Airstream DMX Pro

for IOS

Revision 2.2

Contents

Overview

Airstream DMX Pro is a lighting control app designed for small to medium sized venues such as nightclubs, churches, trade shows or anywhere intelligent lighting fixtures might be used. It is only available for Apple IPad. This app can control many types of intelligent lighting fixtures that use DMX512 so that you can create scenes, special effects and shows. There is also support for audio triggers and MIDI.

To connect your lighting fixtures, you will need either the ADJ Airstream DMX Bridge or the ADJ 4 Stream DMX Bridge, available from your ADJ products supplier. A bridge allows you to connect to any DMX512 lighting fixture from any manufacturer. The bridge provides a private Wi-Fi network to connect to your IPad. It also provides an ADJ Wifly transmitter than can wirelessly control ADJ Wifly equipped lights.

This app can support up to 4 DMX universes on a single Wi-Fi network. Lighting control messages from this app are sent over the network using either Art-Net or streaming ACN protocols. The app will work with any Art-Net or sACN node from any manufacturer but you must first connect to at least one ADJ Airstream DMX Bridge or 4 Stream DMX Bridge to unlock the outputs.

This manual describes all of the features of the Airstream DMX Pro app. There are separate user manuals for the Airstream DMX Bridge and the 4 Stream DMX Bridge. You may want to consider downloading this manual into your IPad for easy reference while using the app.

What's New

Version 1.9

Add new effects editor for "Basic" effect.
Add a loop switch so that a show can loop continuously or play once and then stop.

Version 2.0

Add more lighting fixtures to the library.

Version 2.1

Add loop counter and link feature to shows.

Connecting to the DMX Bridge

To control intelligent lighting fixtures using DMX512 or ADJ's Wifly wireless network, your IPad needs to be connected to a Wi-Fi network from one of the DMX Bridges or to an external network that all devices are connected to. If external, the network can be a home or business Wi-Fi network or a router. When the bridge is turned on, it will either create a local Wi-Fi network that you can join using the Wi-Fi settings on your IPad or it will join an existing network depending on how you have it set up. If the bridge is making a local network it will show up on the list of available networks in the Wi-Fi section in your IPad's settings. The default network names created by the ADJ bridges are "ADJ Airsteam DMX" or "ADJ 4 Stream DMX" The default passwords are "airstream" or "4 Stream" depending on which bridge you have. 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 for your bridge network before using it in public. The network can appear on any Wi-Fi device in the vicinity of your lighting system.*

The default network lighting protocol for the 4 Stream DMX Bridge is sACN. If you have a connection between the app and the bridge the green activity LED on the bridge will flash briefly every second or so to show that it is receiving a message. The app sends a regular refresh packet every second or so even if there is no lighting activity taking place.

The Wi-Fi range between your IPad and the bridge will vary depending on the environment but you should expect no more than 75 feet for a reliable connection when the bridge is making its own network. If you are using an external network generated from a router, the range will depend on the range or coverage of that network. The range of the ADJ Wifly network is far greater than the range of the bridge's Wi-Fi network so it is recommended that the bridge be kept close to your IPad rather than close to the lights.

Note: The ADJ 4 Stream Bridge also offers a wired connection over USB to your IPad as an alternative to using a wireless Wi-Fi connection. See the chapters "Settings - MIDI" and also "MIDI" for more details.

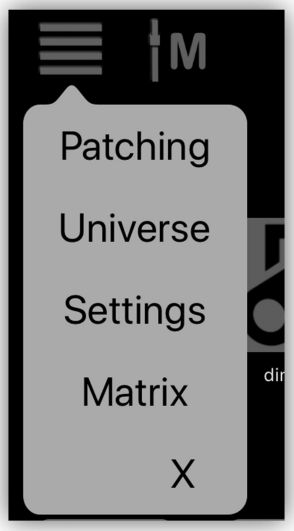
Note: If you are using the original Airstream DMX Bridge. Change its settings to sACN mode, universe 1. This will match the default settings of this app.

App Navigation

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

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.

From within each tab's view, you can navigate to other views by tapping the pull-down menu button at the top of the screen and then tapping a menu item. The illustration shows the menu list from the fixtures view.



Fixtures Tab

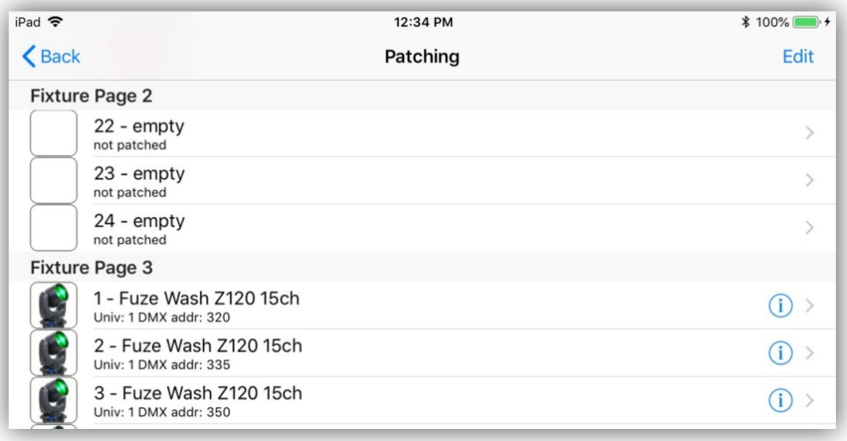
The fixtures tab is where you select fixtures for programming and where you can configure your fixture layout. The first view you will see is a field of 24 fixture selection buttons. If you are running the app for the first time, your field will be filled with empty buttons.

You will notice in this example that the top row of buttons is highlighted while the other rows are dimmed. This indicates that the top row has 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. To select or unselect a group, first tap and hold the first button of the group then tap the last button of the group. All buttons in between will select or unselect depending on the state of the first button tapped. The order of selection is important for some of the effects that use a sequence of fixtures. Tap the “Clear” button at the top to unselect all fixtures on all pages.

In the upper right there are blue up and down arrow buttons for changing pages. You can use up to 24 pages of 24 fixture buttons per page. Tap the up or down arrow or touch and hold to auto repeat.

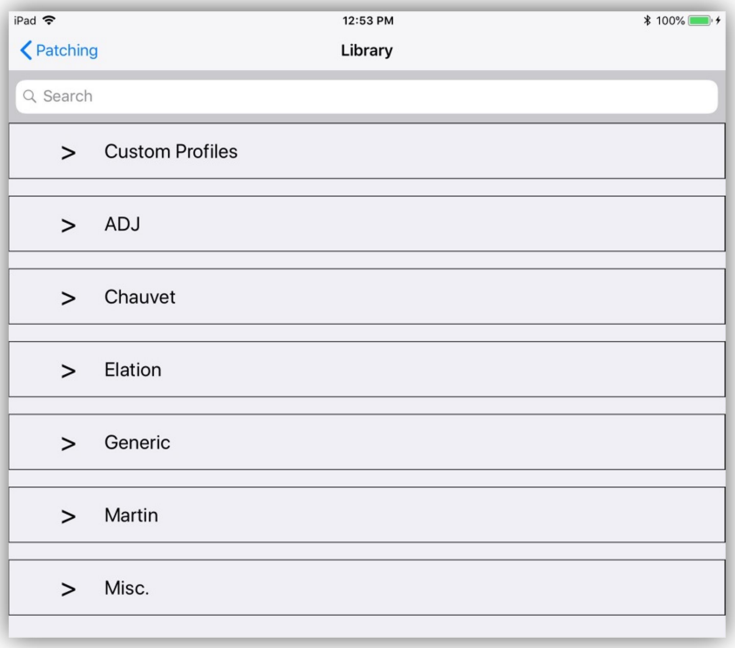
Patching Fixtures

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 or from a custom library that you can create using the built-in fixture profile editor. DMX starting addresses are automatically assigned to each fixture after selection but you can change the address as explained later in the fixture editor section. The following screenshot shows the patching table.



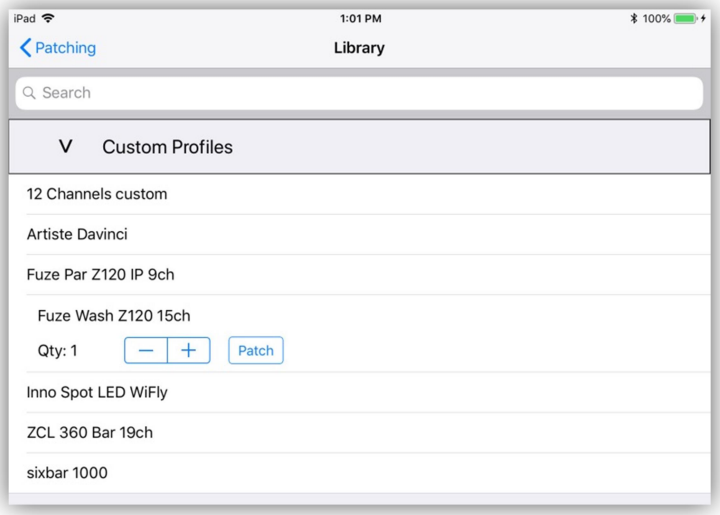
Tapping any one of the empty rows will show the fixture library as in the following example. You can also tap an occupied row to change the fixture selection that is there. Occupied rows will have a detail button (!) as shown above. Tap the detail button to edit the assigned fixture. See the following 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 Not In Library

If your fixture is not in the library you will have to make the fixture profile using the editor. Start by selecting any fixture from the library 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 used and the types of channels used. See the section on how to make a custom profile.

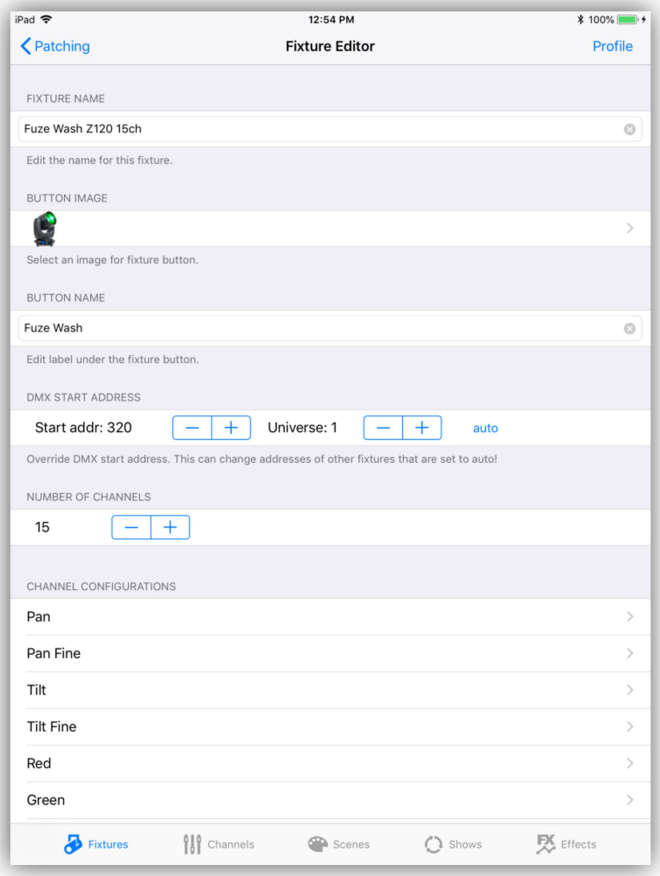
Helpful hint: If you are going to customize a group of fixtures that will all be identical, first save a single custom profile as explained in the next section. Once you have created the fixture you will be able to patch the whole group of fixtures by selecting the custom profile and then the quantity. 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 assign the same photo to each fixture one at a time.

Fixture Identification

When a new fixture is first 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 that use that fixture.

Custom Fixture Profiles

Tap any detail button (!) in the patching list to show the fixture editor. From there you can customize and then save 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 a custom fixture profile.



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

The following paragraphs describe each fixture item 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. Press and hold either stepper to change the DMX address or the universe number. 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 fill in around 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.

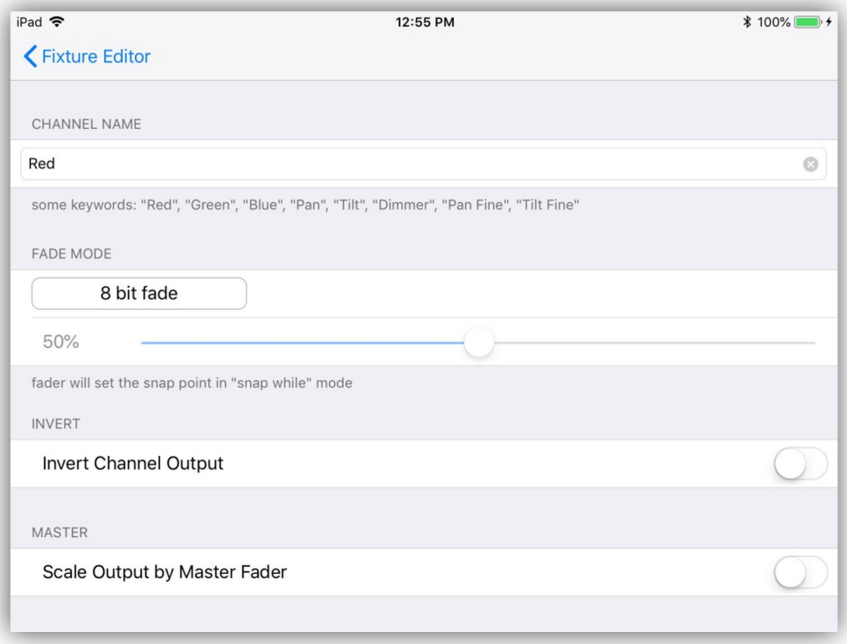
To return a fixture to auto patching, touch "override" and the address will return to "auto" mode.

To force auto patching to start using a new universe, manually set the patch 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.

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 when the fixture is moved.

Number of Channels: Edit the total number of DMX512 channels used by the fixture.

Channel Editor: Based on the number of channels used, a channel row will be added for each channel. When you tap a channel row, the channel editor will appear allowing you to edit a list of parameters for that particular channel as shown in the next example.



Channel Name: This is the name that will be displayed above the channel slider and also to identify the channel for certain features and effects. Certain color names and 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 in the text, 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 the movement effects. “Dimmer” is used by the flash effects editor. Adding the word “Fine” to the end of a name will allow fading functions to match channel pairs 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 a new value, “snap before fade” - the channel jumps immediately to a new value at the start of the scene, “snap after fade” – the channel jumps to a new value at the end of the fade, “snap during fade” – the channel jumps to a 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.

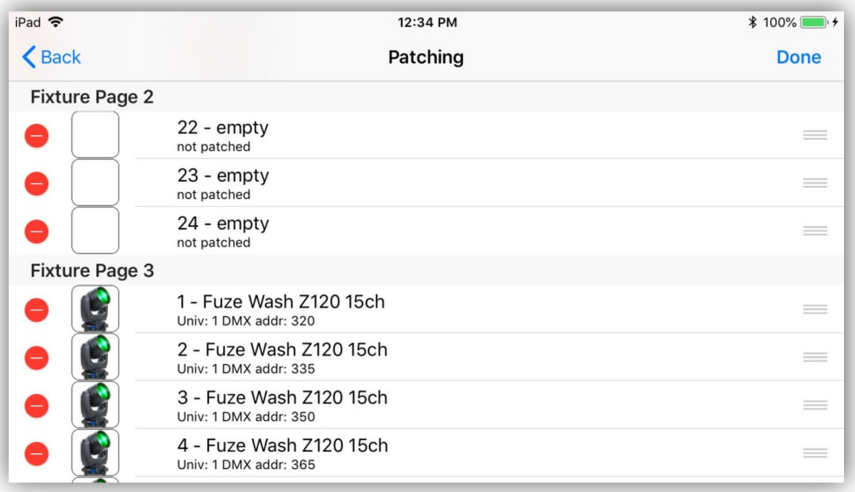
The fine channel must use the same name as the coarse channel with “Fine” added.

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 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.

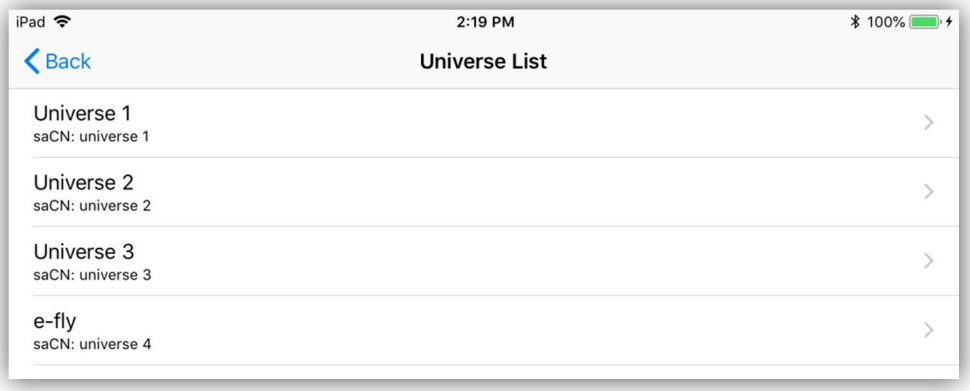
Edit the Fixture Button Order

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.



DMX Universe Editor

Tap the pull-down menu button from the fixtures view then tap “Universe”. You will see a table of assignments for all DMX512 universes.

