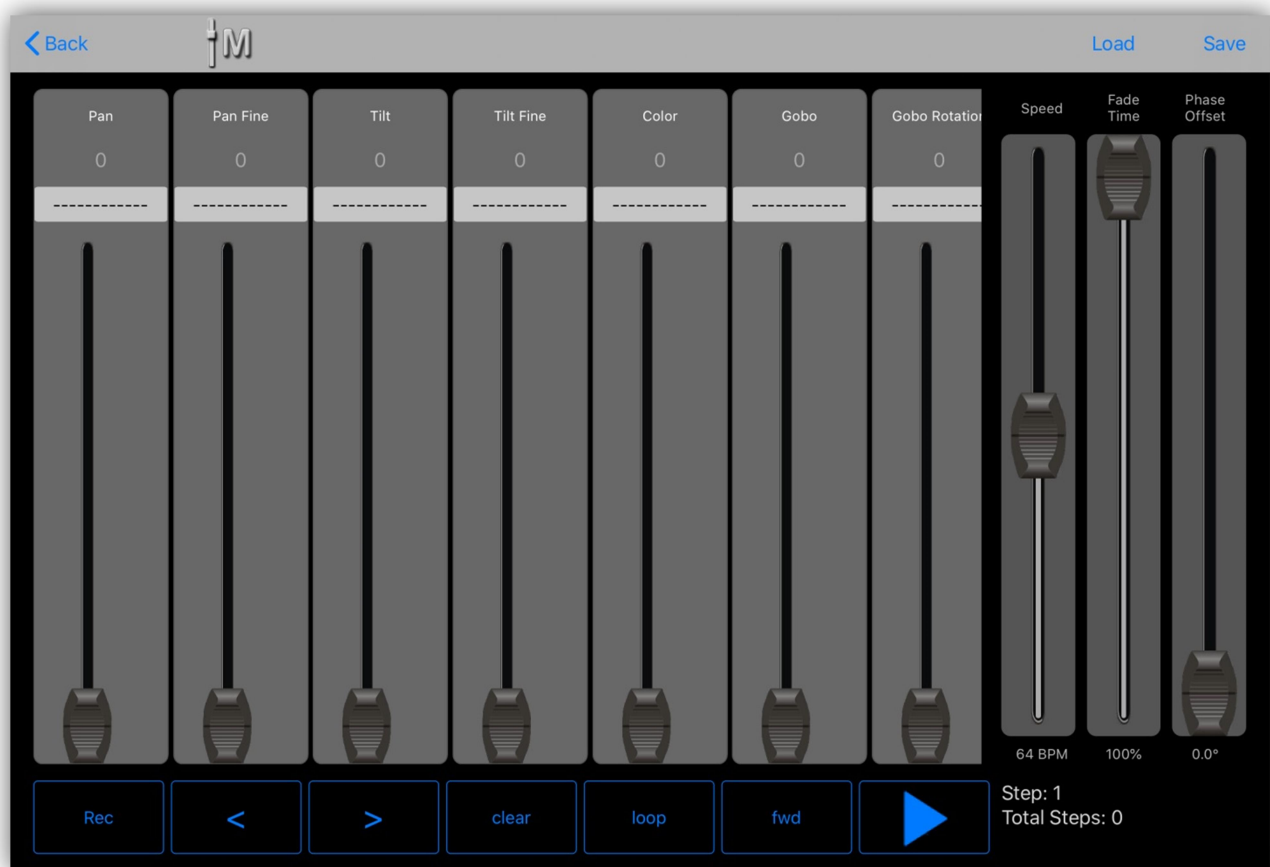

Depending on the fixture(s) you have selected, you will see channel faders in a view similar to the channels view that can be scrolled left and right. To the right of the channels are three faders for controlling the speed, fade rate and phasing of the effect and at the bottom are some buttons used for recording and playback.

The speed is shown in beats per minute and can be controlled using the speed fader or the tap/audio sync feature. Fade time is used for the chase effect and the

random ramp wave and will set the fade as a percentage of the time between steps. Phase offset is the phase lag between fixtures shown in degrees from 0° to 180°. For example, setting phase to 10° will make each fixture lag the previously selected one by that amount. Note that a full wave cycle is 360°.
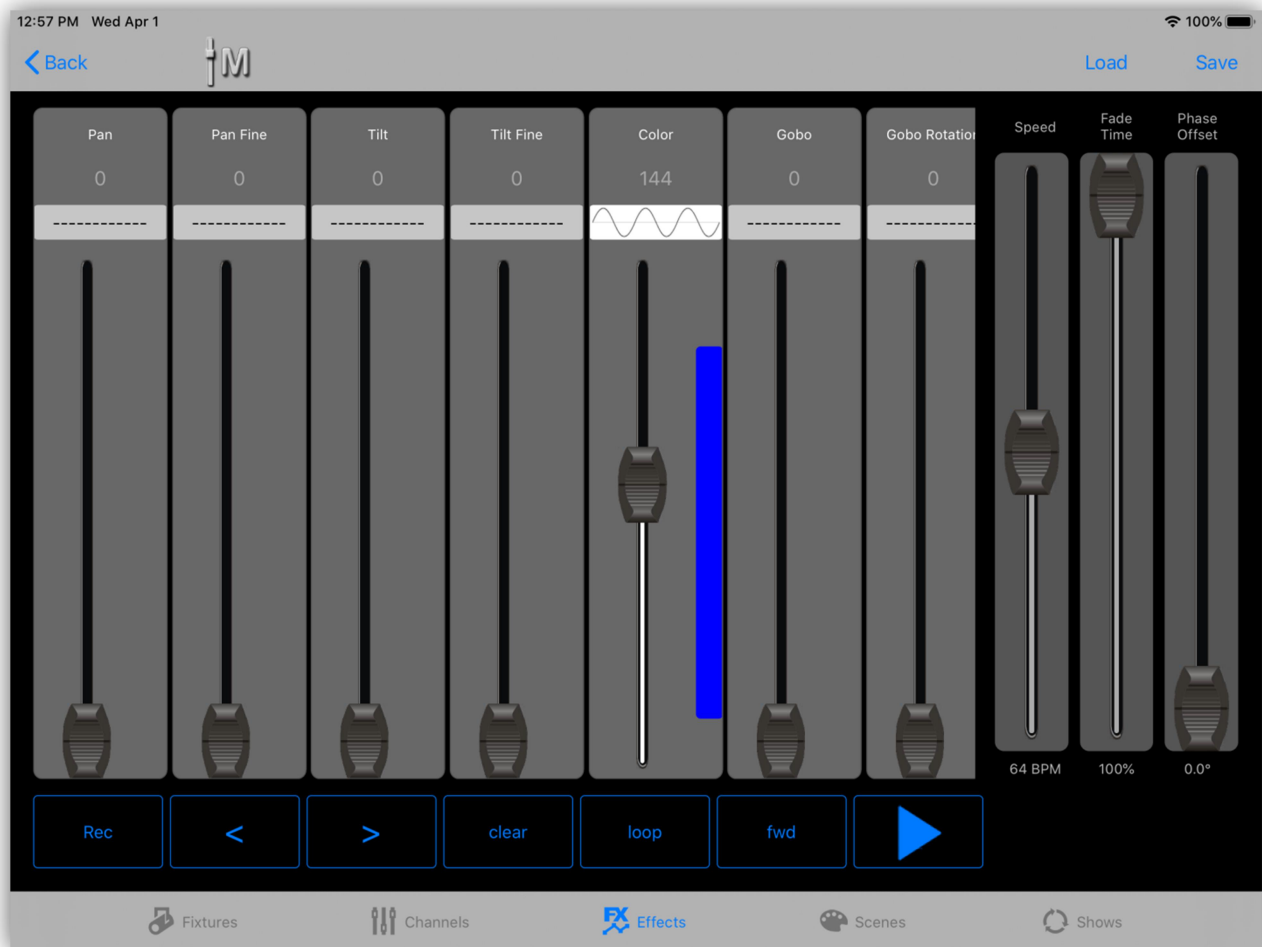
Waveforms

To assign a waveform to a channel, tap the box just above the fader as shown in the example below.
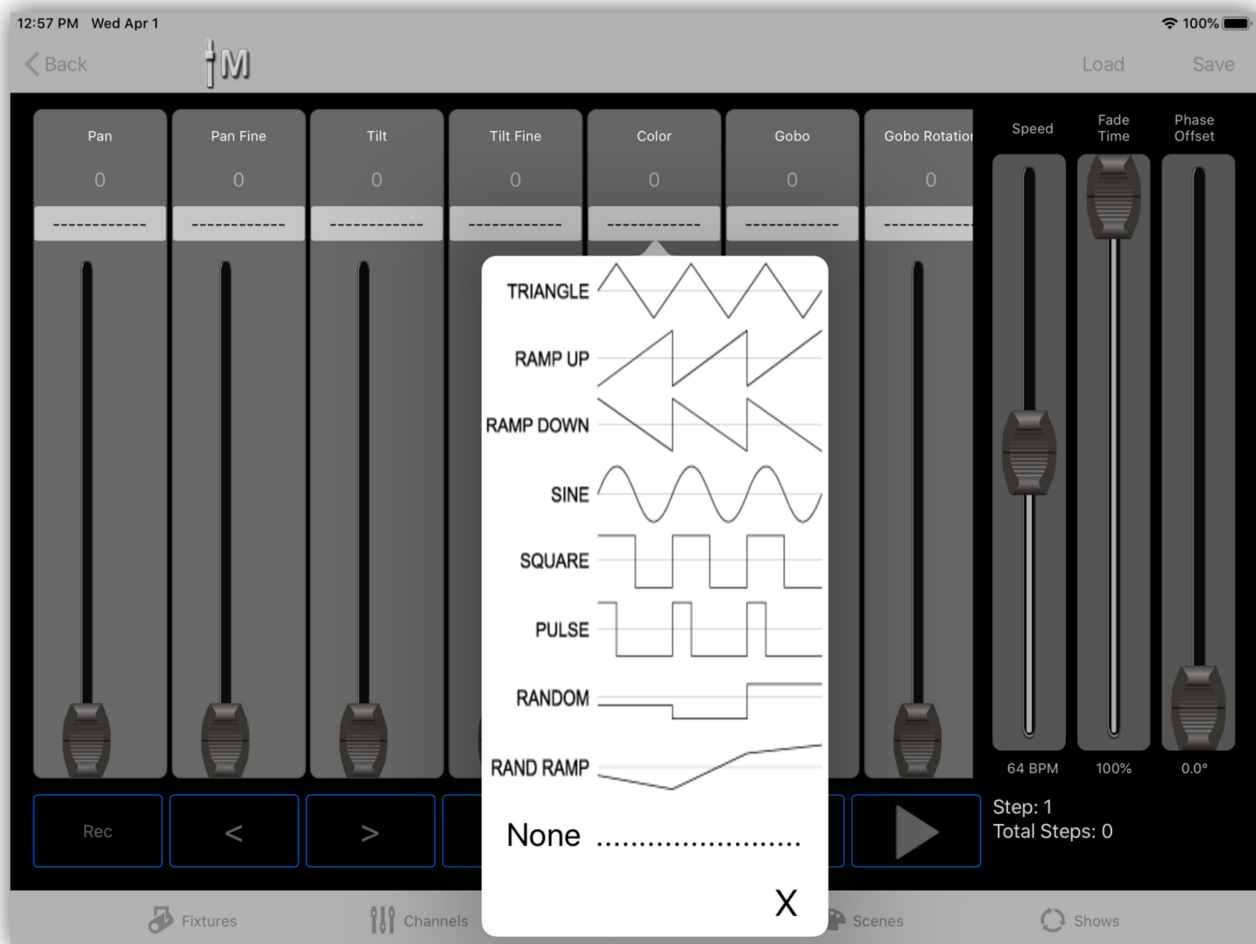
You will be presented with a dropdown list of common waveforms that can be assigned to that channel. To remove a waveform from a channel, select "None".

After a wave has been assigned, a blue stripe will appear along the right side of the fader as shown in the next example. This can be used to set the limits of the channel value while running the waveform. You can adjust the upper and lower endpoints of the limits by touching and dragging the ends of the blue stripe.

You can have as many or as few channels running waves as desired. To see the waveform run, tap the play button in the lower right of the screen. You will need to have some fixtures connected to actually see any phase offset you have added.

When using random waves the effect will pick random values within the bounds of the blue stripe. If the phase control is set above the halfway mark, each fixture in the effect will use different random values. If set below halfway, all fixtures will use the same random value.

When using pulse waves, the width of the pulse can be adjusted by using the pulse width control. Tap just above the phase fader on its label and the control will switch to pulse width. You can use it to get a short or long pulse and anything in between.

Basic Chase

You can record multi-step chases using this feature. To do this tap the "record" button in the lower left of the editor. It will turn red to indicate that you are recording as shown in the example below. Select and move channel faders in the scrollable view to add those channels to the first step. The number value above the fader will turn green to show that the channel is included in the step. You can also enter a value using the popup keypad similar to how it works in the channels view by tapping the value number above each fader. The keypad will also let you remove a channel from a step.
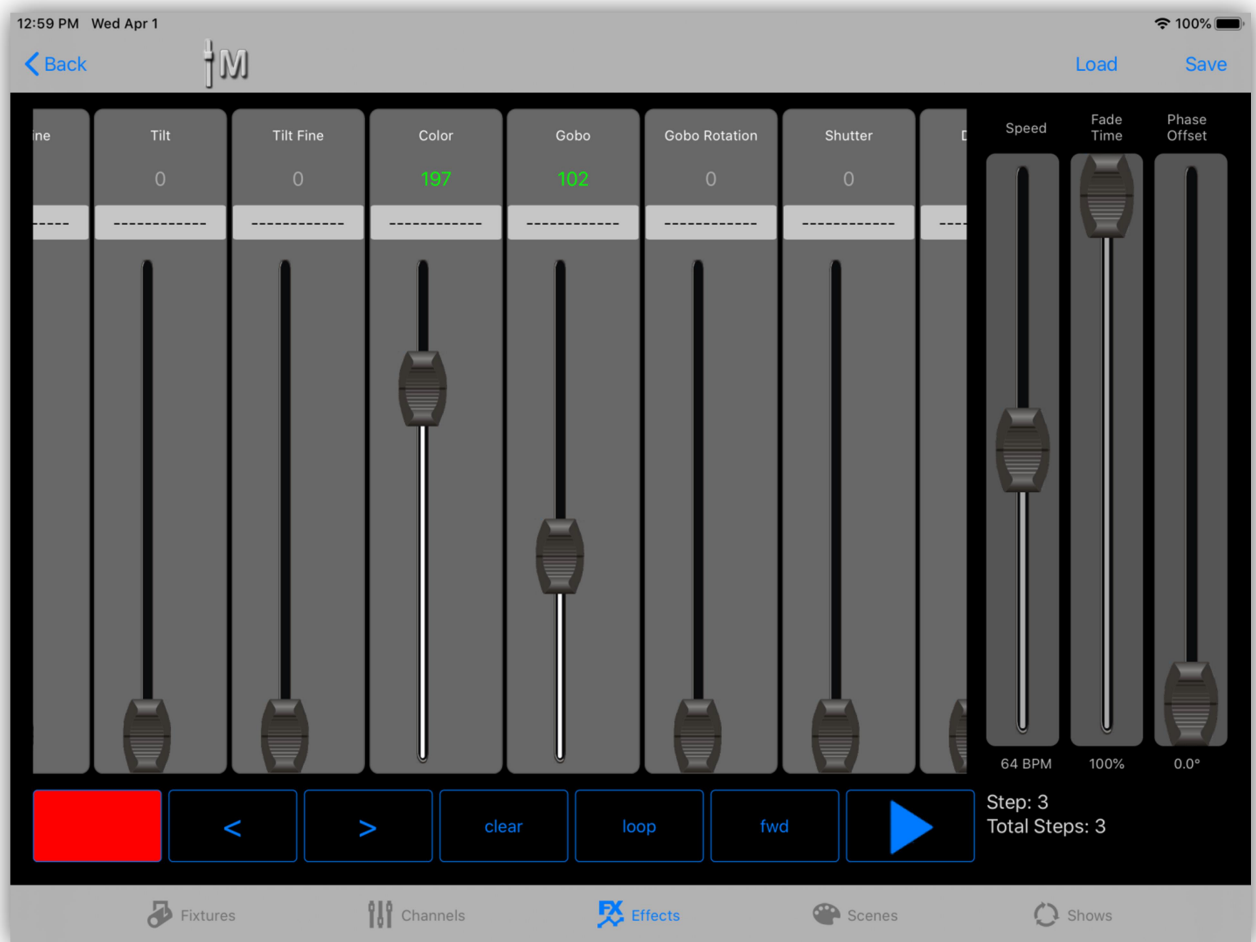
Notice the display in the lower right of the screen. This shows the current step you are working on and also the total number of steps in the chase.