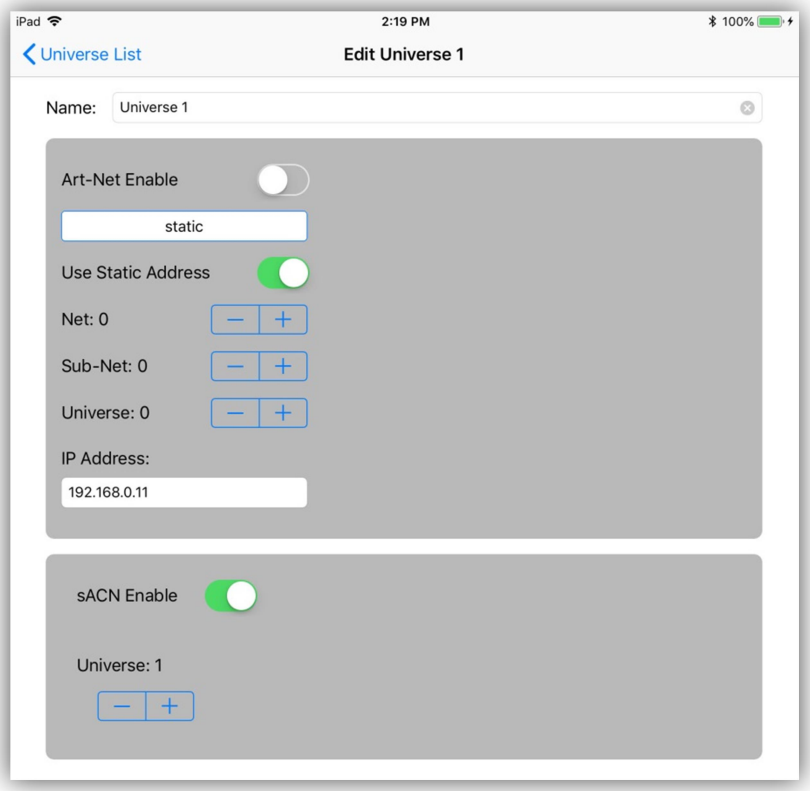


This app can support up to four DMX512 universes. If you are using a single 4 Stream DMX Bridge that’s making its own network, all four DMX universes will be used. If using a single Airstream DMX Bridge making its own network, only universe 1 will be used. If you want to use additional Airstream DMX Bridges or other DMX nodes in order to get more universes, you will need to use an external network and router. This app only requires that you use at least one 4 Stream DMX Bridge or one Airstream DMX Bridge. Additional DMX networking nodes by other manufacturers can then be used.

If you are using this app with a single 4 Stream DMX Bridge, the default settings should work without any changes.

If you are using this app with the original Airstream DMX Bridge you will need to set it to sACN mode with sACN universe set to 1. This can be done using the Airstream Config app, available on the app store or you can download the Windows or Mac config programs from the ADJ web site.

When you tap a universe row in the universe table, the universe editor will appear. At the top of the editor you can give the universe a custom name.



A universe can be configured to use Art-Net or sACN. When using four or fewer universes, sACN is recommended as it is simpler to configure and it only requires that you select a universe number. Network IP addressing is not required for sACN.

Note: The default settings for this app configures universe 1-4 for sACN. This is also the default setting for the 4 Stream DMX Bridge.

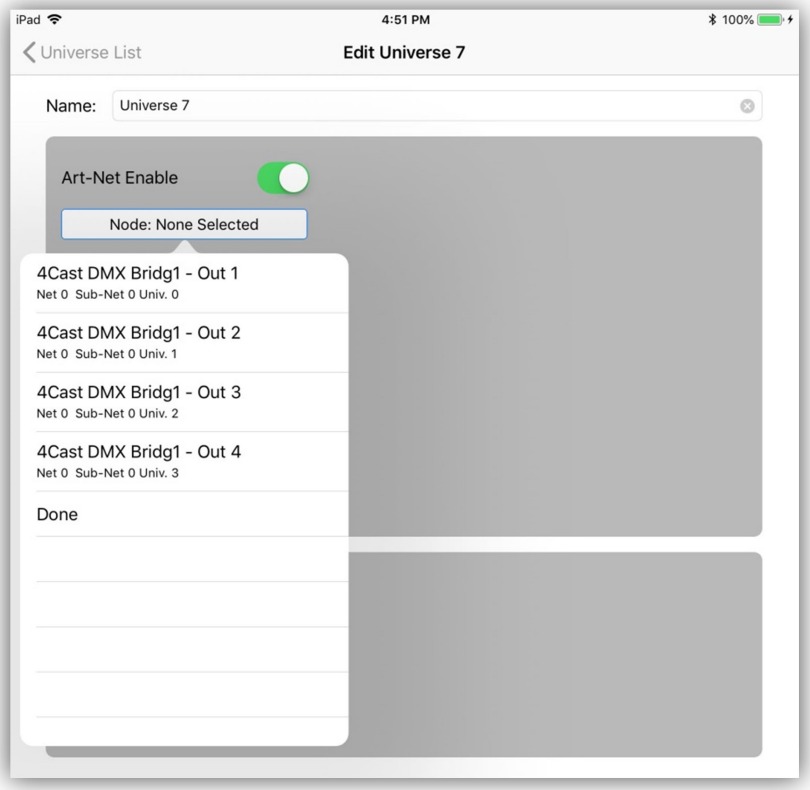
In the example you can see that sACN is selected and sACN Universe 1 is also selected. Use the stepper button to change the universe number as needed. The change will take effect after you exit the editor. **Note:** This setting will only change the universe number being sent from the app. You will also need to match the universe number on the sACN node you are sending to.

Setting the universe to use Art-Net is somewhat more complicated in that it requires that you have some knowledge of networking and how IPV4 addresses work.

You can configure the Art-Net universe to use a static IP address or have the app search for Art-Net nodes on the network. Using a static address can be more reliable in that the node, if set correctly, will most likely always be at a known location on the network. To use a static IP address, turn on the "Use Static" switch and then enter the correct IPV4 address used by the Art-Net node you want to send to.

In addition to setting the IPV4 address you will also need to set the Art-Net addresses. Art-Net addresses are divided into net, sub-net and universe. Make sure that these match the values on your Art-Net node.

If you would like to use Art-Poll to discover what nodes are out on the network, turn off the static switch and tap the node list just below the Art-Net enable switch.



A popup will appear showing available nodes. Select one from the list and it will be assigned to this universe. The app will try to find this node whenever it starts up. Since the app is getting the IP address and Art-Net address directly from the node, no other settings are needed. The settings will take effect when you exit this view.

Note: If nodes are not showing up on the list, make sure at least one universe is set to Art-Net with static IP turned off. If still not responding, dismiss the app and re-start, then return and try again.

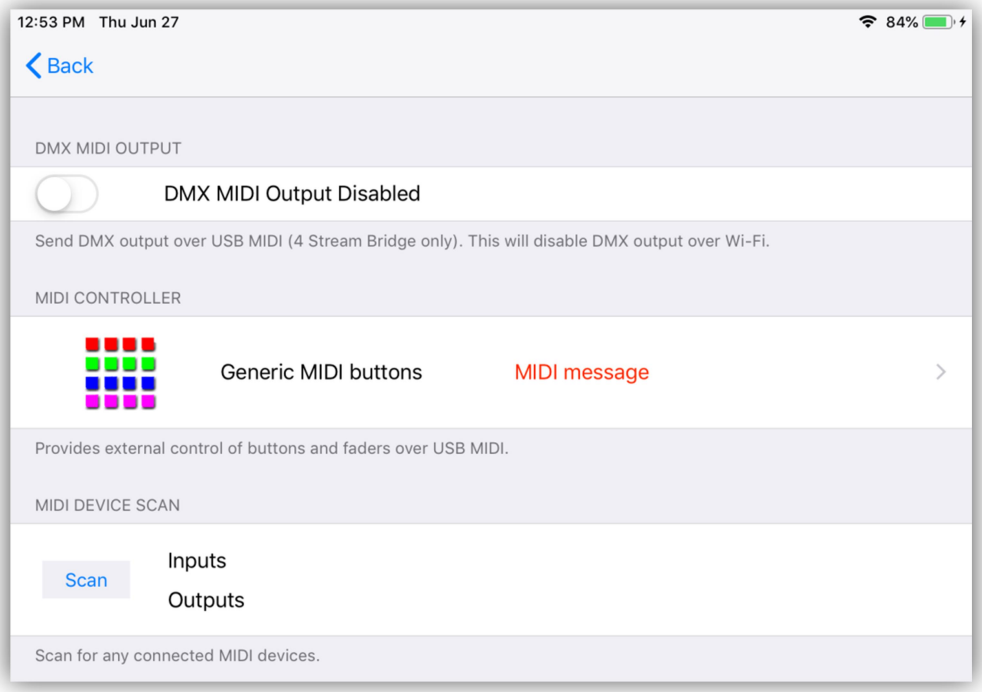
If you are using more than one Airstream DMX Bridge, make sure that each has a different Art-Node name. For example, the screen shot shows the node has been renamed to 4Cast DMX Bridg1. This will help you to choose the correct bridge when using more than one Airstream Bridge for example.

Settings

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

MIDI

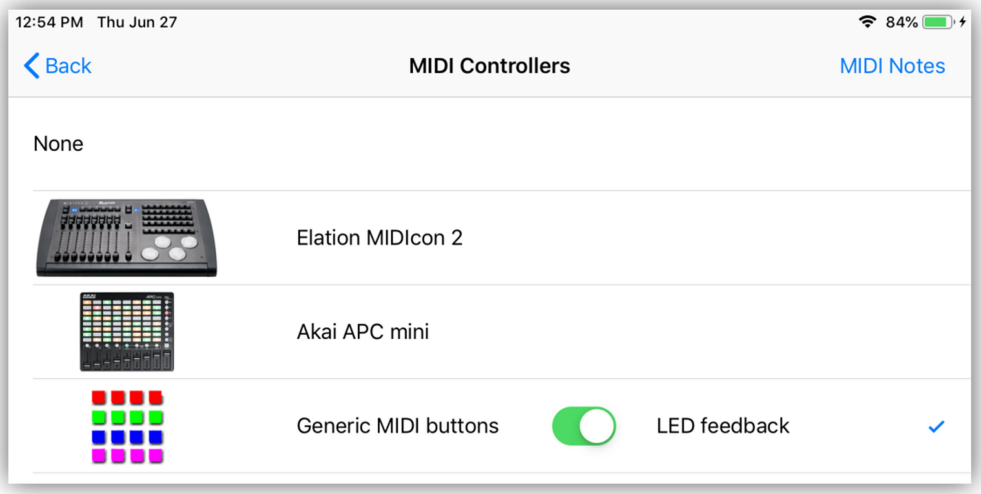
At the top of the list are the MIDI settings. To use MIDI with this app requires that you connect your IPad to an IOS Camera Kit (unless you have the new USB-C connection). See the MIDI chapter at the end of this manual for more details.



The DMX MIDI Output switch enables a wired connection between your IPad and the 4 Stream DMX Bridge. Instead of sending DMX packets over Wi-Fi, it will send them over USB using MIDI messages. The Wi-Fi messages will be turned off as the wired connection will replace it. This can be helpful when radio or network interference makes it difficult to connect. You will also need to enable this on the 4 Stream Bridge by setting USB mode to “MIDI”. See the MIDI chapter for more details. Note: This feature is not available on the Airstream Bridge.

The “Scan” button will find and list any MIDI devices that are currently connected. You can also confirm a controller is working by viewing any incoming MIDI messages on the controller row next to the controller selection.

The MIDI Controller setting lets you choose and set up an external USB MIDI controller like the Elation MIDIcon 2 to trigger events. Tap the MIDI Controller row to bring up a list of available controller choices as shown in the next example.

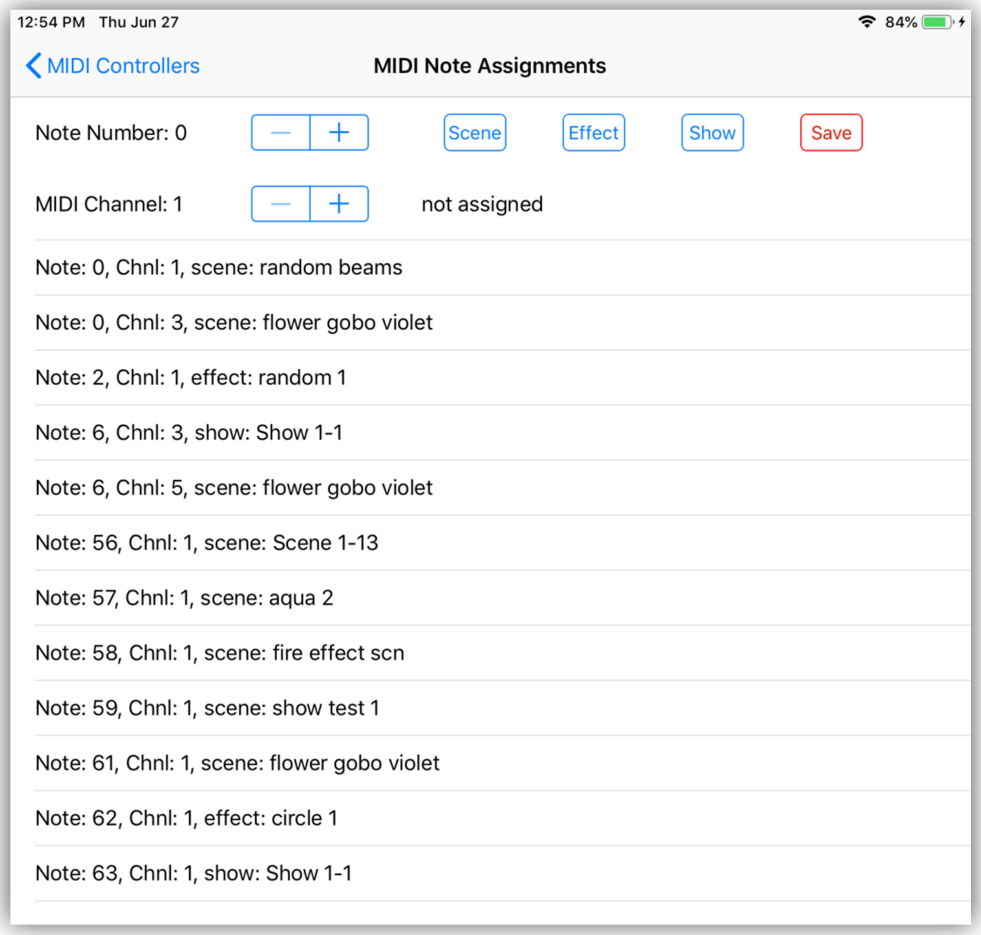


In this example, the generic buttons controller is selected with LED feedback enabled. There are three choices for the controllers, Elation MIDIcon 2, Akai APC mini and Generic MIDI buttons. The first two are set up to be more or less plug and play where the buttons and faders are already configured to work with the Airstream app. The controls will match the current view shown on the app so for example if you are on the channels view, the faders will control the channels displayed. When on the scene buttons view, the button fields will select scenes. Paging, grand master, blackout and tab selection are also supported from those controllers.

The MIDIcon 2 is best supported with the most number of controls available. The "S" buttons will select tabs on the app, the fader section will work with both channels and sub masters, the button matrix will work with each button page, the large wheels will work with channels and some editors, the "A" and "B" buttons will shift the wheels left and right, the "G" button will turn on audio and the "H" button is tempo tap.

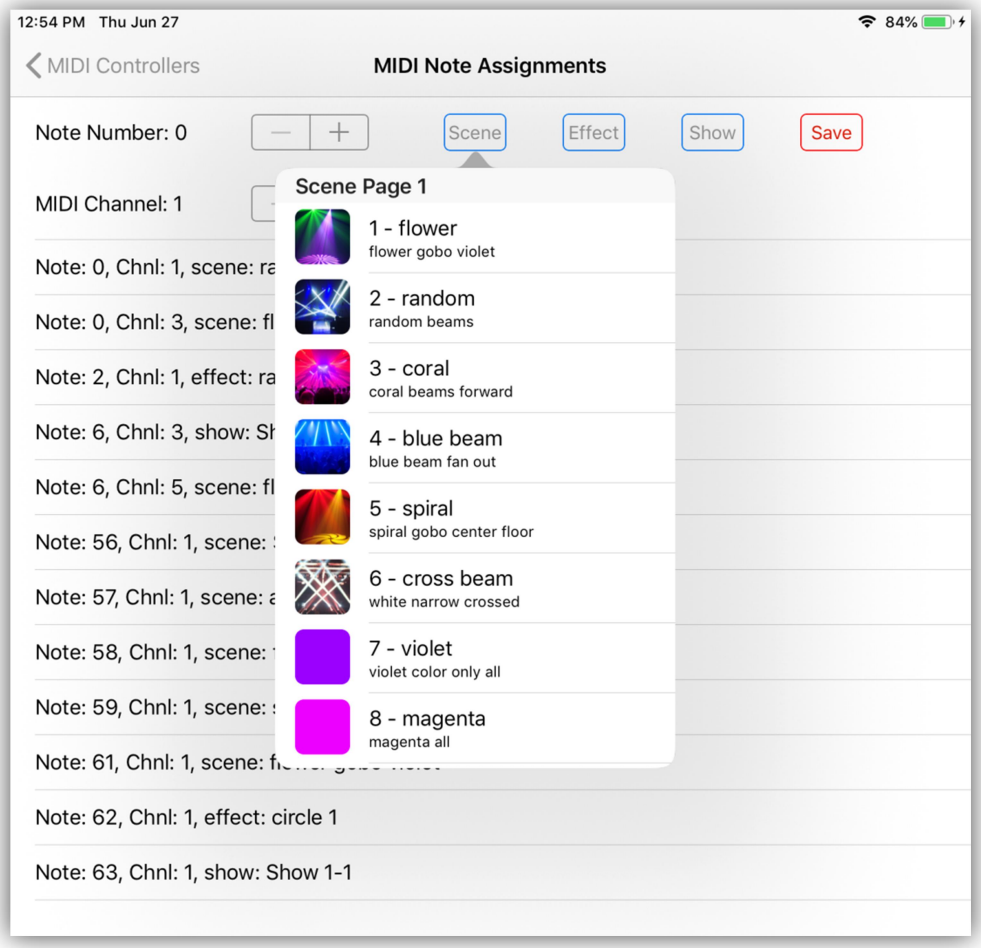
The APC mini is similar to the MIDIcon 2 where the buttons along the right side will select the tabs, the faders and the two rows of buttons directly above will work with channels and sub masters, the top three rows of buttons work with each button page, the up and down buttons will control pages, the left and right buttons will shift the faders, the "shift" button above the master fader is blackout, the "device" button is tempo and the "send" button is audio.