To move forwards or backwards while editing the chase, use the left or right arrow buttons. The right arrow button will continue to add steps to the chase if you are at the end. Channels from the previous step will carry through to the newly added step. This makes it quick and easy to include the same channels in

each step you add. Use the clear button to remove the contents of the current step or the entire chase. One tap clears the step and the next tap will clear all of the steps. Tap the record or the play buttons to end recording. While recording, monitor the lower right display to keep track of how many steps there are and which step you are editing.

The loop/bounce and forward/reverse buttons work the same as with the other effects editors. They will control the direction of the chase. They have no effect on the waveforms.

This editor can have both waveforms and a chase running at the same time. Try not to include waveform channels in the chase steps as the wave will take precedence. A useful tip is to make a one-step chase to force some channels to go to fixed values and hold them while other channels are running waves. For example, set the shutter and dimmer channels open or color wheel on a fixed color while using a wave to pulse the iris channel.

Link Controller

The faders, wheels and buttons on the Link controller can be used with this editor. Buttons 1-7 (top row of matrix) will duplicate the bottom row of buttons on the screen. Faders 1-3 and wheels 1-3 will control the speed, fade and phase. Note that the faders on the Link do not control the channel faders in the editor. Those must be set using the screen.

Save Basic Effect

To save the effect, use the same method as described in the previous sections for the other effects editors. Tap the "Save" button at the top of the editor screen or on the Link. This will present the buttons list. Select a button location to save the effect by tapping the button row on the screen or button on the Link. The button editor will appear similar to the example below.

Enter a new file name or use the default name provided. You can use the default button image or select a new one from your photo library. Enter a short label that will appear under the button. Enable tap/audio sync if you want to be able to control the speed of the effect that way. Tap "Save" to complete the process.

Load Basic Effect

You can load a saved basic effect into the editor. Tap the "Load" button at the top of the editor screen then select from the list of effects buttons. Only basic effects can be loaded into the basic effects editor. Once loaded you can then modify the effect then save to the same location or copy to a new button location using a different name.

Shows View

Shows are scene lists that run on a timer and play automatically. With the show editor you can arrange a list of scenes and assign a hold time to each scene in the list. Typically a show will run in a continuous loop but doesn't necessarily have to.

The shows view is a button array as shown in the example below. Button 1 is highlighted in this example indicating that show 1 is running. More than one show can be running at the same time. Toggle shows on or off by tapping one of the buttons on the screen or on the Link.
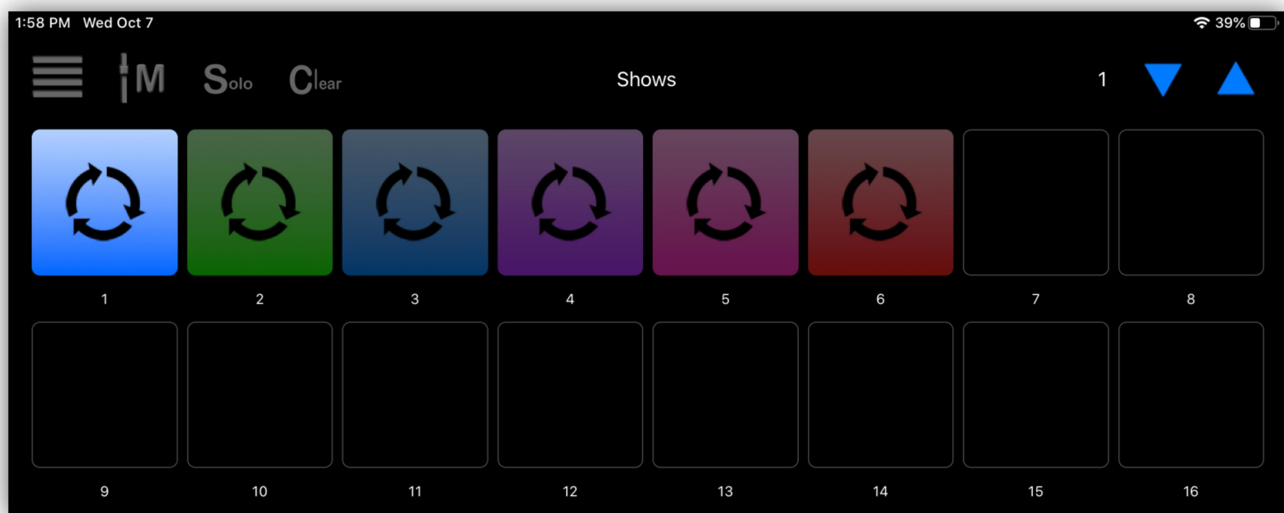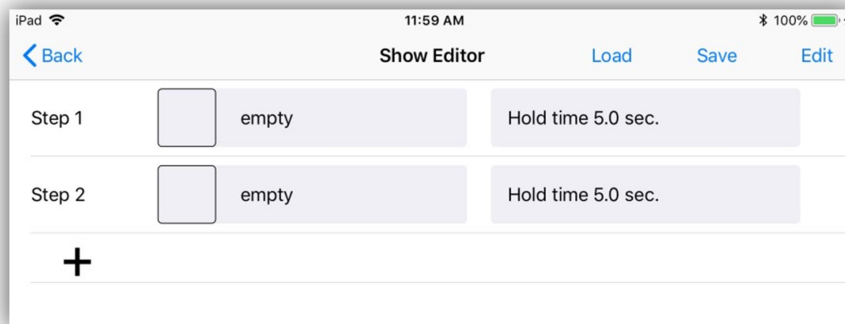

Edit a Show

The menu pulldown for the shows view is shown here. Select "Edit" to start editing a new show or to edit one that's already saved. Select "List" to view the show buttons list.

After you select "Edit" you will see the following screen with two empty show steps set to default hold times. A show must contain at least two steps.

Each row in the table represents a step in the show. To add additional steps, tap the last row "+" to add another empty step. Tap the scene button in any of the occupied rows to view a pop-up list of available scenes to select from as in the example below. You can select a scene by scrolling and tapping a row in the pop-up or you can use the buttons on the Link controller to select a scene.
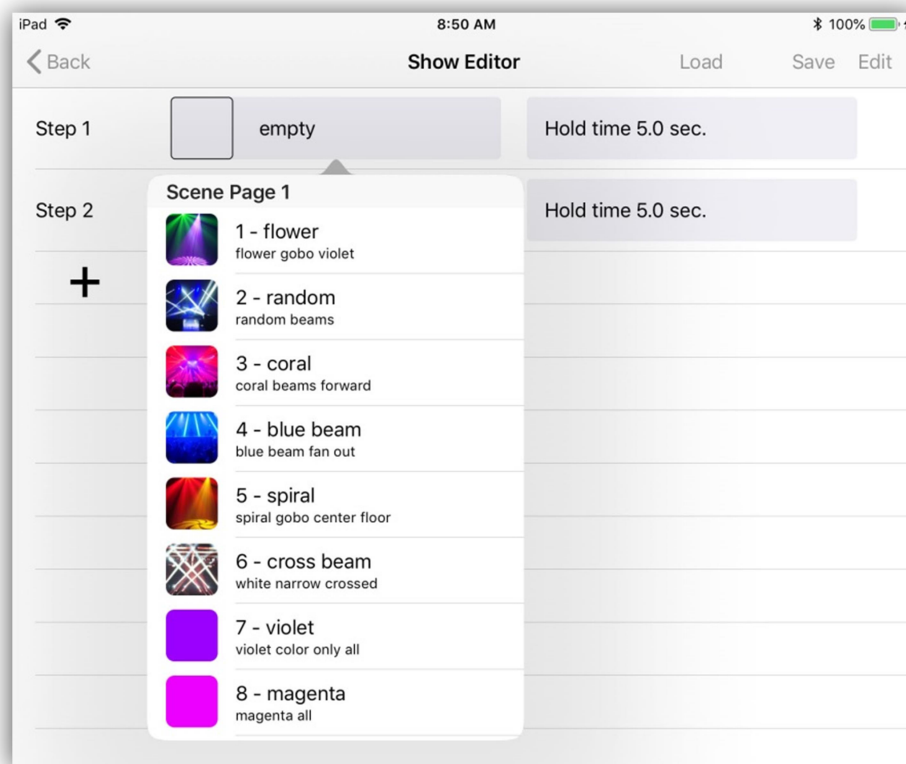
After selecting a scene, tap the hold time and enter a time using the pop-up keypad as in the example below.
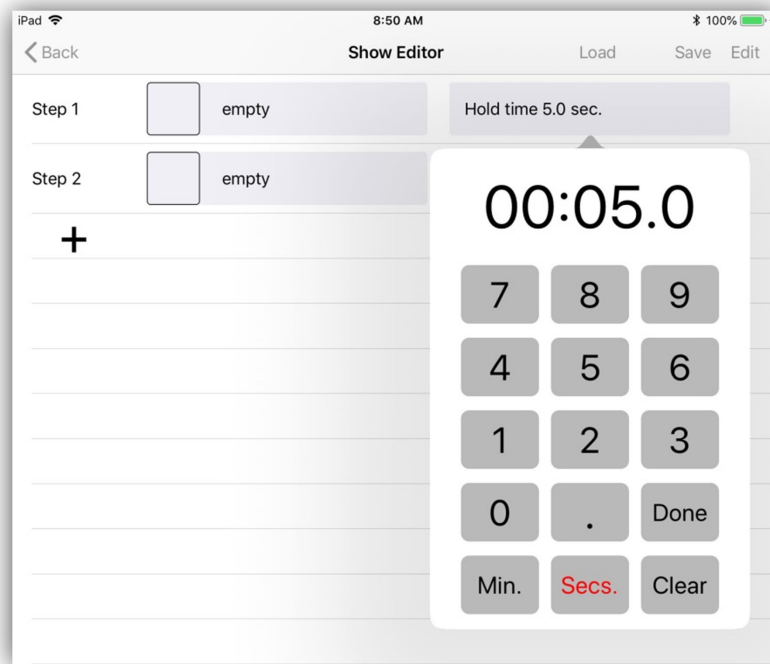
Tap the "Min." or "Secs." button to enter hold times in minutes or seconds. Tap "Done" when finished.

You can tap the "Edit" button in the upper right of the screen to delete or re-arrange the steps using the standard IOS list editor. Tap "Done" when finished.
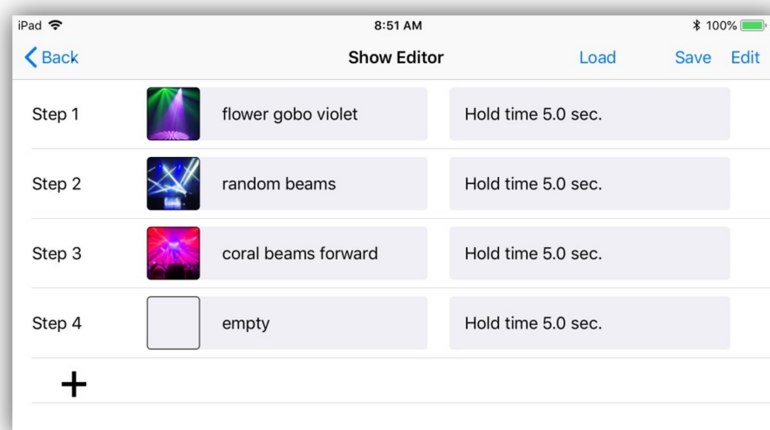
Important Note: The show's scene list only contains scene names and times. If you change or delete any of the scenes that are in the show, the show will reflect any of those changes when it plays.

Save Show

Tap the "Save" button at the top of the show editor when you are finished editing and the list of show button assignments will appear. Choose the button where you want to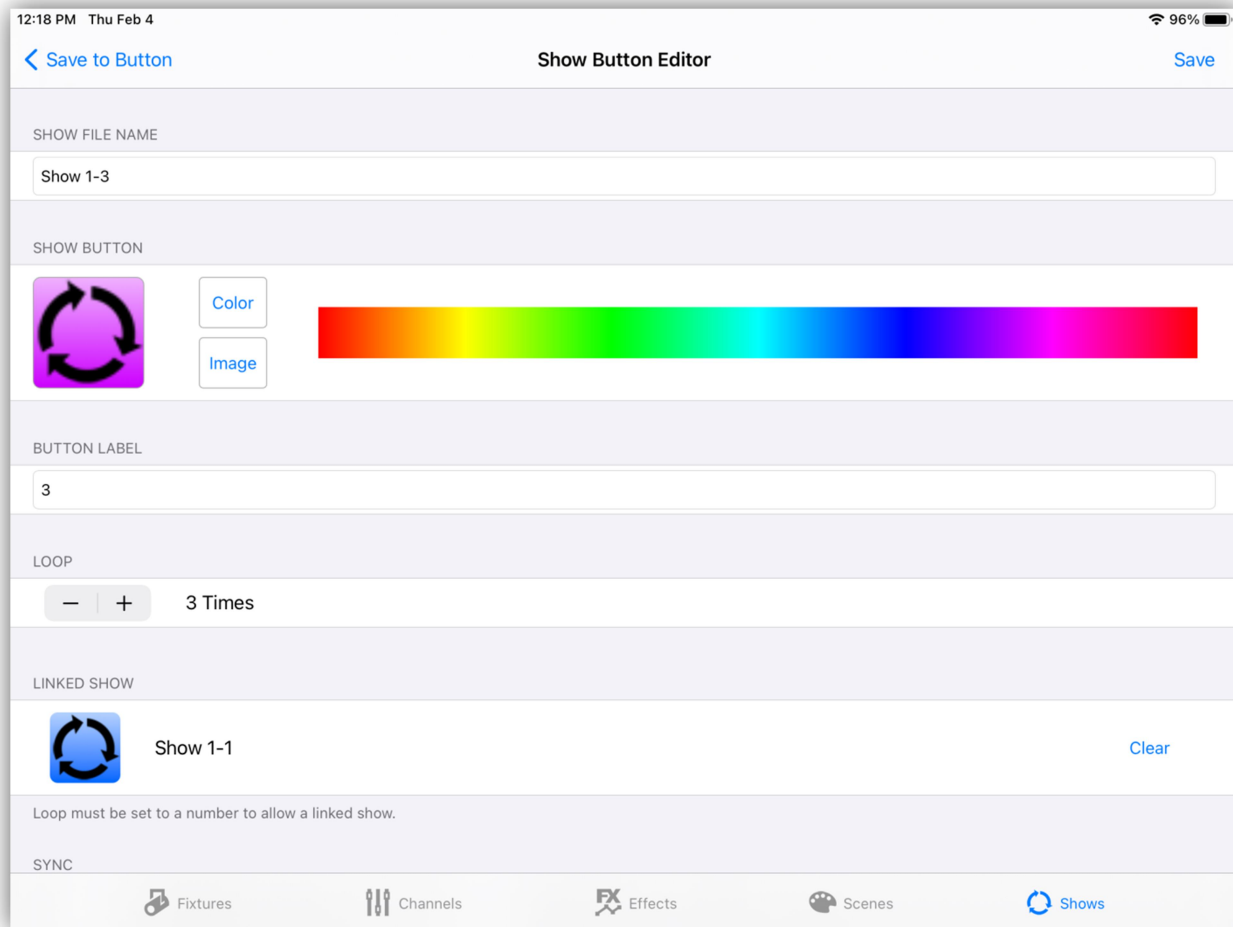 save the show by tapping a row on the screen or by using the Link's buttons. The show button editor will appear as in the example below.

A default file name that uses the page and button number can be used or you can enter a longer more descriptive file name for the show. You can also enter a short label that will appear under the show button. Touch and drag inside the color strip to change the button color. To use an image instead of a color for the button, tap "image" to show the image picker where you can choose and crop any image from your photos library.

With the loop control, you can set the number of times the show will cycle or you can set it to "Loop continuously". If set to a number, the show will stop after it runs the selected number of cycles or it can call another show if you have a linked show selected.

To select a linked show, tap the "Linked Show" button and then scroll through the list of saved shows and select one. You can use this feature to link a set of shows together in a chain. Set the last show in the chain to link back to the first if you want to make a continuous loop. Note that for the linked shows to be called you must set each show's loop counter to a number and not to "continuous".

If you would like to be able to override the hold times in the show using the tap sync or audio sync, turn on the enable switch for tap/audio sync.