The Generic controller can be customized to work with any MIDI controller that uses buttons to send MIDI note commands. You must first make a MIDI note assignment table that lists the notes you want to use and what you want them to do. Tap the “MIDI Notes” button in the upper right of the screen to show the note assignment editor as in the example below.



From the editor you can manually select notes to use or you can generate the notes for the controller that’s connected. Tapping the top row will start a new assignment, tapping any existing assignment will allow you to edit it. Pressing a button from the controller will start a new assignment or select an existing one for editing if that note is already assigned.

Tap the scene, effect or show buttons to display the list of available scenes, etc. to choose from as shown in the example below. This will assign the selected function to the MIDI note.



After you assign a function, tap the save button.

Archive

Archives let you backup your memory in an archive folder. Things like types of fixtures used, 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 with file sharing using ITunes running on a mac. See the chapters on how to use the IOS files app and ITunes for more details.

Tap “Save an archive” and you will be prompted to enter a name for the archive folder before saving.

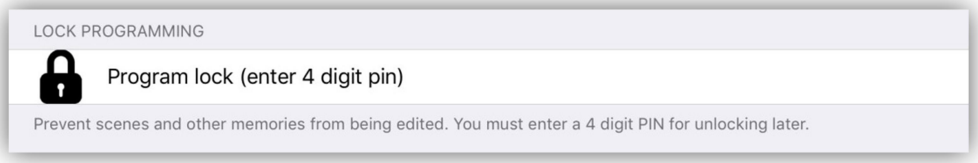
Tap “Load an archive” and a list of previously saved archives will be presented that you can choose from. You will be prompted to allow the new archive to replace the current memory.

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. 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 you want to use. A warning will also appear after entering the pin to prevent accidental locking.

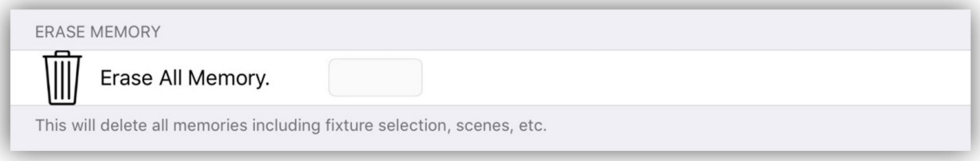
To unlock, touch the "unlock" tab at the bottom of the screen and enter the 4 digit PIN you used to lock the app.



Note: This will not prevent someone from using the IOS Files App to delete saved files.

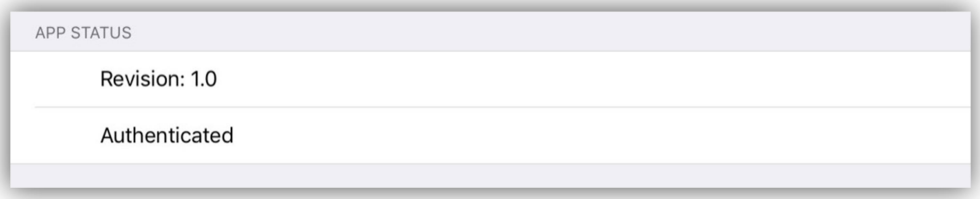
Erase All Memory

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.



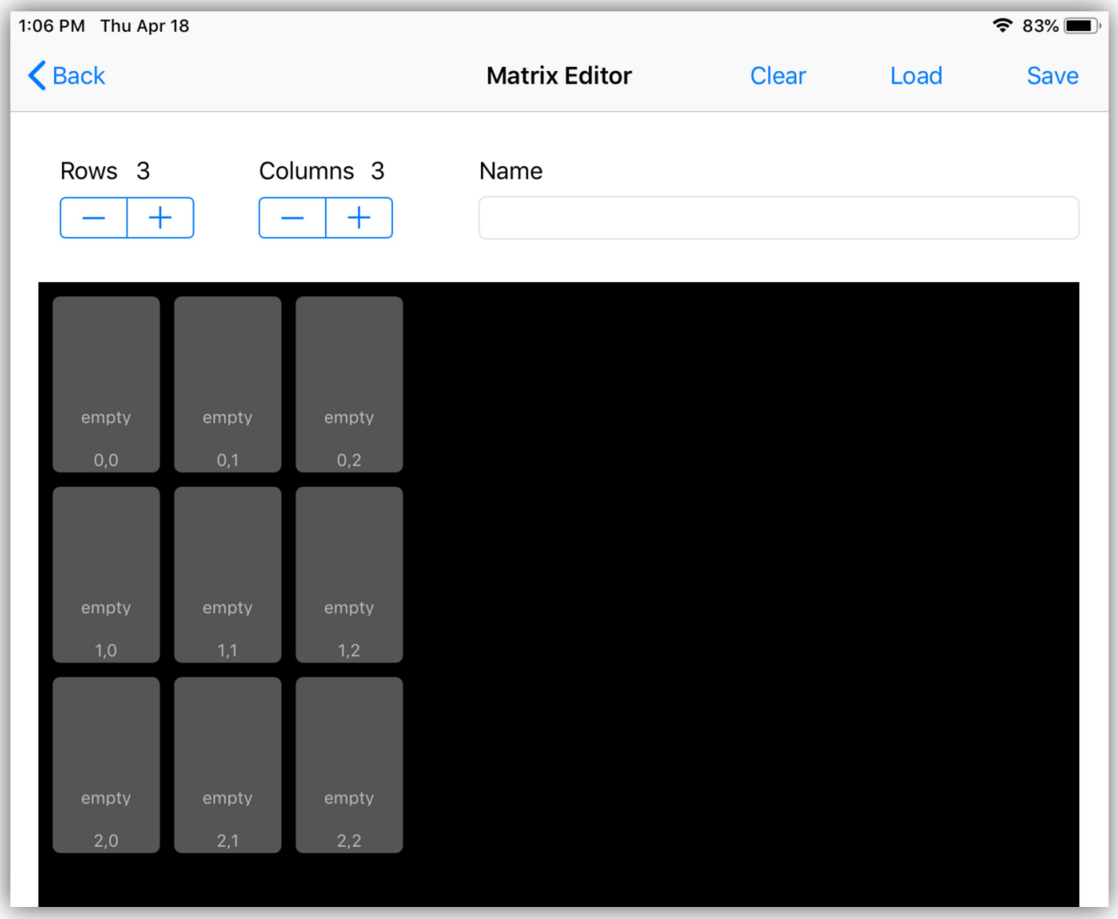
App Status

The app's revision number and authentication status is displayed here. To authenticate this app and unlock the DMX universes, you must connect to an ADJ 4 Stream DMX Bridge or Airstream DMX Bridge that's running its own network and then start the app. This only needs to be done once after you first install the app.

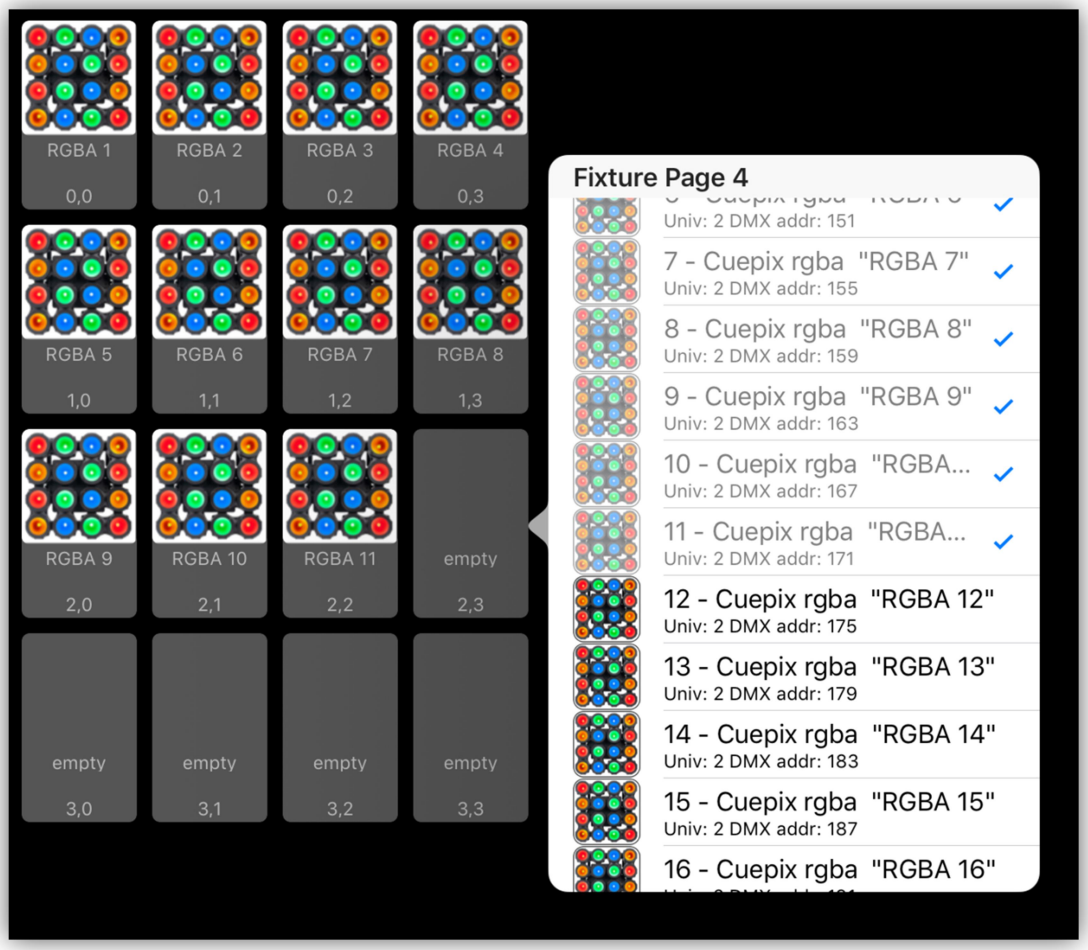


Matrix Editor

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. Use the +/- keys 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 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.



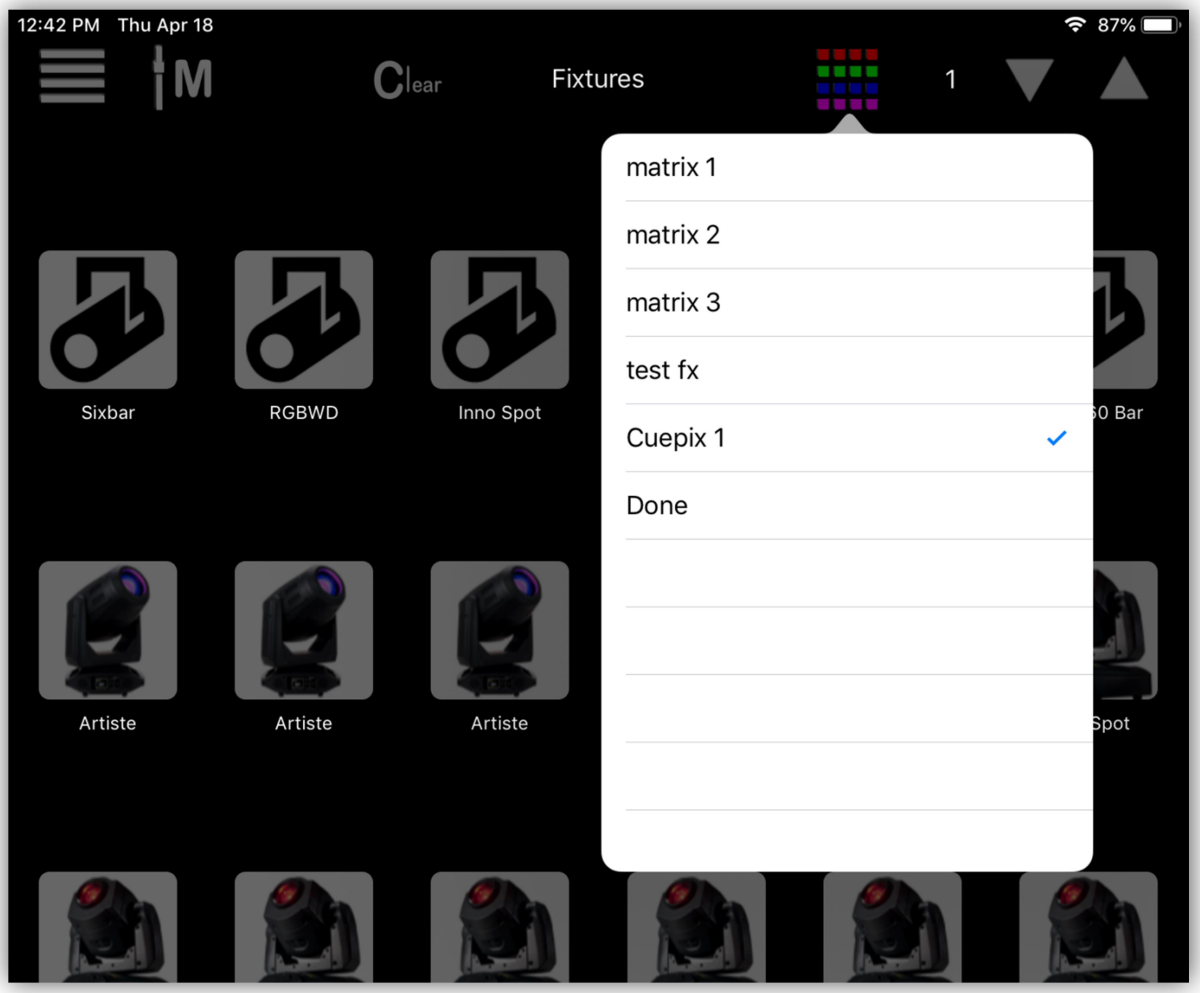
In the example above a 4 X 4 matrix has been created using individual RGBA LEDs from an Elation Cuepix blinder. In this example the fixture was patched as 16 separate RGBA LEDs rather than one large 64 channel fixture simply for convenience. If it had been patched as one large fixture you would only 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

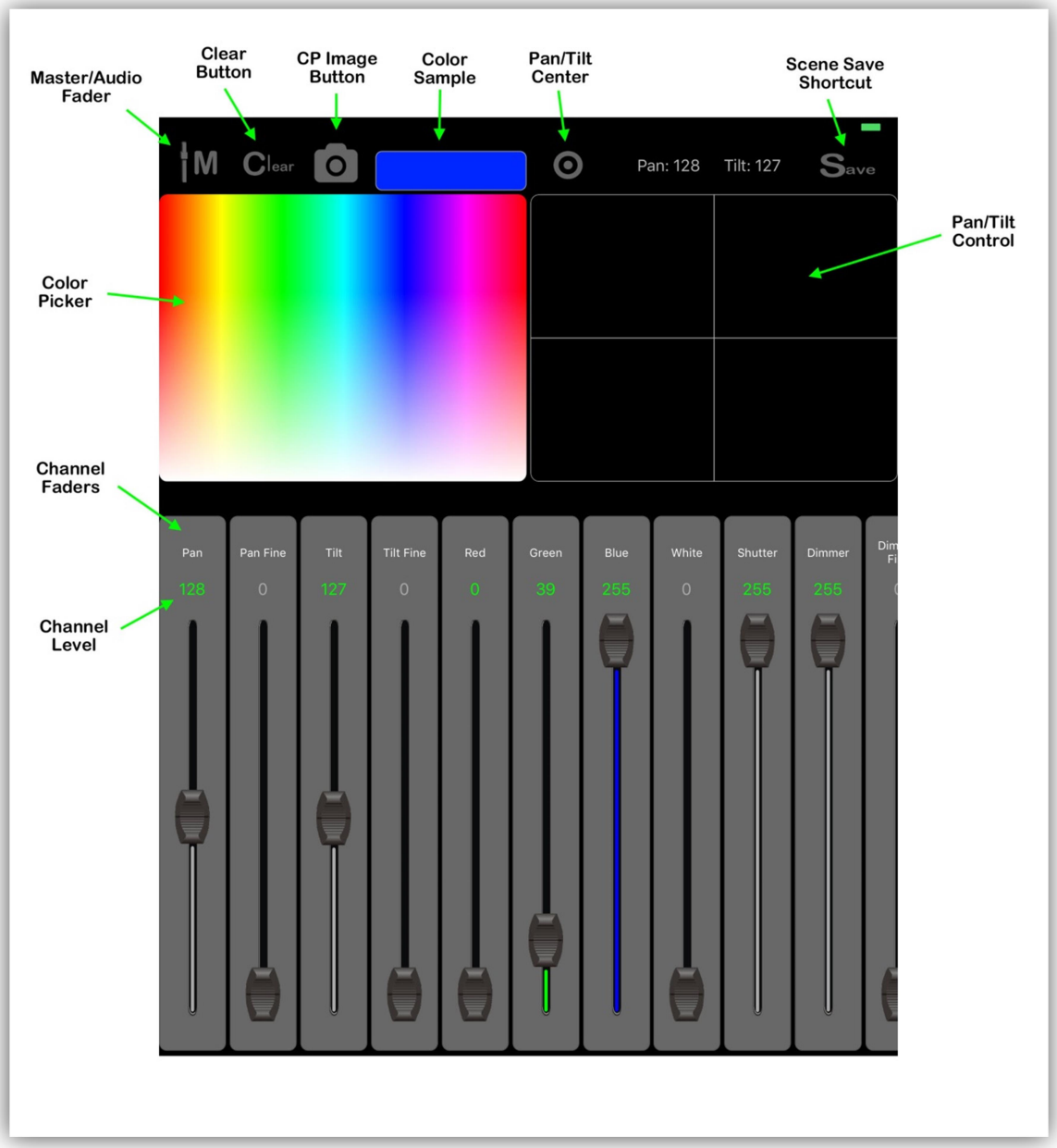
Matrices that have been saved can then be selected and included in the color effects. Tap the matrix button at the top of the fixtures view to show a list of matrices. Tap any matrix in the list to select or deselect it. A check will appear next to any matrix that is selected as shown in the example 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 Tab

The controls in the channels view are used for setting channel levels for selected fixtures. Before using any of these you must first highlight one or more fixture buttons from the fixtures tab. The settings you see on the view will match the settings for the most recently selected fixture. If more than one fixture is selected the settings will match the one last selected. Features of the channels view are illustrated in the screenshot below. The three main controls are the color picker, the pan/tilt control and the channel faders.



All three sections can act on every selected fixture when possible. If all selected fixtures are of the same type, they will all follow the changes as you adjust any control. If mixed types of fixtures are selected, the channel faders will only work on matching fixtures of the type displayed. The color picker and pan/tilt controls are more generic so will be able to affect any fixture that has pan/tilt or RGB channels.

Color Picker

Any selected fixture that that has a red, green or blue channel will be affected by touching the color picker control. Hue values 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.

You also have the option of installing your own color picker from your photos library. Tap the color picker image button (camera icon) 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. You will notice that when you use an image here, the CP image button 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

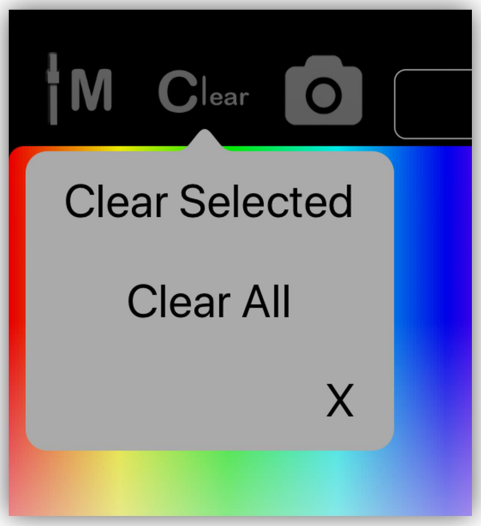
Any selected fixture with a pan or tilt channel can be controlled by touching the pan/tilt control and moving the crosshairs. The DMX512 pan and tilt values will be displayed just above the control. There is also a Center button above the control that will set the pan and tilt to the center position.

Channel Faders

The lower half of the view contains the channel faders. There will be a fader for each channel in the last selected fixture. When there are many channels, you can swipe left or right to scroll through all of them. To adjust the level, touch the fader knob and move the fader. You will notice the DMX level will be displayed just above. 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. You can manually enter the channel level by tapping on the level number to show a keypad pop-up. You can use the keypad to enter a value between 0 and 255 or you can remove the channel from the scene by tapping the "clear" button on the keypad. Tap the "done" button when finished.

Clear Button

In the upper left of the screen is a button labeled “Clear”. This button is a “clear all channels” function. When you clear a fixture or group of fixtures, all of the fixture’s channels will be set to zero and they will be removed from the current scene. Tap the button to show a popup as in the example then tap either “Clear Selected” to clear only the channels of the currently selected fixtures or tap “Clear All” to clear every channel.



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. 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.

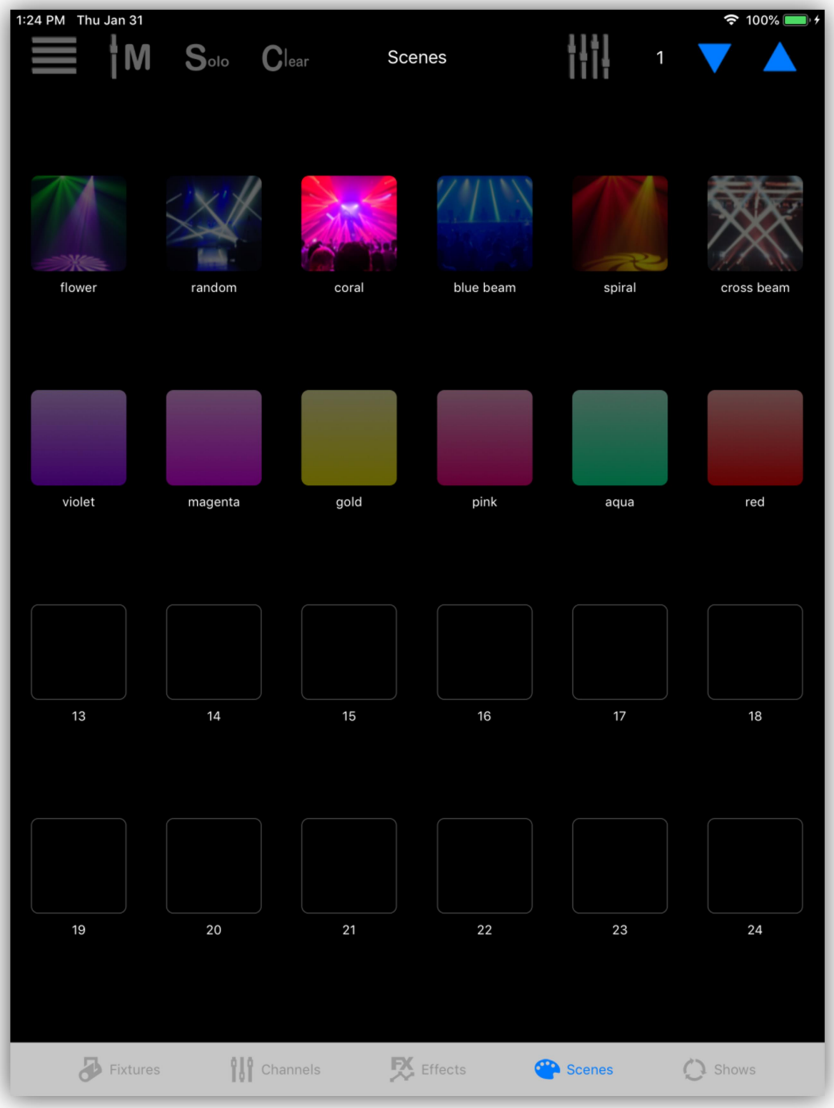
Save Button

Tapping “Save” 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 Tab” chapter next.

Scenes Tab

Scenes are collections 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 12 scenes assigned to the first 12 scene buttons. The third button is highlighted showing that the scene is active.



There are 99 pages available with 24 scene buttons per page. Tapping any button 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. Change pages using the page up and down buttons in the upper right. As you can see in the example some buttons have images while some show a solid color. You can configure the button appearance and label however you prefer when you save the scene.

When creating a new scene it's usually a good idea to first clear all channels. Select fixtures from the fixtures tab, then change any channel value from the channels tab by moving one of the channel sliders or by using the color picker or pan/tilt controls. Only channels that have been changed since the last "Clear" 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.

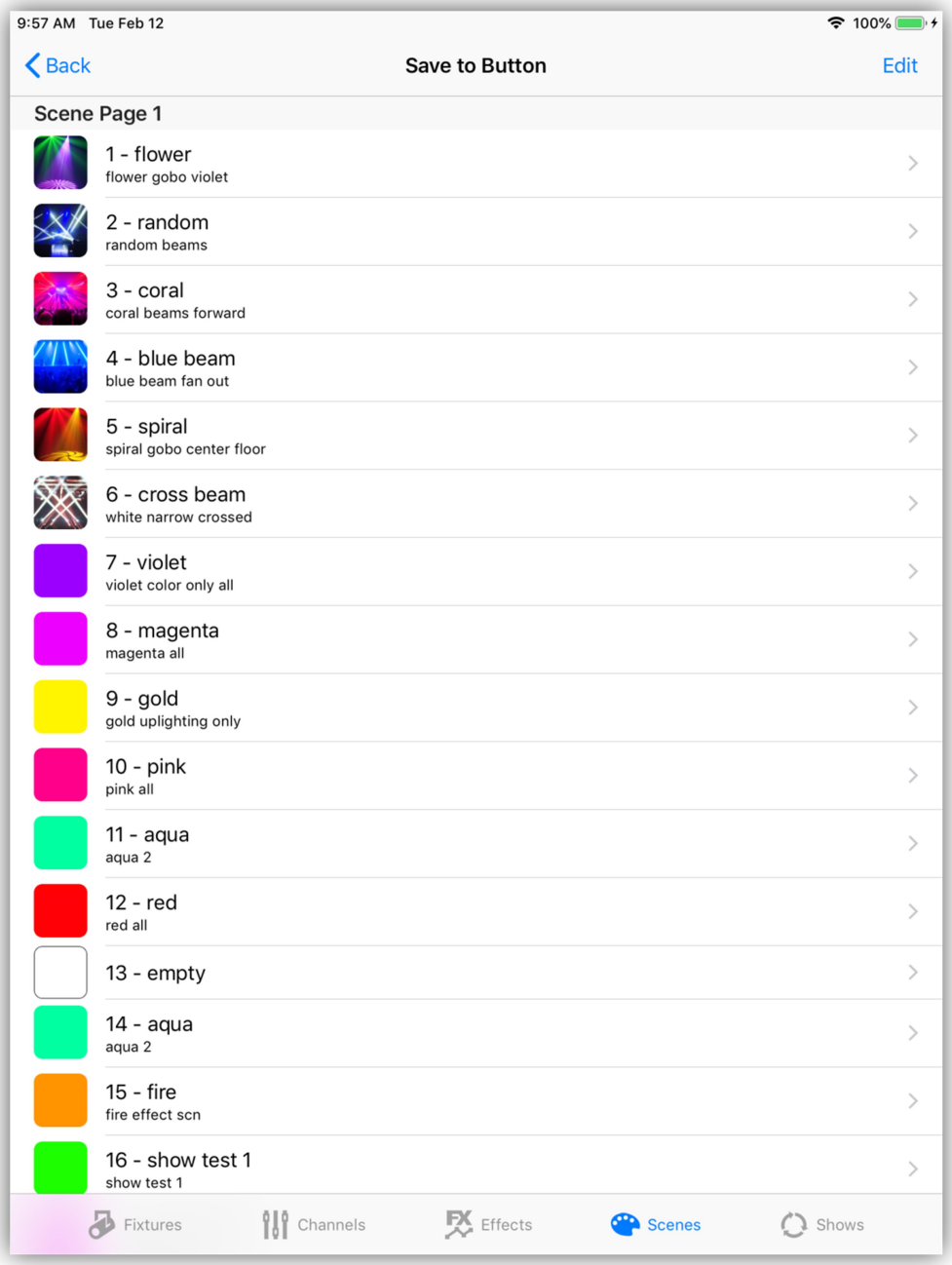
Another way to include channels into a new scene is to first turn on some other scenes that are already saved. When you save the new scene, the other scenes will automatically be merged together into the new scene.

Saving Scenes

Once you have set the channel levels for a scene you can then save it by tapping the menu button in the upper left of the scenes view and select "Save". You can also use the save button at the top of the channels view. Either selection 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 without saving a new scene.

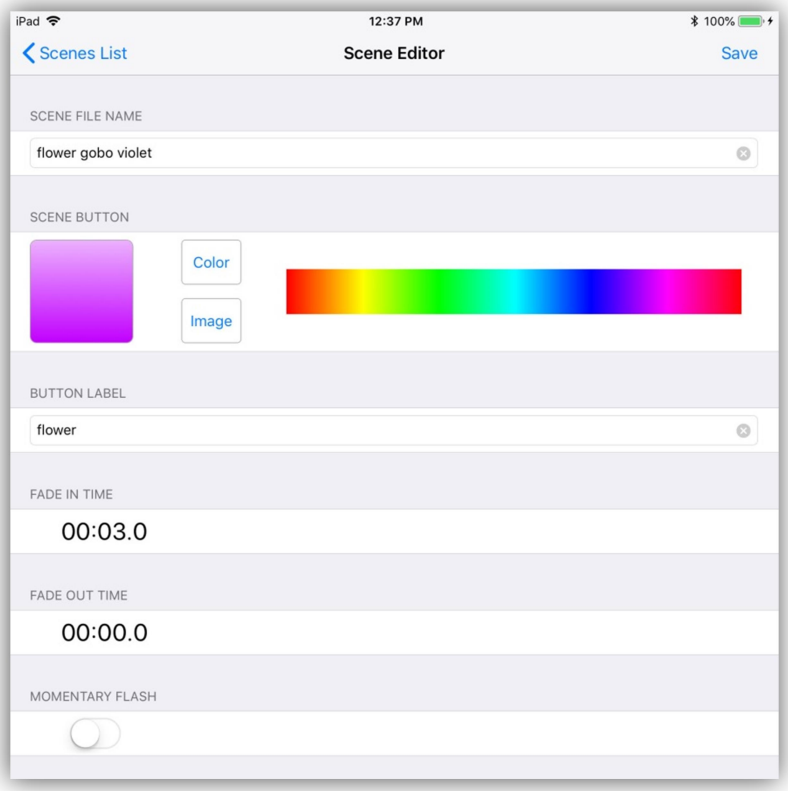
The scene button list will appear similar to the example below. Each row represents a scene button assignment or an empty unused button. At the left is the image or color assigned to the scene button followed by the button number

followed by the button label. In small print under the button label is the file name for that scene.



As you can see in the example, some buttons have scenes assigned to them and some are empty. You can scroll down and view up to 99 pages of scene buttons on the list. Select the button row where you want to save the new scene.

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.



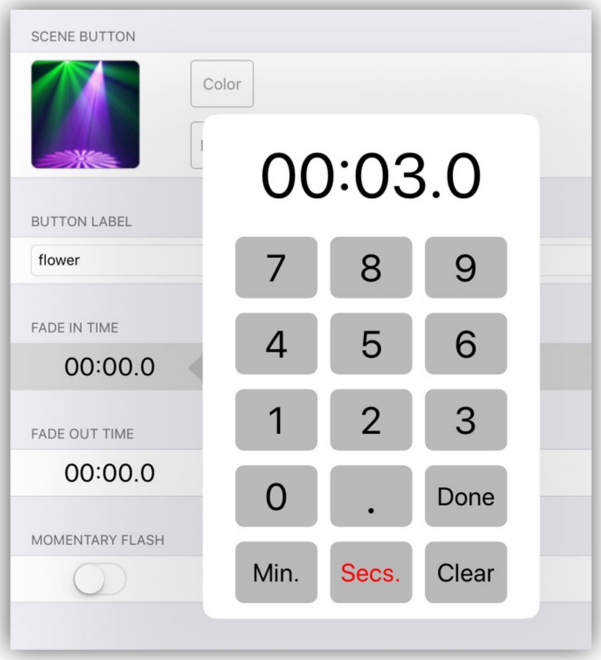
Scene File Name: You can enter a new file name or use the default name. Typically a long descriptive name should be entered here.

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 call 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 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 then go back and select 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

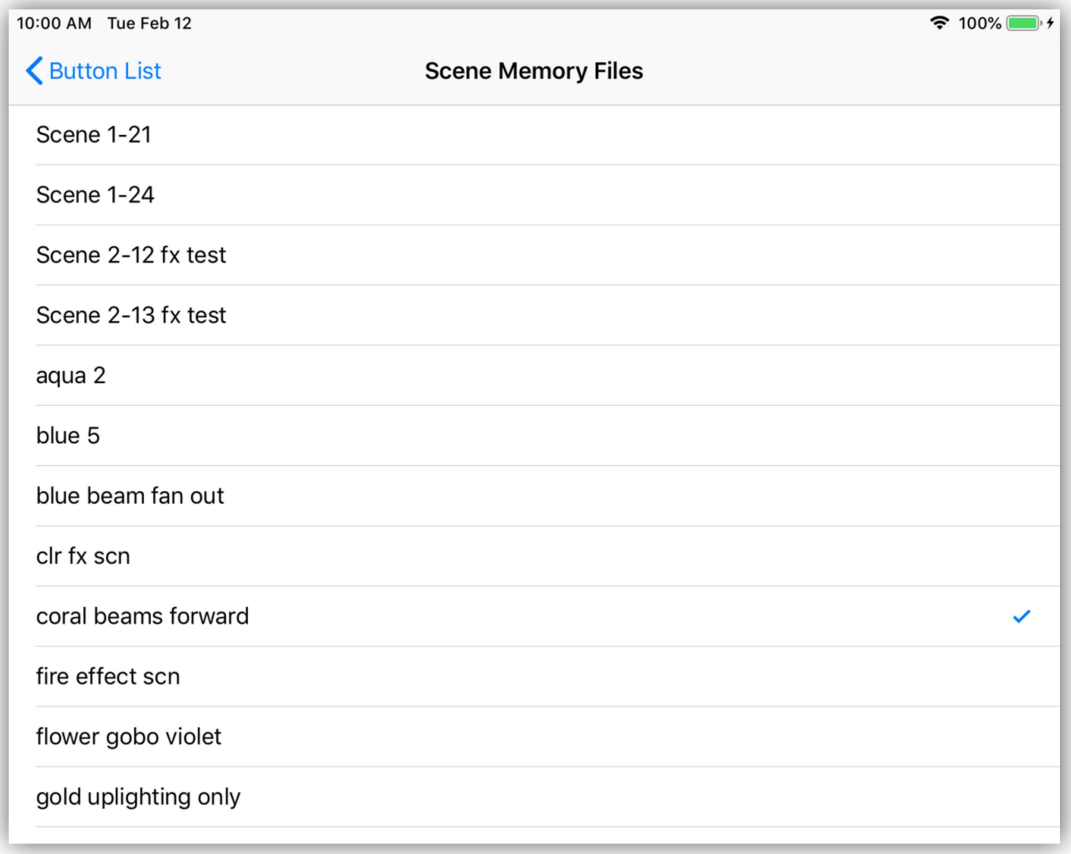
If you only want to edit the order of the buttons or delete a button, tap the "Edit" button in the upper right of the button list view. This will allow you to drag or delete a scene's row using the standard IOS list editor.