To manually advance the show using the < > (Go and Back) buttons. Turn on the enable switch for that feature as shown below. In manual mode, hold times are disabled. When the show is started you will have to use the forward button (just above jog wheel 1) to call the first scene and to subsequently advance through the show's scenes. The < (back) button will allow you to move backwards through the scenes list until the start of the show is reached. "Back" will not loop or recall any linked show but will hold on the first scene in the current show. Note that if there is more than one show running in manual mode, they will all advance together on the Go button press.
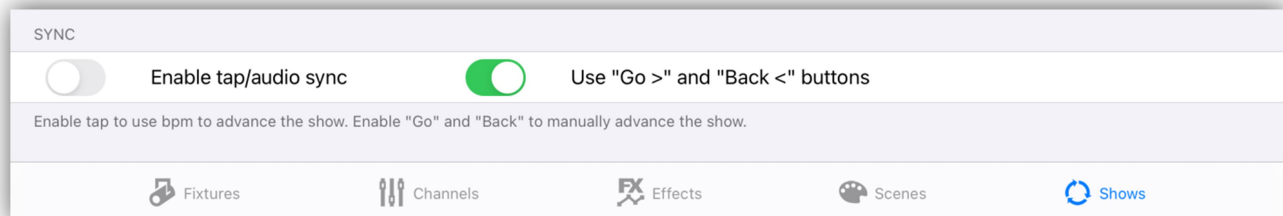

After setting the show parameters, tap the "Save" button in the upper right to save the file. An alert will appear to confirm the save or to warn if you would like to overwrite another show that is already using that name.

Edit a Saved Show

From the show editor, tap the "Load" button at the top of the screen. This will present the list of saved shows. You can select a show to edit from this list.

Shows List

The shows list is a table of show button assignments. The list can be edited to re-arrange the button order or to delete buttons. Tap the "Edit" button to use the standard IOS list editor. If you tap any row you will be presented with the list of show files in memory with a check next to the file of the selected row. You can use this list to assign any show file to a show button.
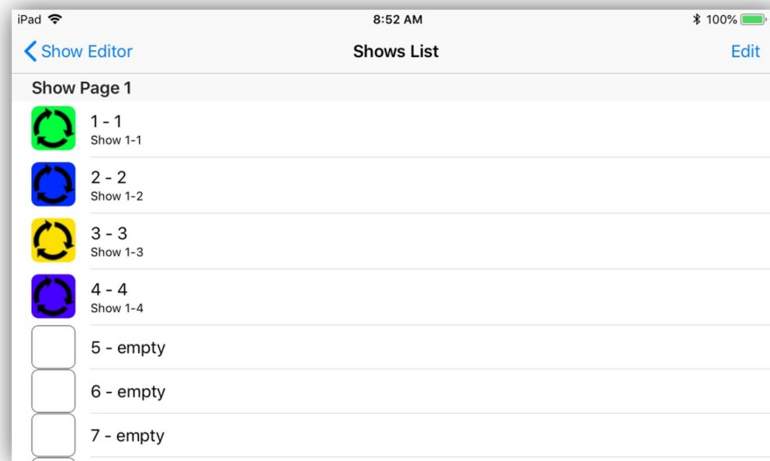
Show Playback

When played, a show will normally loop continuously until you turn it off unless you set the loop counter to a number. Scenes play back the same as if you were tapping scene buttons manually. You can have several shows running at the same time. If scenes in the running shows overlap, the results can be chaotic, especially if two shows are sharing the same scenes at the same time.

If the "Solo" button is on, only one show and one scene will run at a time. With solo off, shows and scenes will be allowed to pile on and continue running. When you turn a show button off, any active scenes from that show will also be turned off.

Tap the "Clear" button to turn off all running shows.

Master Pop-up

The example below shows the Master pop-up. Most views will have access to this by tapping the master button at the top left of the screen. This pop-up contains a number of global controls, each explained in the following paragraphs. You can also call pop-up this by pressing on wheel 4 on the Link controller.
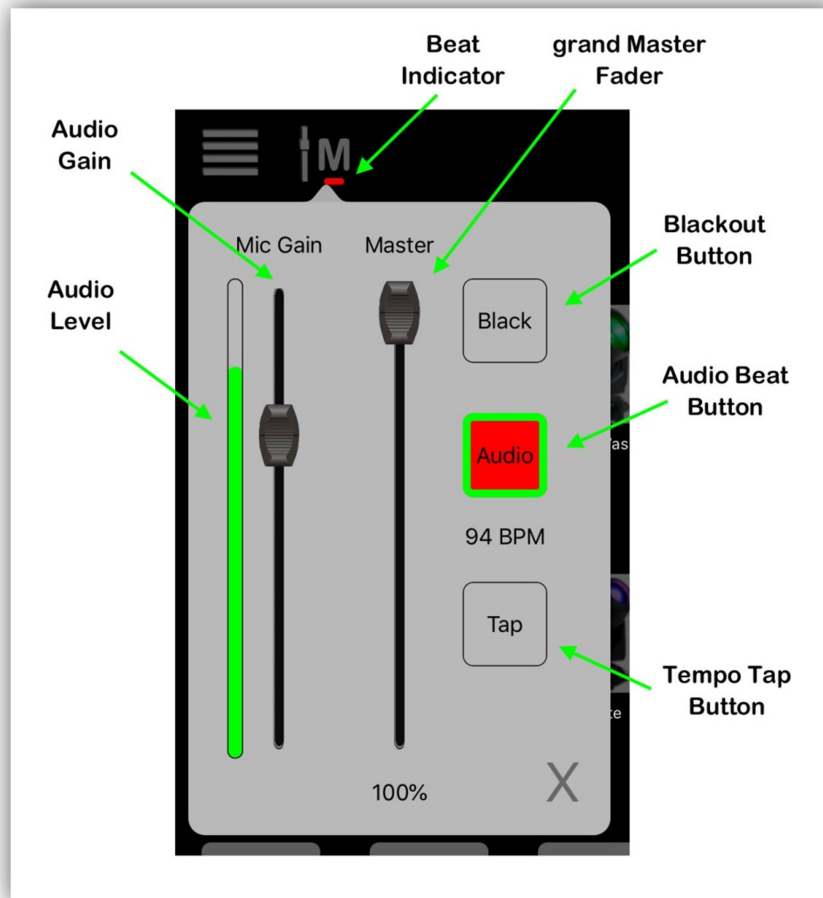
Master Fader

The master fader controls the overall brightness of your stage. It is a manual control and will follow the position of the master fader on the Link controller. It will affect all fixtures whether they are selected or not as long as the fixture has a way to control its brightness, either through a dimmer channel or channels that are dimmable, e.g. RGB. All of the fixtures in the built-in library are set up for master control by having certain channels flagged as "controllable by master". For your custom fixture profiles, you need to flag these channels yourself using the channel editor. See the "Custom Fixture Profiles" chapter for details.

Black Button

This button works along with the master fader (on the screen) to achieve a blackout by pulling the screen fader to 0. Tap and hold the button briefly to get a 3 second fadeout. Tap and release quickly to get an instant blackout. Tap the button again to return the master to its previous position. The blackout button on the Link controller works this way also, regardless of whether the master pop-up is visible or not.

Mic Gain

This fader controls the sensitivity of the microphone input for audio effects and audio beat. Adjust the gain with music playing and observe the level indicator. The indicator responds to low frequencies as this is what's used for the beat detector. Set the level so that any low frequencies raise the level indicator just into the red and makes the pulse indicator on the audio button flash. The pulse indicator is the green frame around the audio button. **Note:** The audio level indicator will not respond to high frequencies such as those coming from a smart phone speaker. For best results, try to use the gain fader in the 50-75% range.

If the master pop-up is displayed you can use wheel 4 to adjust the audio gain.

Audio Button

This button will enable the audio beat function. When there is a low frequency pulsing beat that is picked up by the mic, this function will try to extract a tempo from it and trigger any effects or shows that have the sync function enabled. When the tempo is detected, the audio button will flash red on each beat as shown in the example above and the beats per minute will be displayed just below the audio button. The beat will stop if the audio source stops and any effects or shows will revert to their saved tempos. You can use the audio button on the Link controller to enable audio beat at any time.

Tap Button

The tap sync button lets you tap in a beat. The beats per minute will be displayed above the button and the button will flash red on each beat. You only need to tap twice to activate it. Tap once to turn it off. If any currently running show or effect has the tap sync enabled, it will respond to the tap sync BPM. You must enable this feature for each individual show or effect. See instructions on saving shows and effects for more info. Use the tap button on the Link at any time to tap in a beat.

IOS Files App

The files app gives you easy access to files on your IPad as well as any cloud service you use. If for example you have some custom fixture profiles on the original Airstream app that you would like to use on this app, it's easy to copy and paste them from one app's documents to another's. You can also backup files and folders by copying and pasting them to a cloud folder.