Note that 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 ITunes file sharing 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 menu popup. The list view uses the same list of scene button assignments as shown in the previous example but will present a list of scene files when you select a row. This allows you to assign scenes to buttons using previously stored files. 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 that is assigned to that row. 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 as needed although you can keep as many scenes as you like in memory without assigning them to buttons.



Solo Button and Scene Playback

At the top of the scenes view is a button labeled "Solo". "Solo" will be displayed in red when 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. In that case, 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 when there is a 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 tab view. A scene can be made up of only effects without including any static channels. This allows you to combine any number of effects onto a single 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

Scenes can be controlled in one of 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.

The following is an example of the sub master view with IPad in portrait mode.

Each scene is represented by one sub master strip. Scene buttons that are empty will not show up in the sub masters. You can swipe left or right when there are more sub masters than will fit on the screen.

Each sub master has two buttons and a fader. The top button is a flash button, sometimes referred to as a bump button, and shows the scene image or 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. The sub master fader will also go to maximum intensity while the button is pressed.

The button below is a play button. Tapping this will fade up the scene and sub master fader using the scene's fade-in time. Tapping it 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 while fading will stop a fade to allow manual control.

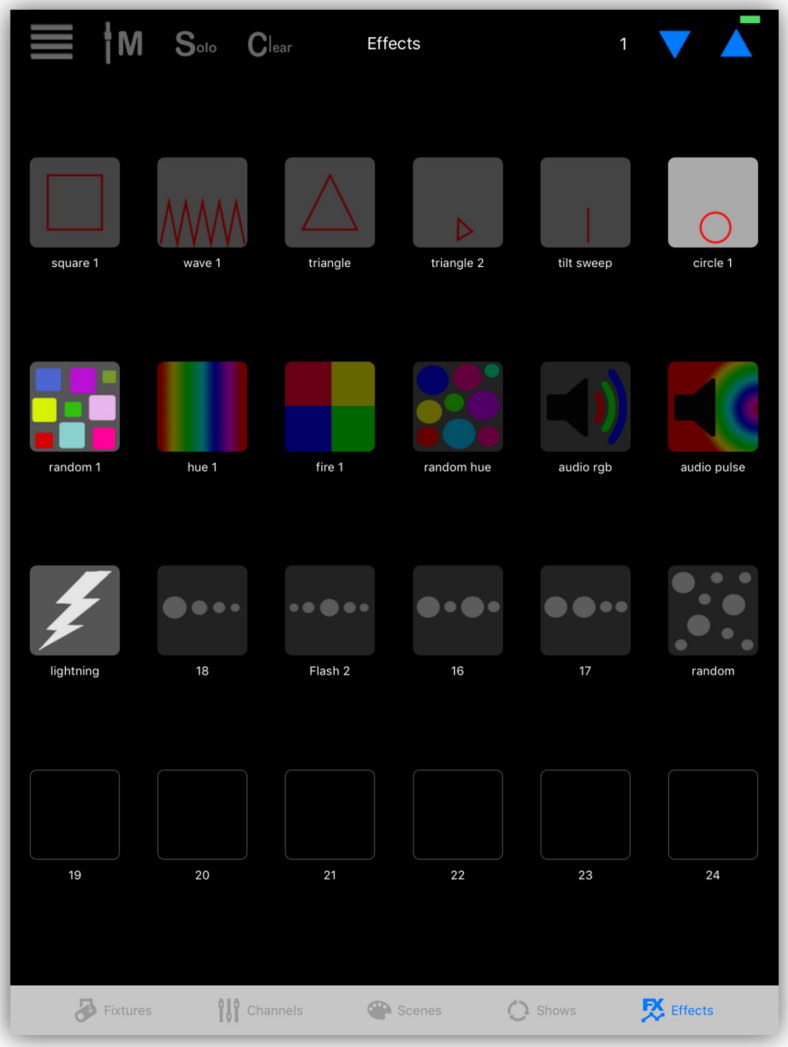
The sub master fader can also be used to start and manually control the intensity of any scene. In the example, the scene labeled "coral" is active as shown by the fader being up to full intensity and the top button highlighted. The brightness of the top button will match the intensity of the scene as the sub master fader moves up or down.

There are differences between how scenes are called when using the sub masters versus the regular scene buttons. Using sub masters gives you more choices and versatility over using the regular scene buttons. The regular scene buttons will always fade in and fade out all scene channels using the saved fade times. The sub masters will only 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 "RGB" channels 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 instantly. Any effects attached to the scene will also start. The sub master fader will control the brightness or intensity of the scene, either automatically as when a sub master button is used or manually as you move the fader with your finger. The scene is released when the sub master fader is returned to the 0 position. All scene channels will then be cleared and set to 0.

It's possible to have more than one sub master controlling the intensity of a fixture. In that case the sub master that's highest will have control of the fixture's intensity.

Effects Tab

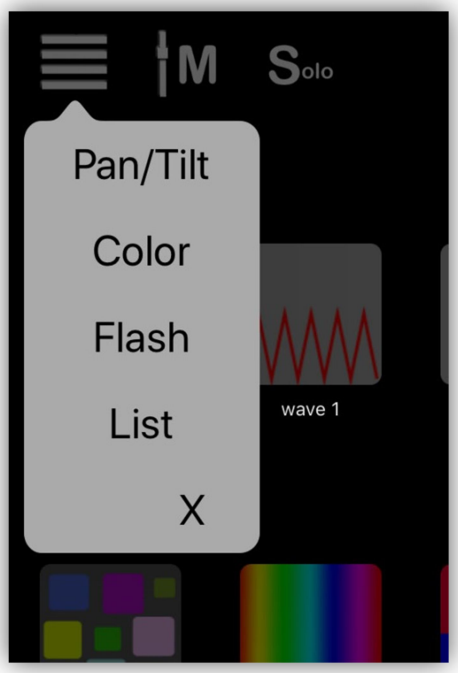
The special effects tab displays a button field of the effects that you have saved. As with the scenes tab you have 99 pages of 24 buttons. The example below shows three rows of effects with each row containing different types of effects. In this example the top row contains pan and tilt movement effects, the second row contains color effects and the third row contains flash effects. Buttons 6, 7 and 13 are lit to indicate that those three effects are currently running. When you select the effects tab 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 one that is running, it will automatically turn off the previous effect. Tap “Clear” to turn off all running effects.

Important Note: When an effect is running the idle timer on your IPad will be temporarily turned off to allow effects to run without interruption. Effects will pause after several minutes when you background this app. They will restart when you reopen the app.

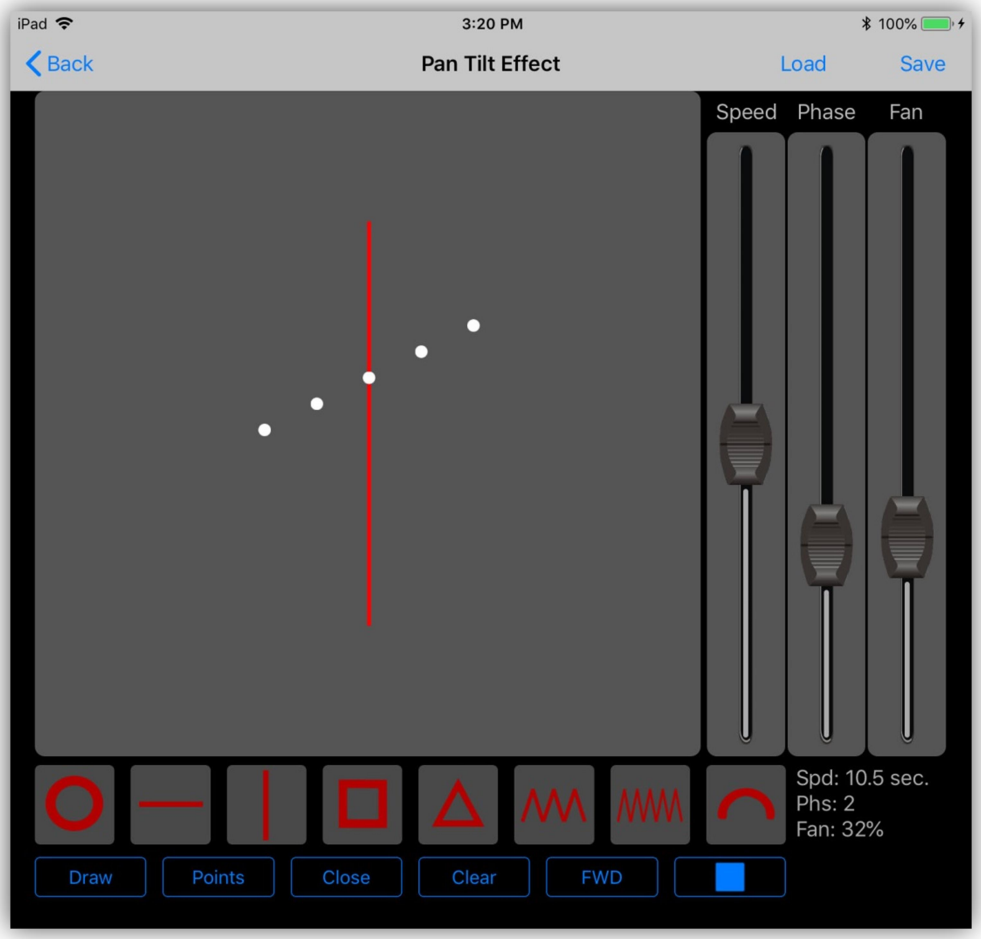
There four items in the menu pop-up. The Pan/Tilt effects editor, the Color effects editor, the Flash effects editor and the list of button assignments. Tapping any of the editors will bring up that editor view. Tapping “List” will show the list of effects button assignments. Use the list view to rearrange 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. See the scenes chapter for more details.



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 tab that have pan and tilt channels. The order that you select the fixtures is important as this will affect how 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 here and is running five fixtures that are slightly out of phase and slightly spread out (fan). The five white dots represent the beam positions and the red line represents the path of the movement. The drawing area represents the full range of pan and tilt, with pan 0 and tilt 0 in the lower left corner.



The editor has eight preset shape buttons just below the drawing area plus some assorted function buttons below those. Three faders to the right control speed, phase and fan. If you have lights connected, the beams will follow the white dots.

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 is 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.

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 tab and the Fixtures tab 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 with two fingers. You can pinch horizontally or vertically. To rotate the shape use a three finger touch and rotate your touch in a circle. You can edit any of the preset shapes or one that you draw yourself.

The bottom row of buttons are as follows:

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 end to the start.

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

Close Button: Tap the "Close" button to connect the end of your path to its start. Use this to create a path that you want to 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 your path (bounce).

Clear Button: Tap the "Clear" button 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.

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 until it looks right on the lights rather than the screen animation.

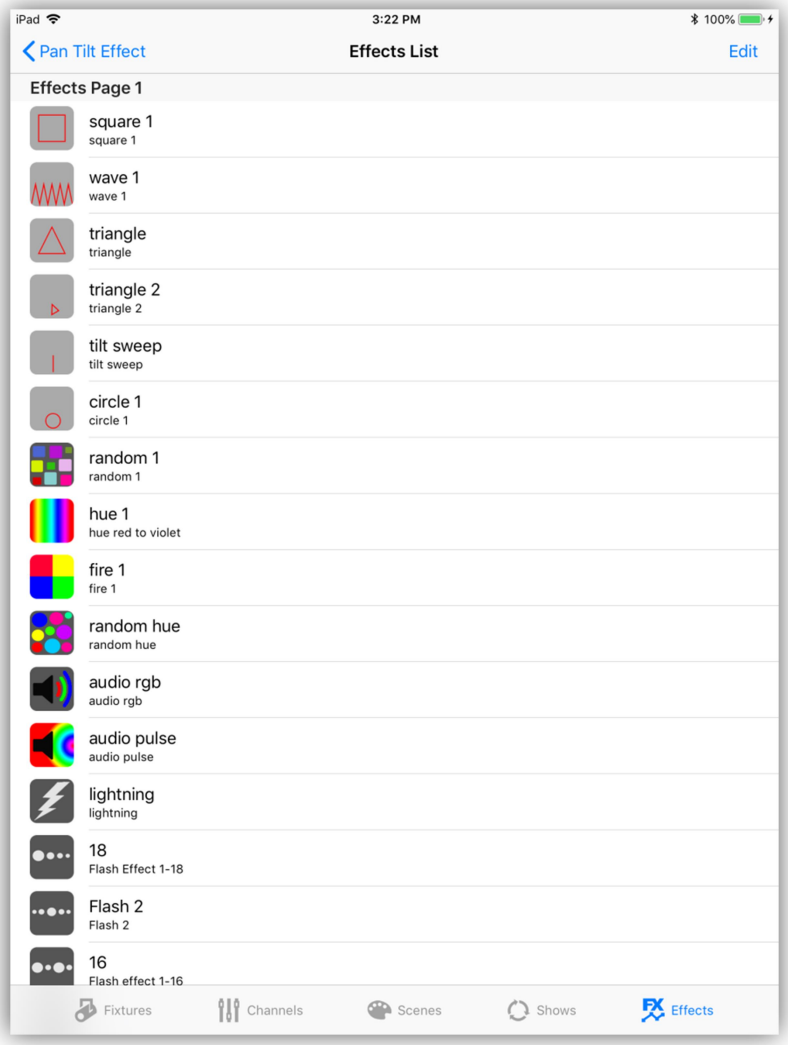
Phase Fader: This allows you to spread fixtures across the shape. For this to work, you need to select more than one fixture. The selection order will determine the order of the beam positions inside the shape. With phase at 0, all beams will be on the same point in the path. With the phase at full,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

Fan Fader: This control will fan the beams apart on the horizontal plane. 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 tab.

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 to equal if you want an even looking effect. The phase control uses points to set the distance between beams so more points means finer control over the phase.

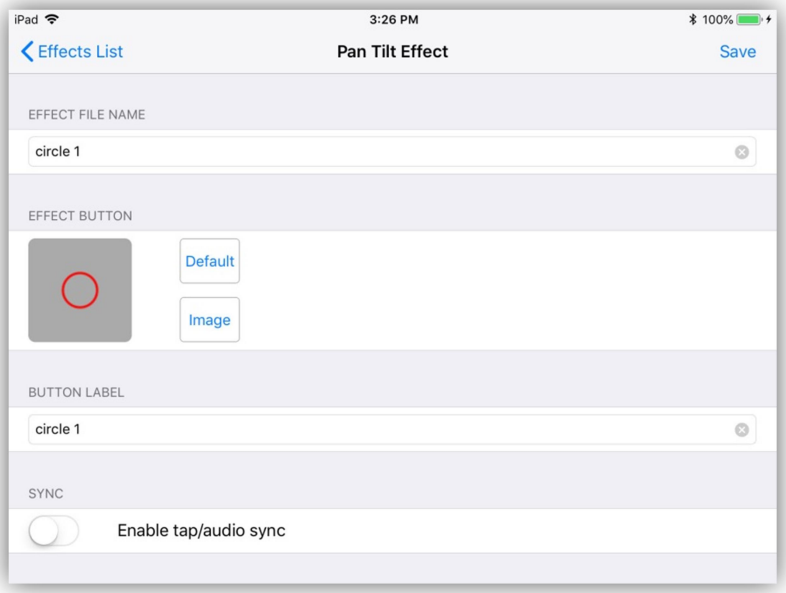
Save the Pan/Tilt Effect

Tapping the "Save" button at the top of the effects editor screen will show the button assignment list similar to the next example. To save the effect to one of the buttons, select a button row on any page. 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.



You can reorder the buttons at any time by using the "Edit" button at the top of the screen using the standard IOS style list editor.

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 the "Save" button in the upper right to save the file and button assignment. Effects files are stored in their own folder in the app's documents directory.

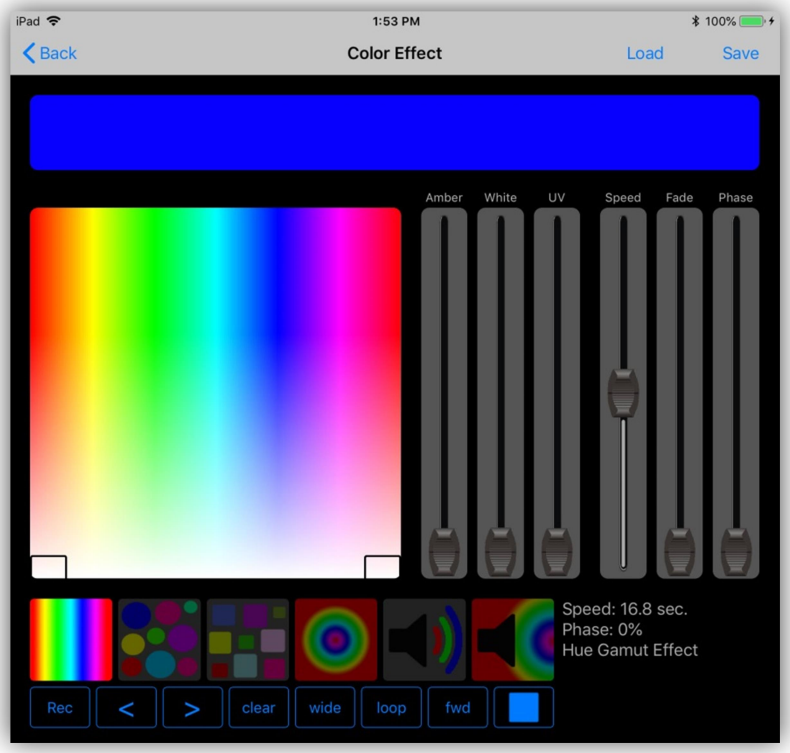
There is a tap/audio sync enable switch that allows the effect to be controlled by the tap sync button or audio beat. Enable this if you want to be able to override the stored speed using the tap sync or audio sync.