Tap the files app icon to open it.

You will see something similar to the example below after selecting "Locations". In this example the three important locations are ICloud Drive, Dropbox and My IPad. When you select a location, you will be able to view the files there. Note that when using the files app for the first time you may need to enable your locations using "Edit" in the locations pane.
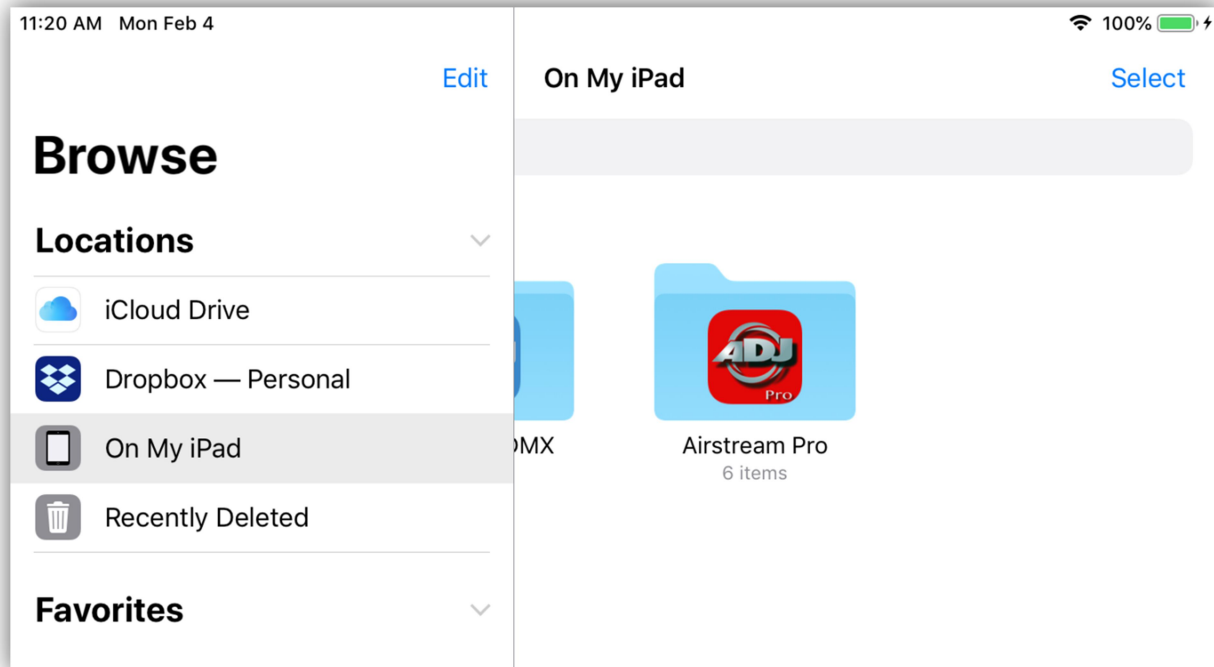
After selecting "On My IPad" in locations, you will see the apps that support file sharing as in the example below. **Note:** An app will need to have some files saved before it will show up here.
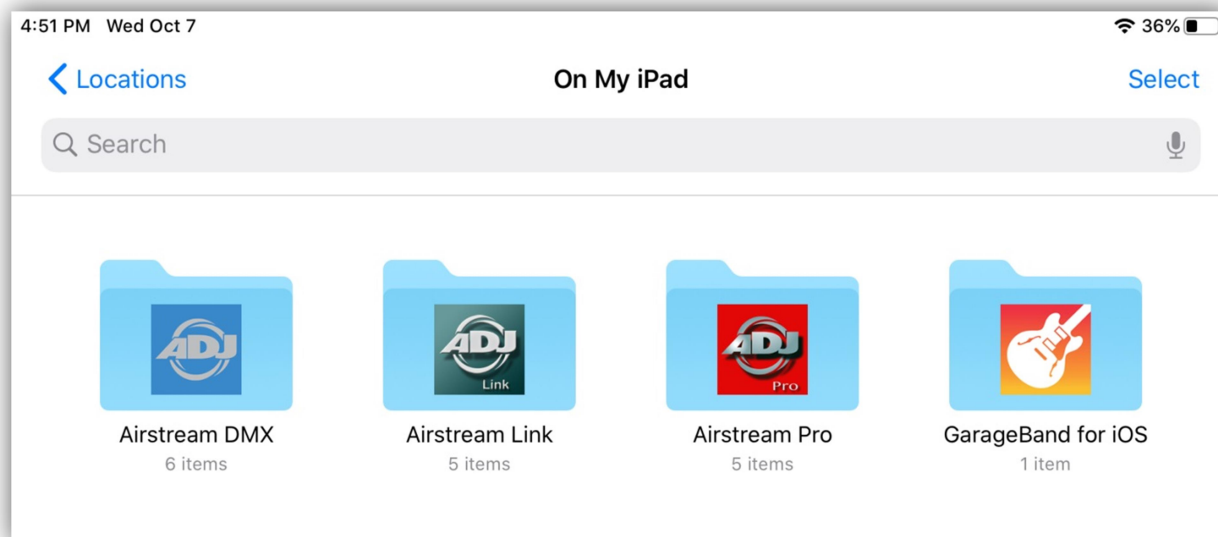
Select Airstream Link to view all of its folders as shown in the following example.
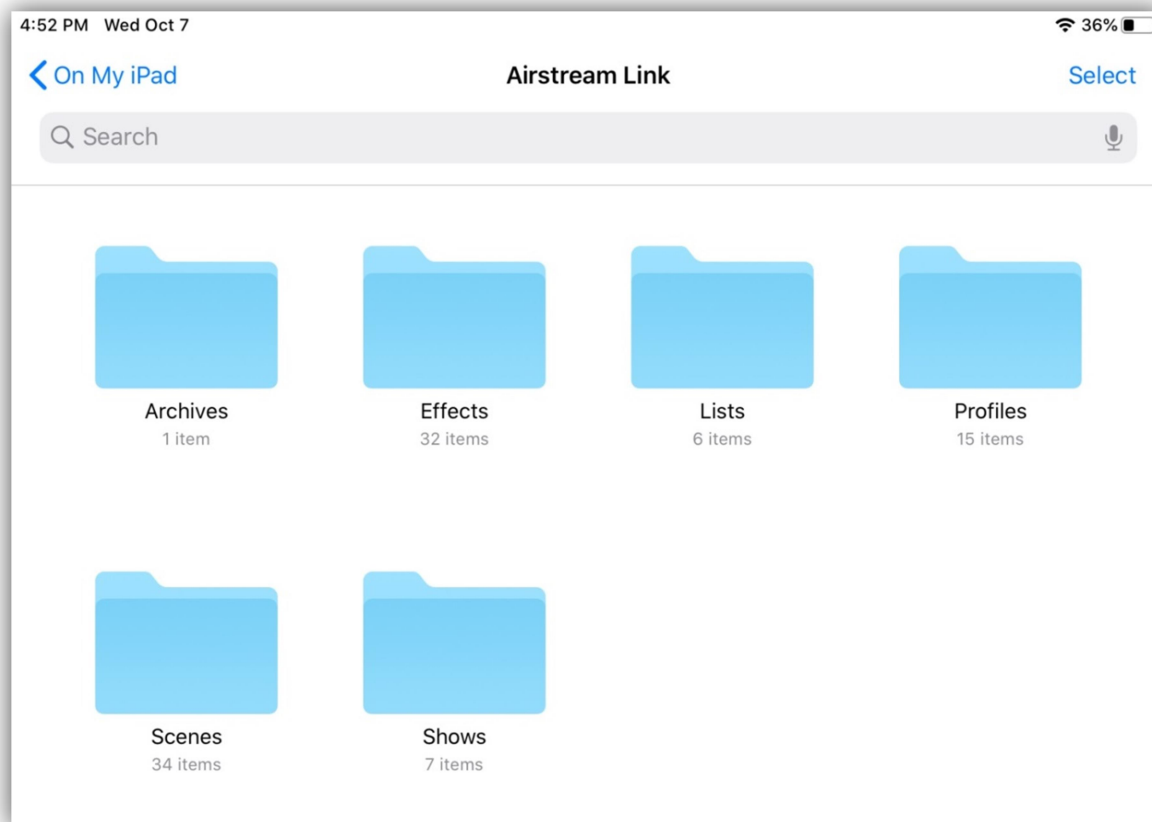
To back everything up using ICloud, tap "Select" and then "Select All". At the bottom of the screen tap "More" and then "Copy" as shown in the example below.
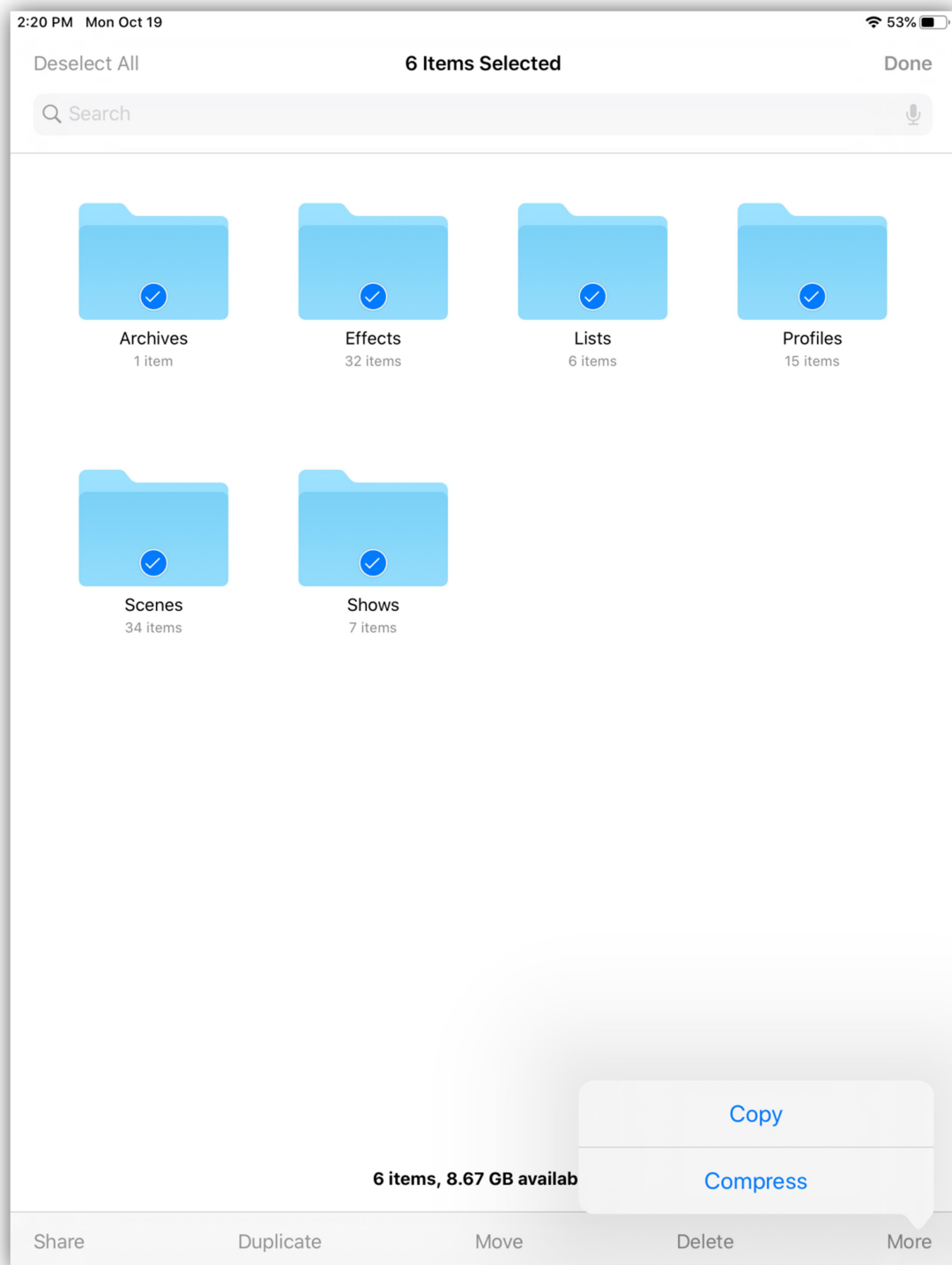
Tap "Done" and then return to Locations and select ICloud Drive. In the ICloud view you will see the files and folders you have stored there. Touch an open area of the screen and hold your finger until you see the following popup.

Tap "New Folder" to make a folder to save your files. Finally open that folder, touch and hold on an open area until you see the same popup and tap "Paste". It can take some time to copy the files depending on how many there are and your internet speed.

This method can be used to copy your Airstream Link files from an old device to a new device. Use the methods described in the previous paragraphs to copy all of the Airstream Link files you have backed up on ICloud to the new Airstream Link documents folder.

Note: You can reuse custom fixture profiles that you created in the original Airstream DMX app or the Airstream Pro app by copying and pasting them from one profiles folder to the other. Only profiles can be shared between the three apps. Things like scenes, effects and shows are not compatible.

Mac Finder

Scenes, effects, shows, custom profiles and all other necessary files are stored in the app's documents folder in your IPad. Subfolders are created for each type of memory. In addition to the IOS files app described in the previous section you can also access these files using Finder running on your Mac when your IPad is connected to it. The screenshot below is an example of the file sharing display in Finder connected to an IPad with the Airstream Link app installed. Notice that the IPad is selected in the left pane and Files are selected in the right pane top bar.
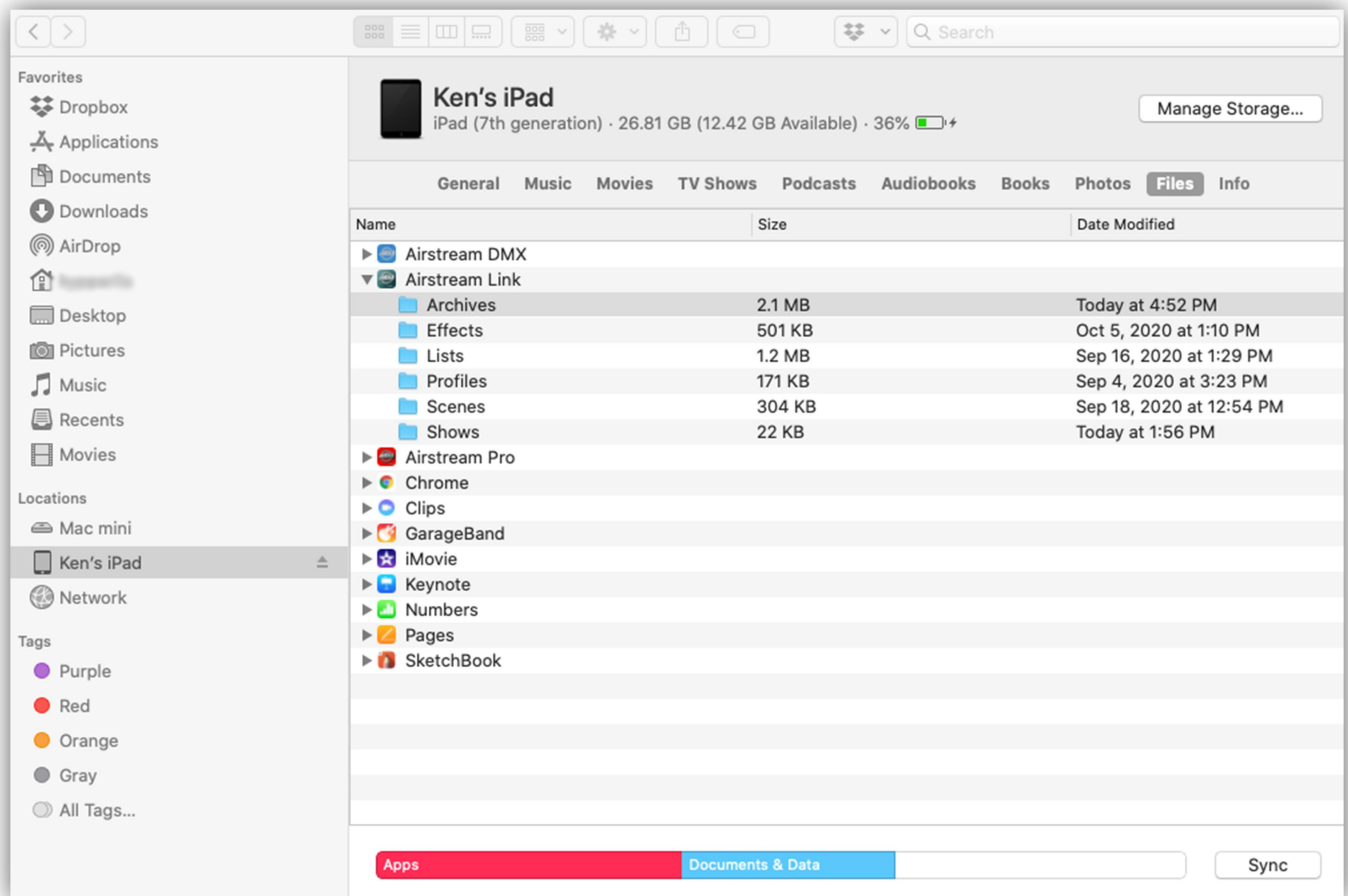
All of the app's folders are displayed in the pane on the right. The folders can't be opened in Finder but they can be dragged to your desktop where you can open and edit them. You can then drag them back to Finder where they will be copied back into your IPad automatically.