Load Pan/Tilt Effect

You can load a saved pan/tilt effect into the editor. Tap the "Load" button at the top of the 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 tab to include in the effect. Only fixtures that have RGB 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 this example the Hue Gamut effect is running. Its button is the first color preset and is highlighted showing that it is on. The color sample bar across the top of the screen will show the colors that the effect is currently running.

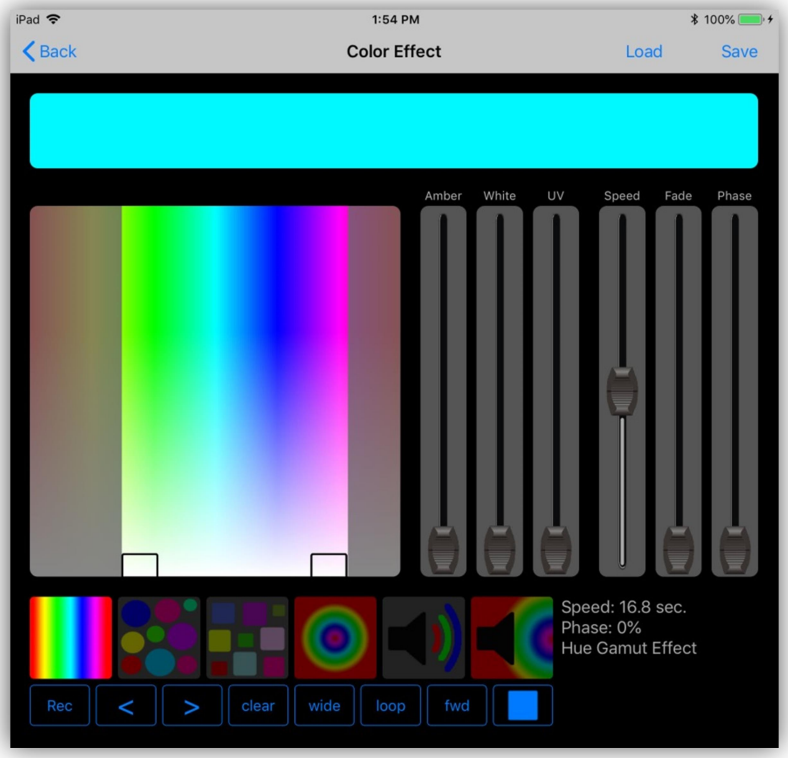
There are six preset color effects available plus the ability to record your own color chases.

The large color picker control in the center is used for selecting RGB colors when recording 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.

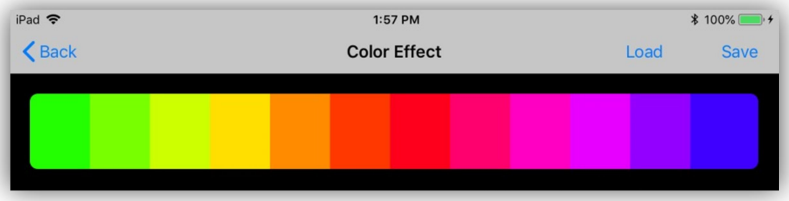
Setting the Hue Range

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



Phase Control

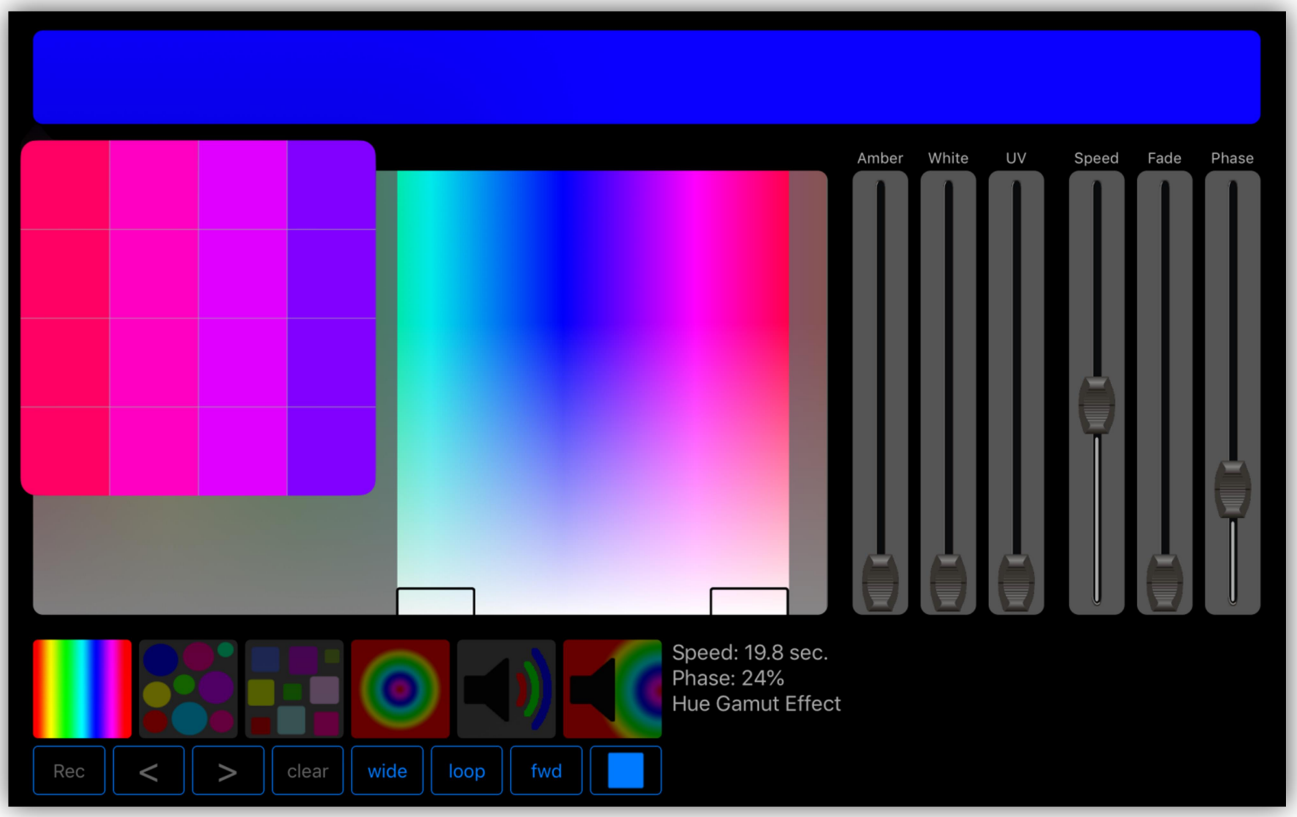
With phase added to an effect, the sample bar will display the phase offset for all pixels within the selected fixtures. In the example below there are twelve pixels active. The order of phase from left to right will be the order that the fixtures are selected or the order of control channels within 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 only 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 that 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.

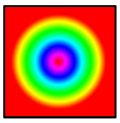
The phase control will behave differently for each type of color effect you select and differently for linear fixture selections (single fixtures selected) versus pixel selections (matrix selected). You can have both single fixtures and matrices selected when running a color effect but the phasing will not necessarily match between the two styles.

Color Effect Presets

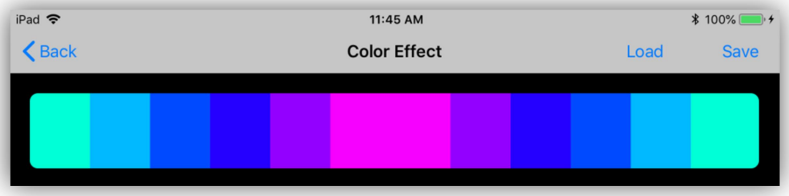
Hue Gamut Effect: The color will gradually change hue across the entire gamut unless you confine the hues by using the control tabs in the color picker. Speed is displayed in hrs:min:sec. This is the time it takes to run the entire gamut. The range is 2 seconds (fast) to 2 hours (super slow). The fade 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 tap or audio beats. Fade is a percentage based on the time between beats. Phasing the effect will depend on the number of pixels selected with more phase causing more pixels to change randomly.

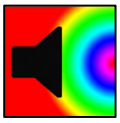
Random RGB Effect: The color changes randomly but unlike the random hue effect, red, green and blue channels are picked at random. This will give a much wider range of colors. The speed is set in beats per minute and can be synced to the tap or audio beats. Fade is a percentage based on the time between beats. Phase will depend on the number of pixels selected with more phase 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 have 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 of each 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 highs, mids and lows and 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 Master Fader chapter. The speed fader controls how quickly the effect responds to audio changes. The fade 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 from 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. "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.

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

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. This will present the buttons list. Select a button location to save the effect. 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.

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 tab. 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 as a percentage of the time between flashes.

The following section describes the six preset flash effects. In addition to the presets you can also record your own custom flash chases.

Flash Effect Presets

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 tab. 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 flashed on in a 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. Also 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.

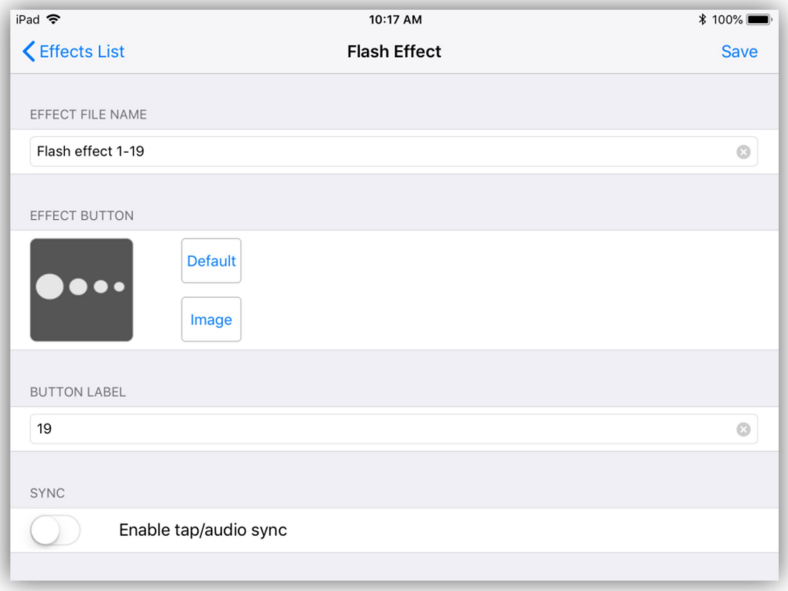
+Flash/-Flash: This is used to create a negative flash effect where lights flash off instead of on.

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.

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. This will present the buttons list. Select a button location to save the effect. The button editor will appear similar to the example below.



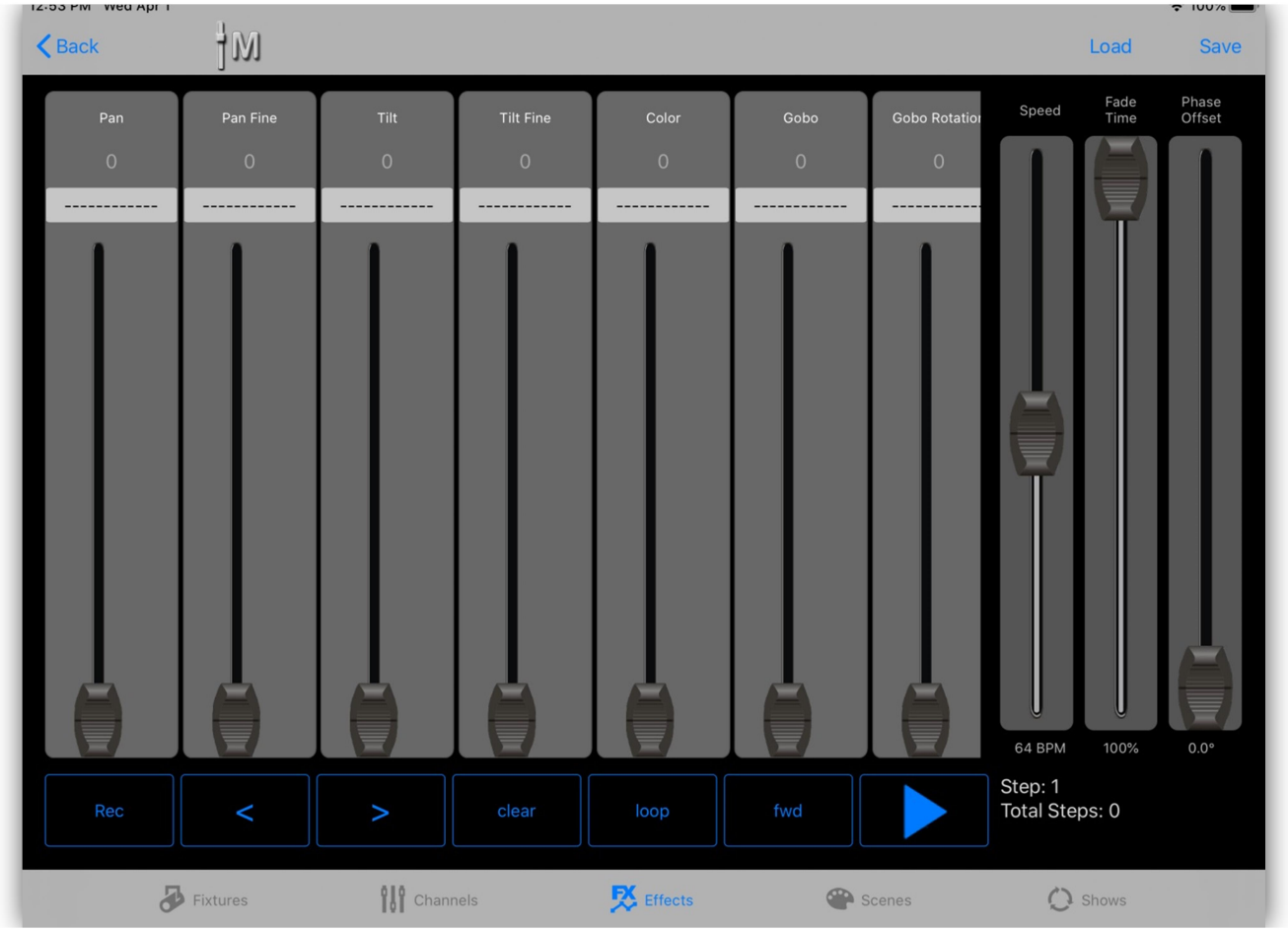
Enter a new file name or use the default name provided. You can use the default button image or select a new one from your photo library. Enter a short label that will appear under the button. Enable tap/audio sync if you want to be able to control the speed of the effect that way. **Note:** The "lightning"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



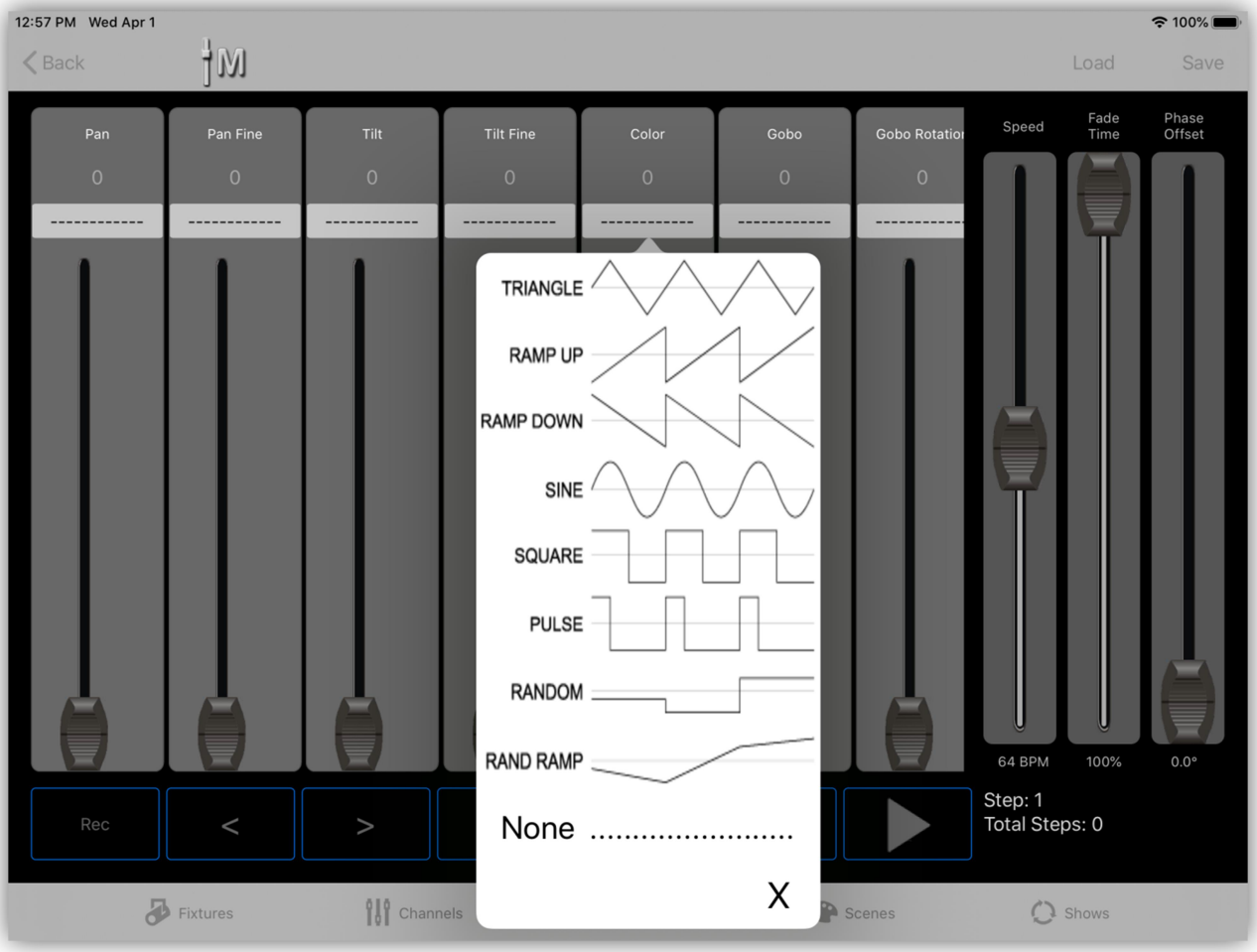
Depending on the fixture(s) you have selected, you will see channel faders in a view similar to the channels tab that can be scrolled left and right. To the right of the channels are three faders for controlling the speed, fade rate and phasing of the effect and at the bottom are some buttons used for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

The speed control is shown in beats per minute and speed can also be controlled using 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°.