The example below shows a Finder window on a Mac with the contents of the Profiles folder open showing 6 custom profiles.
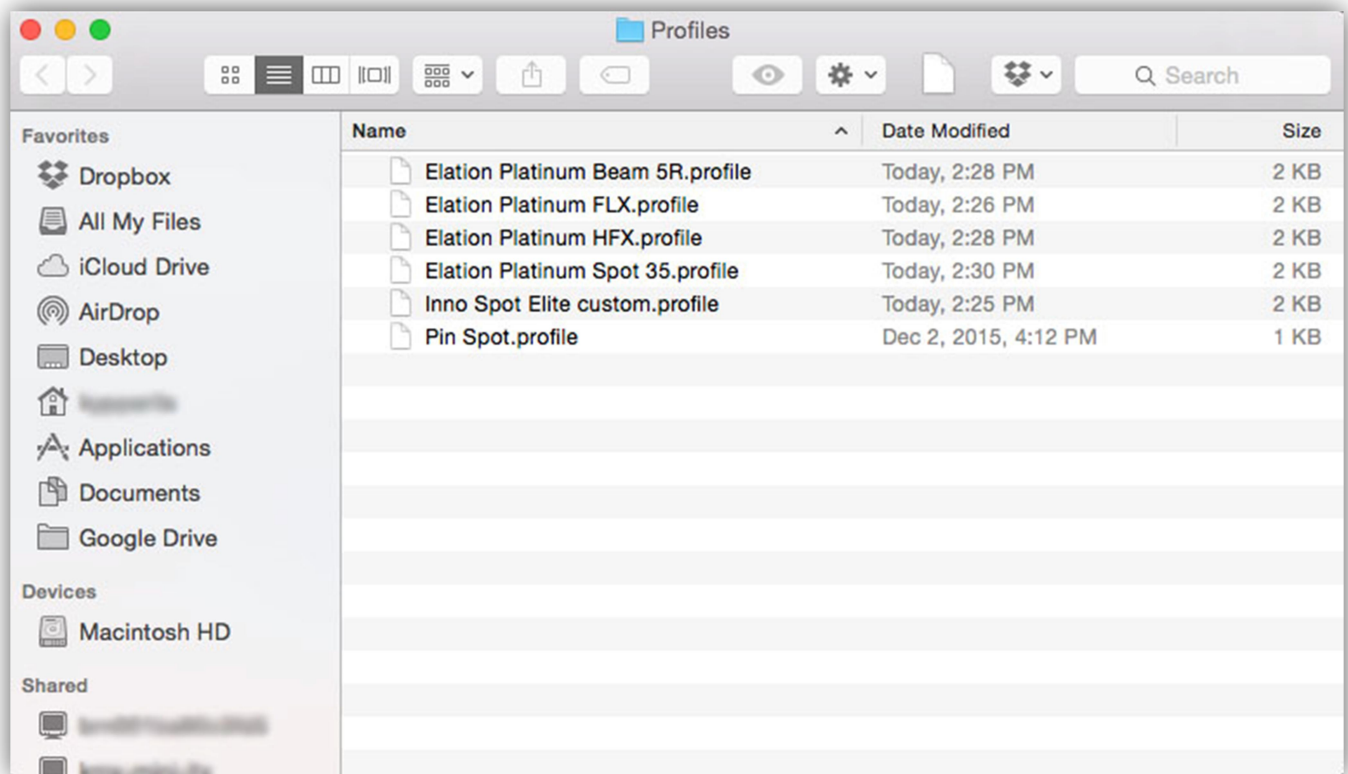
You can use Finder to back up your folders on your Mac or to load new files into your IPad. To Share custom profiles with someone, copy any new profiles to or from the profiles folder while it's on your desktop.

Important Note: There is a potential compatibility issue between IOS filenames and OSX filenames. IOS will allow you to create two files with the same name using different letter case, for example "scene 1" and "Scene 1". OSX will see these as the same file name. This can cause error warnings if you try to transfer files like this between your IPad and your OSX device using Finder. Try to avoid duplicate file naming to avoid this problem.

Idle Timer and Background State

This app will temporarily disable the idle timer on your IPad to prevent the app from going into the background automatically. It ignores the screen timeout you have set in the IPad display settings. This insures that the screen won't go dark while using this app. When you leave the app, the idle timer is re-enabled so that it works normally.

When you force the app to the background by pressing the home button, the Link controller will continue to output the DMX512 signal on the 4 DMX connectors. The app will no longer be updating the output and the output will hold on the last values that were received from the app. If you are running a static scene, nothing will change. If you are running an effect or show that uses a timer, it will pause until you restart the app.
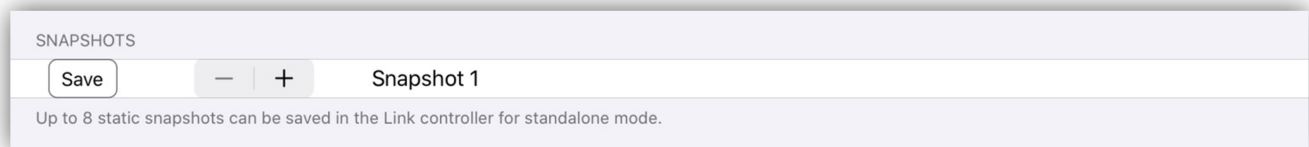
Standalone Mode

The Link controller is capable of running in a simple standalone mode where it doesn't need to be connected to an IPad. Eight static scenes can be assigned to matrix buttons 1-8 where they will be stored in the Link's memory for recall when running in standalone mode. This can be useful for emergency situations when you don't have an IPad.

Saving a Snapshot

To save a scene to one of the eight standalone buttons, first create or call a static scene using the IPad. A static scene contains no moving effects. Make sure all four DMX outs are set to the desired levels as these will be recorded as a snapshot. This includes setting the master fader to the desired level.

From the settings (accessed from the fixtures view menu) go to the snapshots row and select the button number to save, then tap the save button. The Link controller will record the outputs of all four DMX universes into its internal memory.

SNAPSHOTS

| Save | — | + | Snapshot 1 |

Up to 8 static snapshots can be saved in the Link controller for standalone mode.

Using Standalone Mode

To enter standalone mode, press and hold matrix button 1 while powering on the Link controller. "SA" will be displayed on the matrix page. The Link will not establish a Wi-Fi network and only matrix buttons 1-8 will function. All other controls like the master fader are ignored. If there is a snapshot assigned to button 1 it will be called.

Press any of the eight buttons that have snapshots assigned to fade the lights on or off. The Link will perform a soft one second fade-in or fade-out. Only one snapshot can be active at a time and a button's LED will light when active. If no snapshot is assigned to a button, the button press will be ignored.

Revision History

1.0   First release.

1.1   Fix minor bugs.
       Add fixtures to library.
       Add home position feature for moving fixtures.
       Add manual "Go" and "Back" for shows.
       Utilize the page and matrix buttons when saving scenes, effects and shows.
       Add "clear" function by pressing in wheels.
       Add press-in functions to small rotaries.

1.2   Fix minor bugs.
       Improve functionality of the sub masters.
       Add keypad entry for fixture start addresses and home position.
       Add "fan" wheel group.
       Add fixtures to library.

1.3   Add fixture groups.
       Add "At Full" button.
       Add home setting for any channel.
       Fix minor bugs.
       Improve overall response and performance.

1.4   Add custom page names.
       Update fixture library.
       Fix minor bugs.

1.5   Fix minor bugs.
       Update fixture library.

1.6   Add online fixture library of over 20,000 downloadable fixtures.
       Can now display channel slots for downloaded fixtures.
       Update and improve audio functions.
       Fix minor bugs.

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