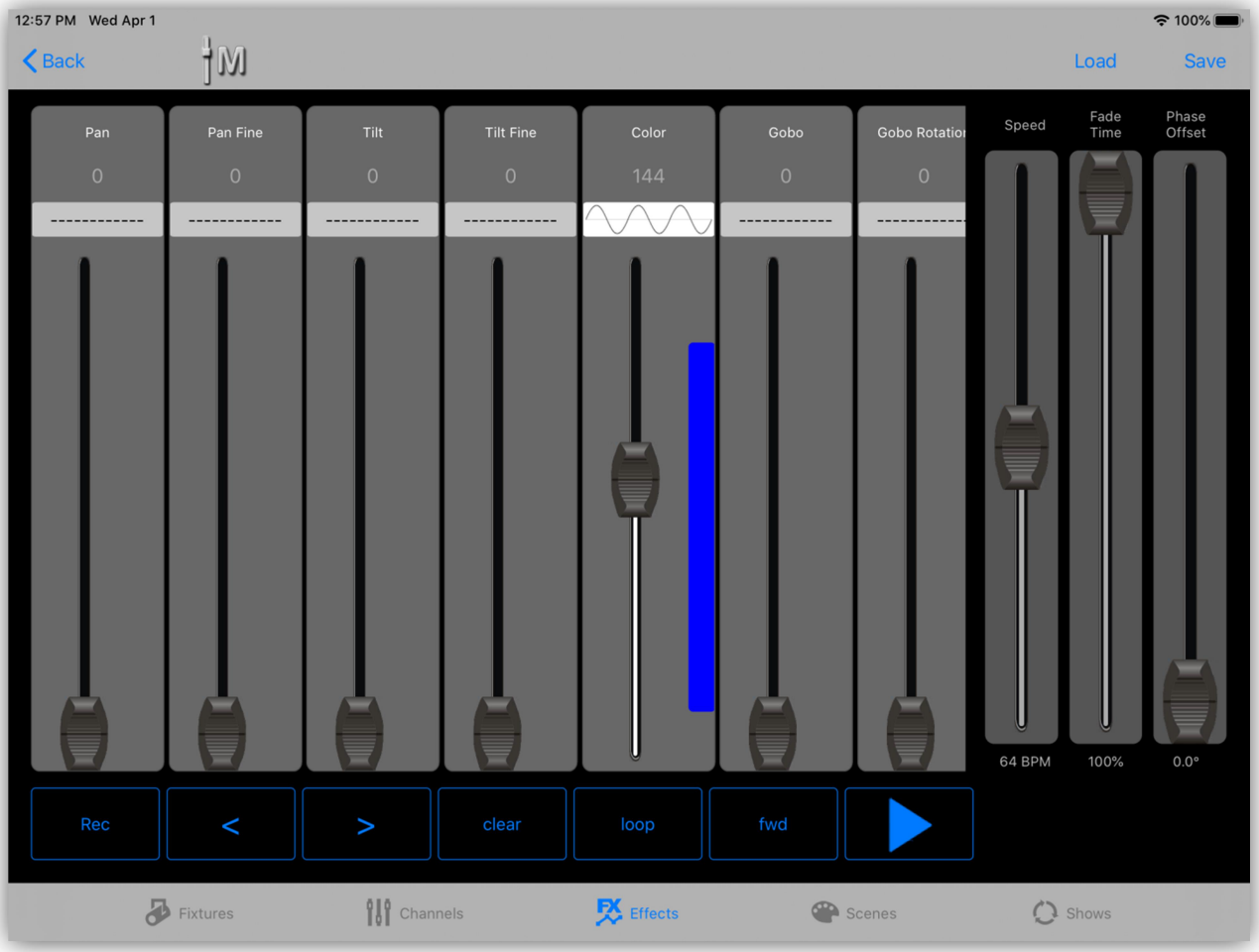
Waveforms

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 movement while running the waveform. You can adjust the upper and lower endpoints of the limits by touching and dragging the ends of the stripe.



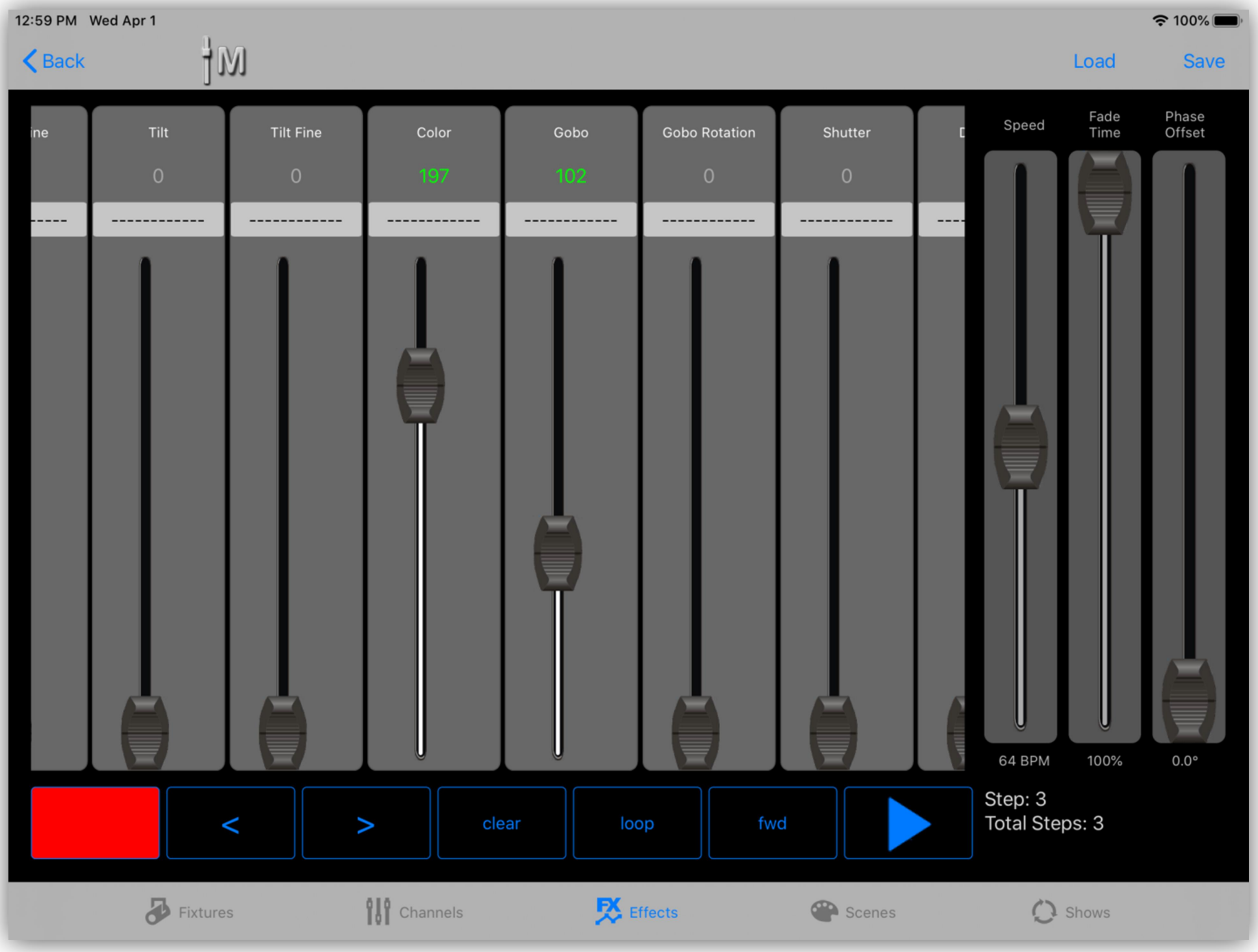
You can have as many or as few channels running waves as desired. To see the waveform run, tap the play button in the lower right of the screen. You will need to have some fixtures connected to view the full effect and any phase offset.

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 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 will show 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

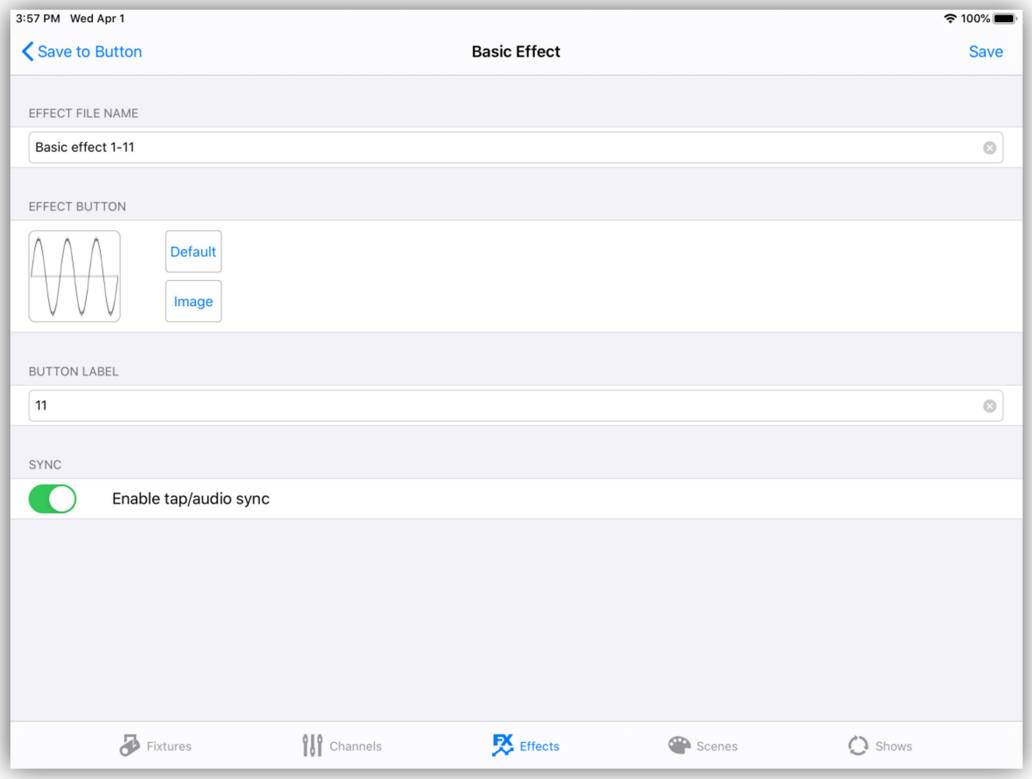
each step you add. Use the clear button to remove the contents of the current step or the entire chase. One tap clears the step and the next tap will clear all of the steps. Tap the record or the play buttons to end recording. While recording, monitor the display to keep track of how many steps there 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 effect can have both waveforms and a chase running at the same time. Try not to include waveform channels in the chase as the wave will take precedence. You can also make a one-step chase to force some channels go to fixed values and hold them as part of the effect.

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. This will present the buttons list. Select a button location to save the effect. 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.

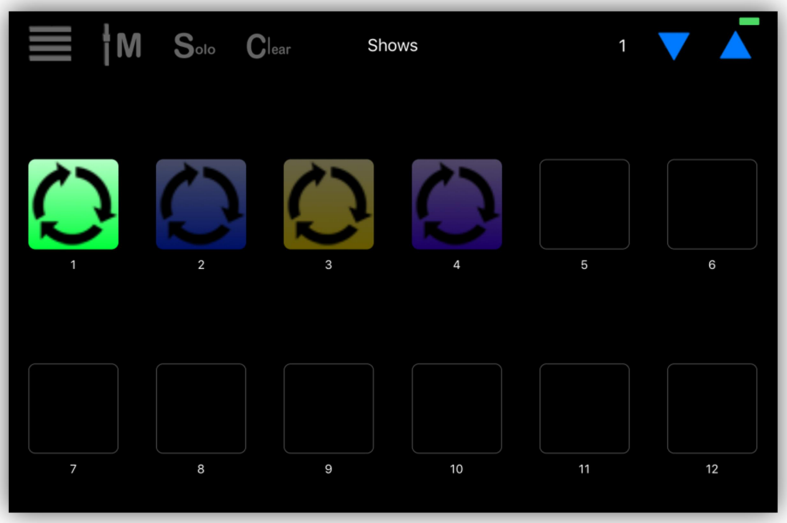
Load Basic Effect

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 Tab

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.

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

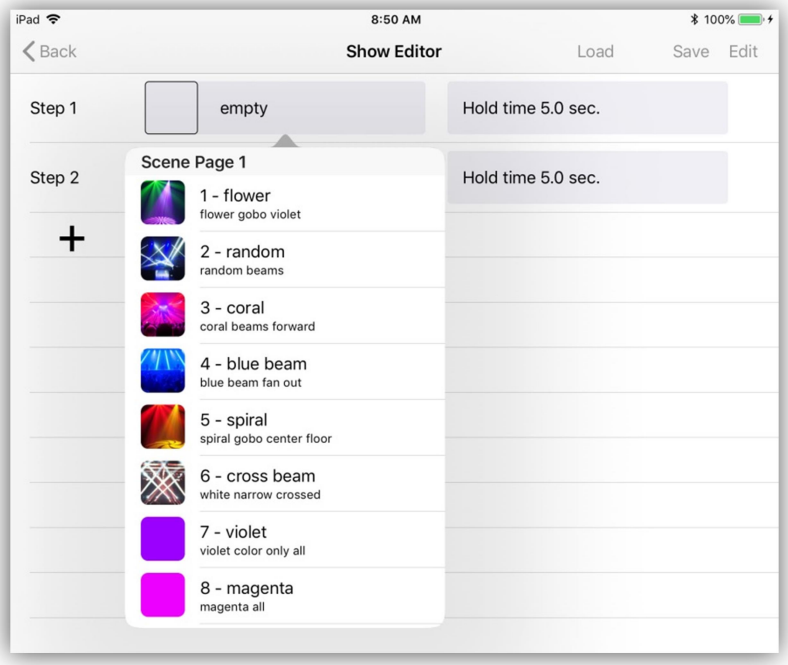


Edit a Show

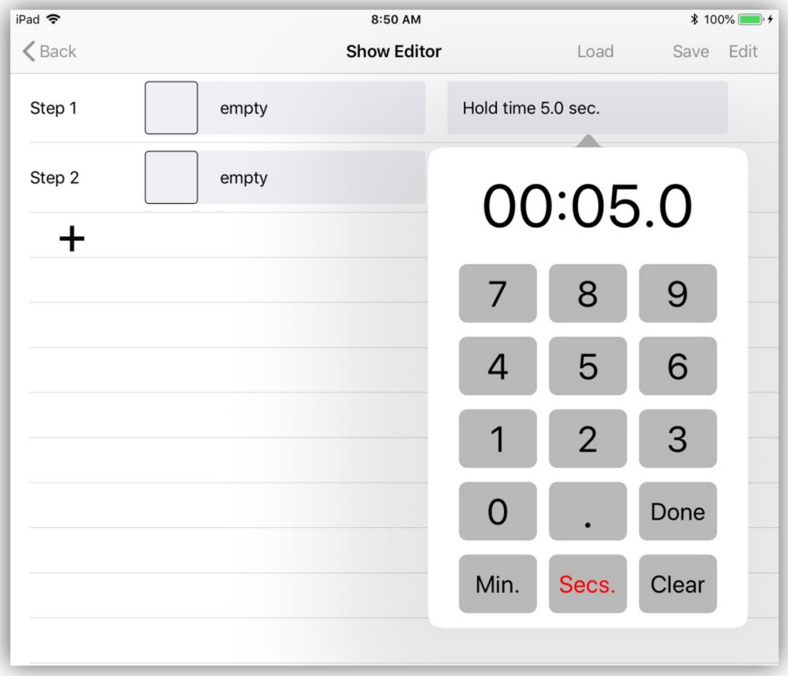
The menu pop-up for the shows view is shown here. Select “Edit” to start editing a new show or to edit one that’s already saved. Select “List” to view the show button list.

When 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 “+” and an empty step will be added. 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.

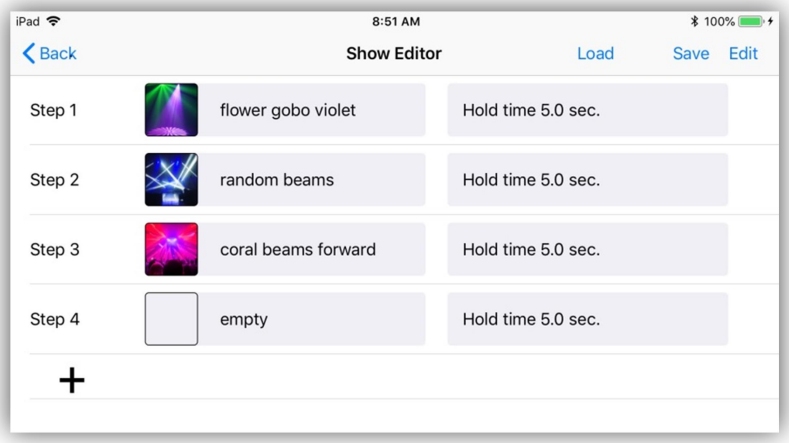


After selecting a scene, tap the hold time and enter a time using the pop-up keypad as in the example below.



Tap the "Min." or "Secs." button to enter hold times in minutes or seconds. Tap "Done" when finished.

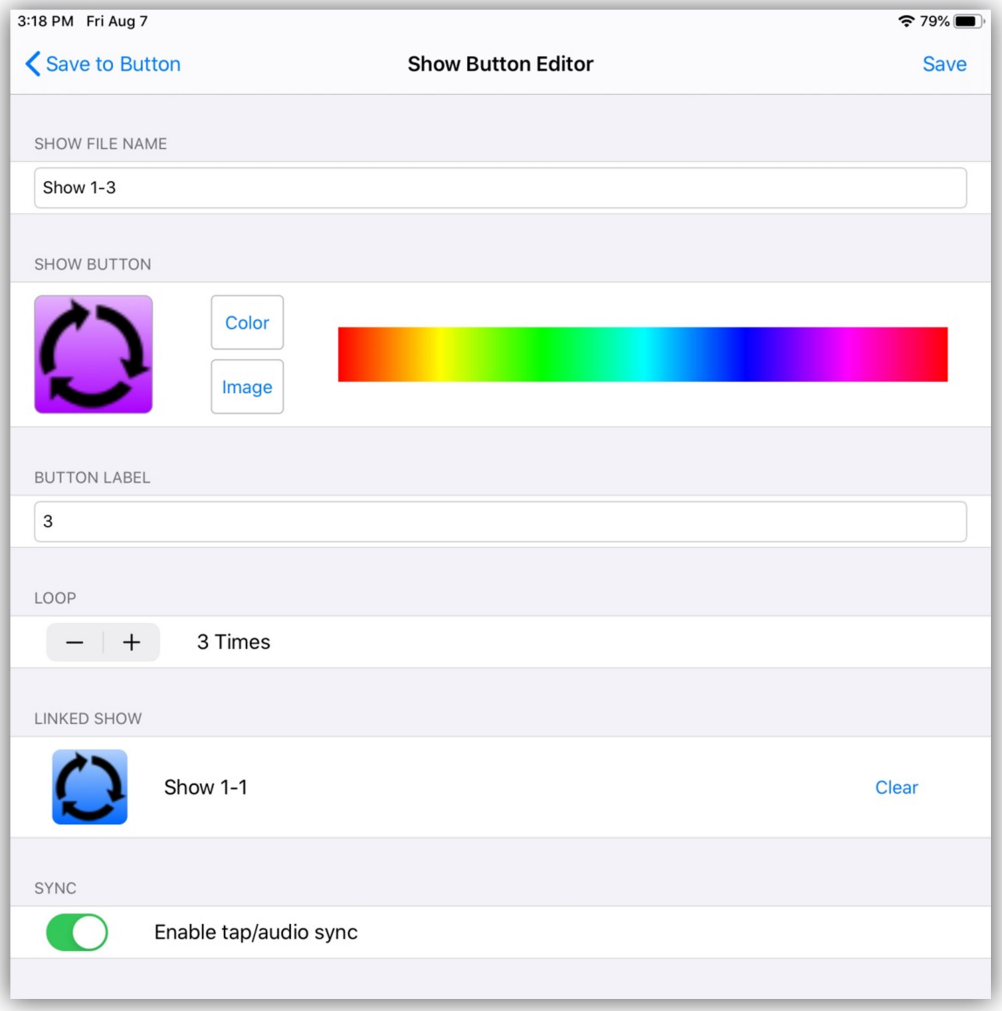
You can tap the "Edit" button in the upper right of the screen to delete or re-arrange the steps using the standard IOS list editor. Tap "Done" when finished.



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 and 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 photo library.

From 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 link selected.

To select a link, 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 links to work 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.

Finally, 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.

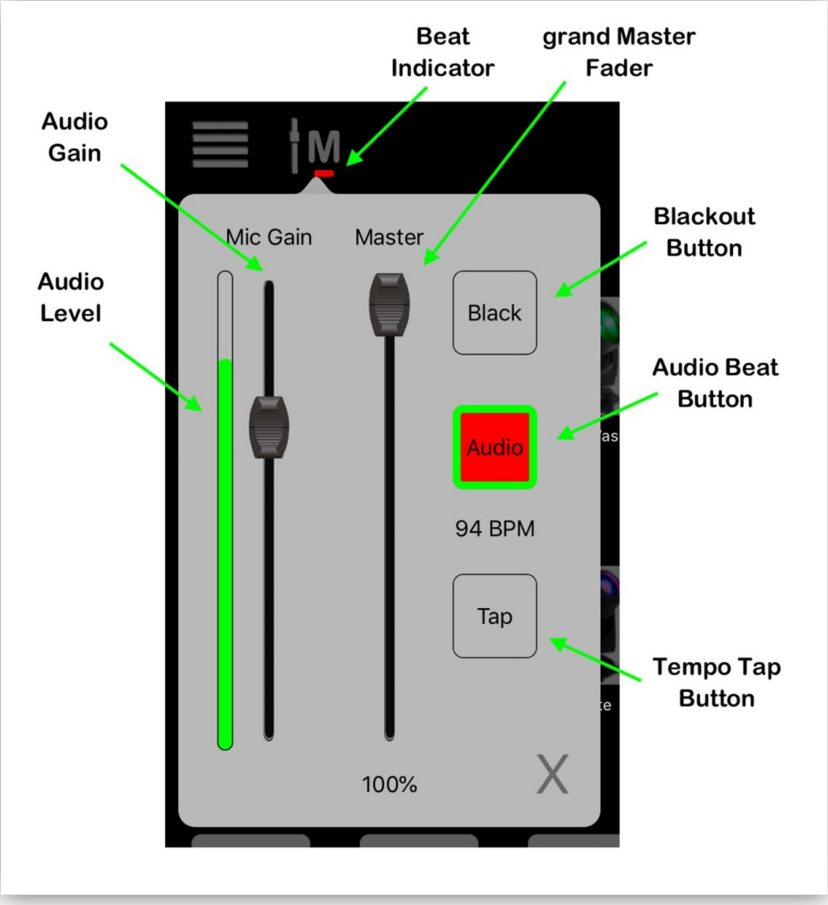
If the "Solo" button is on, only one show and one scene will run at a time. With solo off, shows and scenes will be allowed to pile on and continue running. When you turn a show button off, any active scenes from that show will also be turned off.

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

Important Note: When a show is running the idle timer on your IPad will be temporarily turned off to allow the show to continue uninterrupted. If you background the app while a show is running the show timer will eventually pause after several minutes.

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 of the screen. This pop-up contains a number of global controls, each explained in the following paragraphs.



Master Fader

The master fader controls the overall brightness of your stage. It is a manual control. 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 to achieve a blackout by pulling the master fader to 0. Tap and hold the button briefly to get a 3 second fade from the master. Tap and release quickly to get an instant fadeout. Tap the button again to return the master to its previous position.

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 low frequency beats raise the level indicator just into the red and cause the pulse indicator on the audio button to 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.

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 button will flash red on each beat as shown in the example and the beats per minute will be displayed below the button. The beat will stop if the audio source stops and any effects or shows will revert to their saved tempos.

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 current BPM. You must enable this for each individual show or effect. See instructions on saving shows and effects for more info.

MIDI

This app supports MIDI over USB, both MIDI input and output. MIDI output will provide a wired connection between the IPad and the 4 Stream DMX Bridge that can replace the Wi-Fi connection. MIDI input will allow a MIDI controller to connect to the IPad for external button and fader controls. To use MIDI you will need to purchase the Apple Lightning to USB Camera Adapter shown below. This will connect to your IPad which will then let you connect the 4 Stream DMX Bridge using a standard USB (mini) cable. **Note:** Newer IPads now have a USB-C connection that doesn't require the camera kit. You will need a C to A style adapter.

This will also allow you to connect to a USB MIDI controller like the Elation MIDIcon 2. If you would like to connect to both the 4 Stream DMX Bridge and a MIDI controller at the same time, you will need a simple USB hub, preferably one that is powered as some controllers like the MIDIcon 2 get their power from the USB bus.

From the app's "Settings" you can enable MIDI in and MIDI out separately. There is also a function to detect MIDI devices that are connected and check the MIDI messages coming from a controller.

If using an ADJ 4 Stream DMX Bridge, you will also need to set the bridge's USB mode to "MIDI" from the bridge settings.

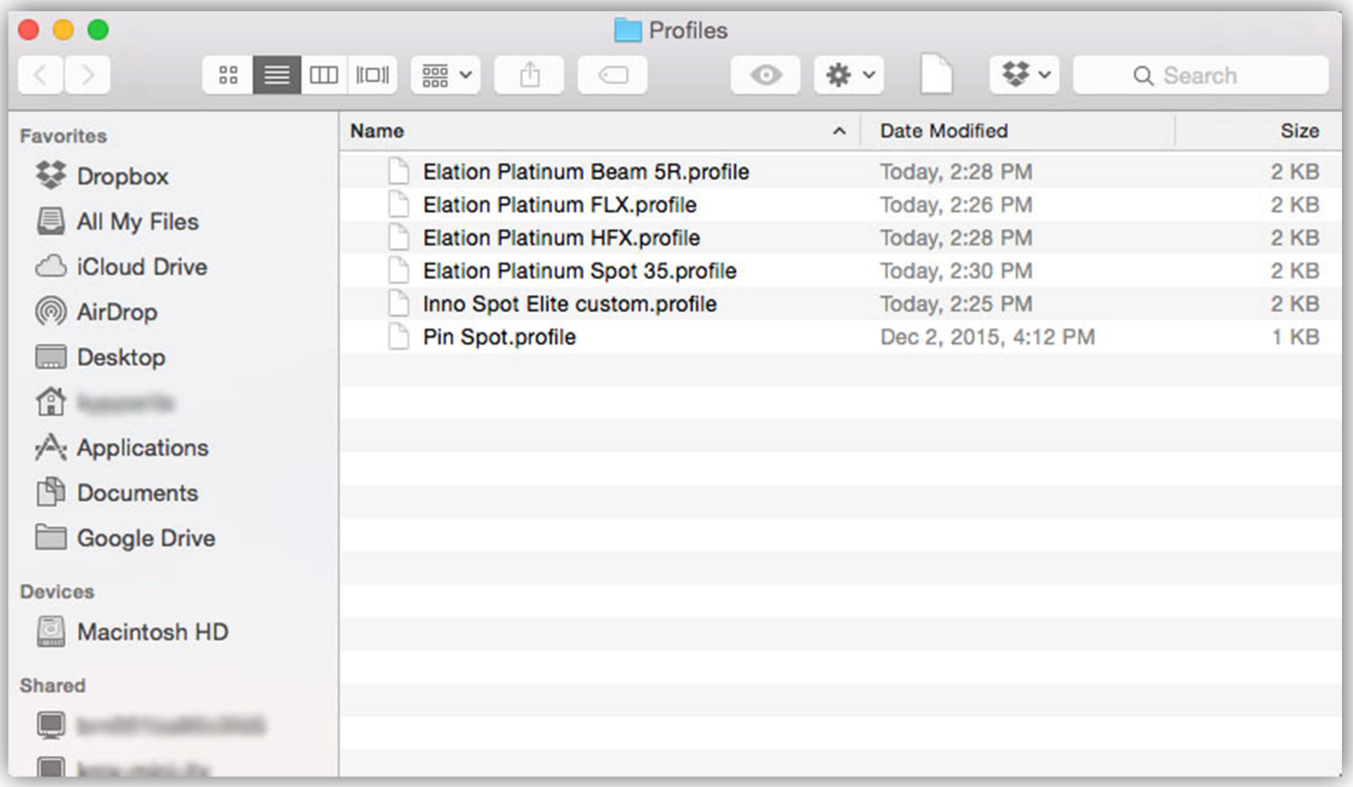
As of this revision, there is support for controller input from the MIDIcon 2 or any MIDI controller that can send MIDI notes. MIDI notes 1-24 on any channel will trigger the buttons on the currently displayed tab or page. The page control on the MIDIcon 2 will also sync and control pages on the app. Pages will respond to continuous controller number 11 using a value of 1 – 99 for the page number. The app's tabs will respond to MIDI notes 59 – 63 and the master fader will respond to continuous controller 9. The MIDI channel is ignored for all.

File System and ITunes

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. You can access these files using ITunes file sharing running on your Mac when your IPad is connected to it. The screenshot below is an example of the file sharing display in ITunes connected to an IPad running the Airstream DMX Pro app.

All of the app's folders are displayed in the pane on the right. The folders can't be opened in ITunes but they can be dragged to your desktop where you can open and edit them. You can then drag them back to ITunes 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 ITunes to back up your folders on your computer or to load new files into your IOS device. To Share custom profiles with another user, copy any new profiles in or out of the profiles folder while it's on your desktop.

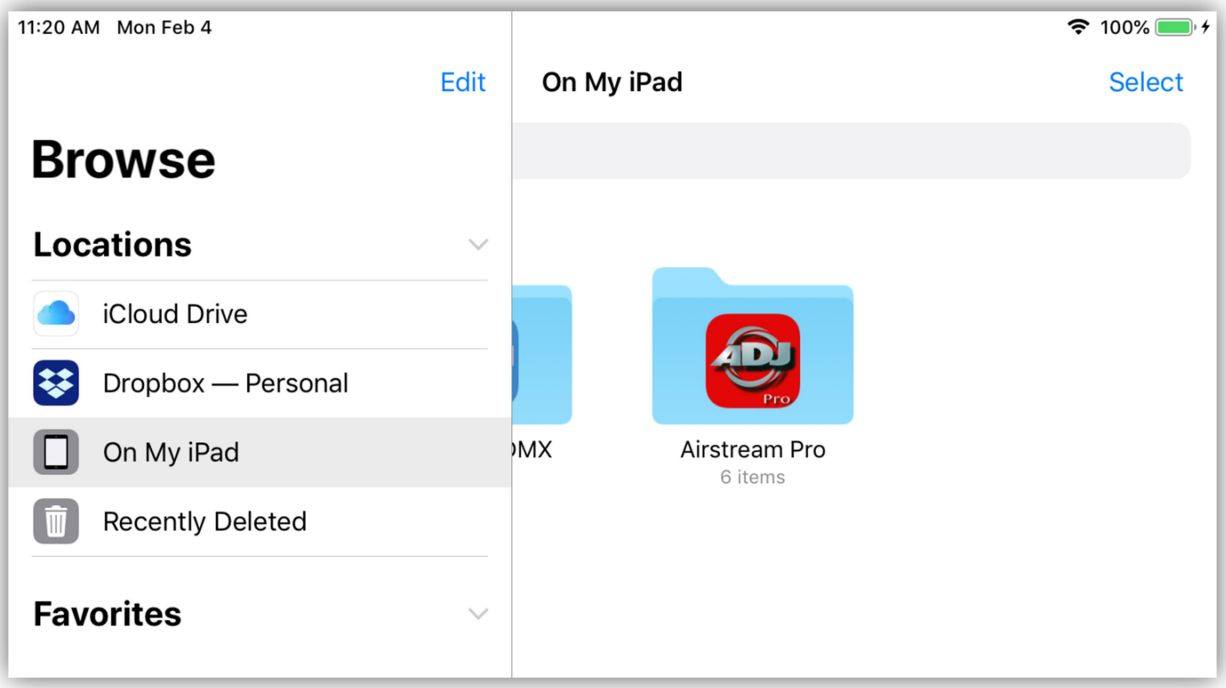
Important Note: There is a potential compatibility issue between IOS filenames and OSX filenames. IOS will allow you to create two files with the same name using different case, for example "scene 1" and "Scene 1". OSX will see these as the same file name. This can cause error warnings if you try to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

IOS Files App

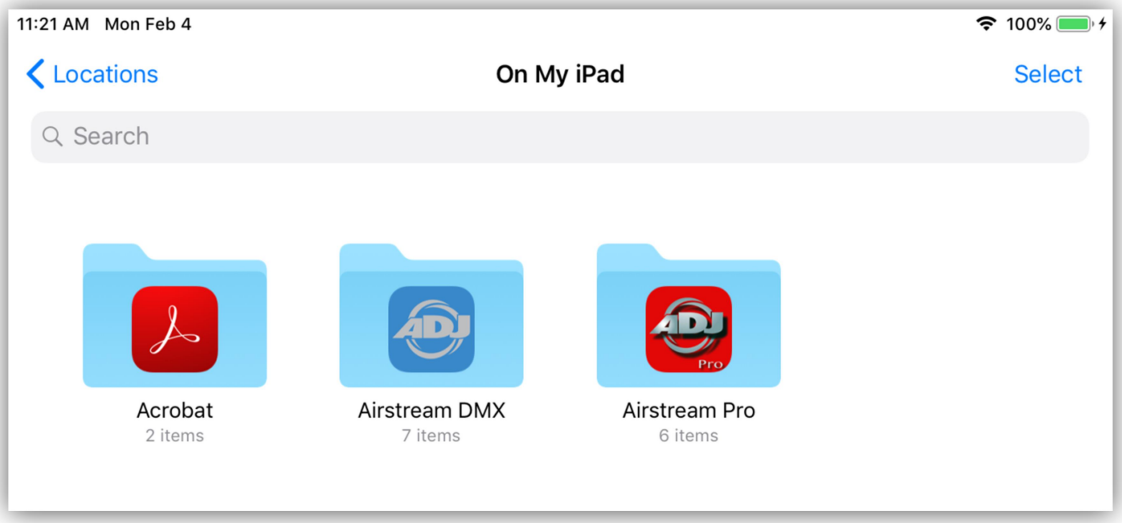
The files app gives you easy access to files on your IPad as well as any cloud service you use. If for example you have some custom fixture profiles on the original Airstream app that you would like to use on this app, it's easy to copy and paste them from one app's documents to another's. You can also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

You will find the IOS Files app in the dock at the bottom of your screen.

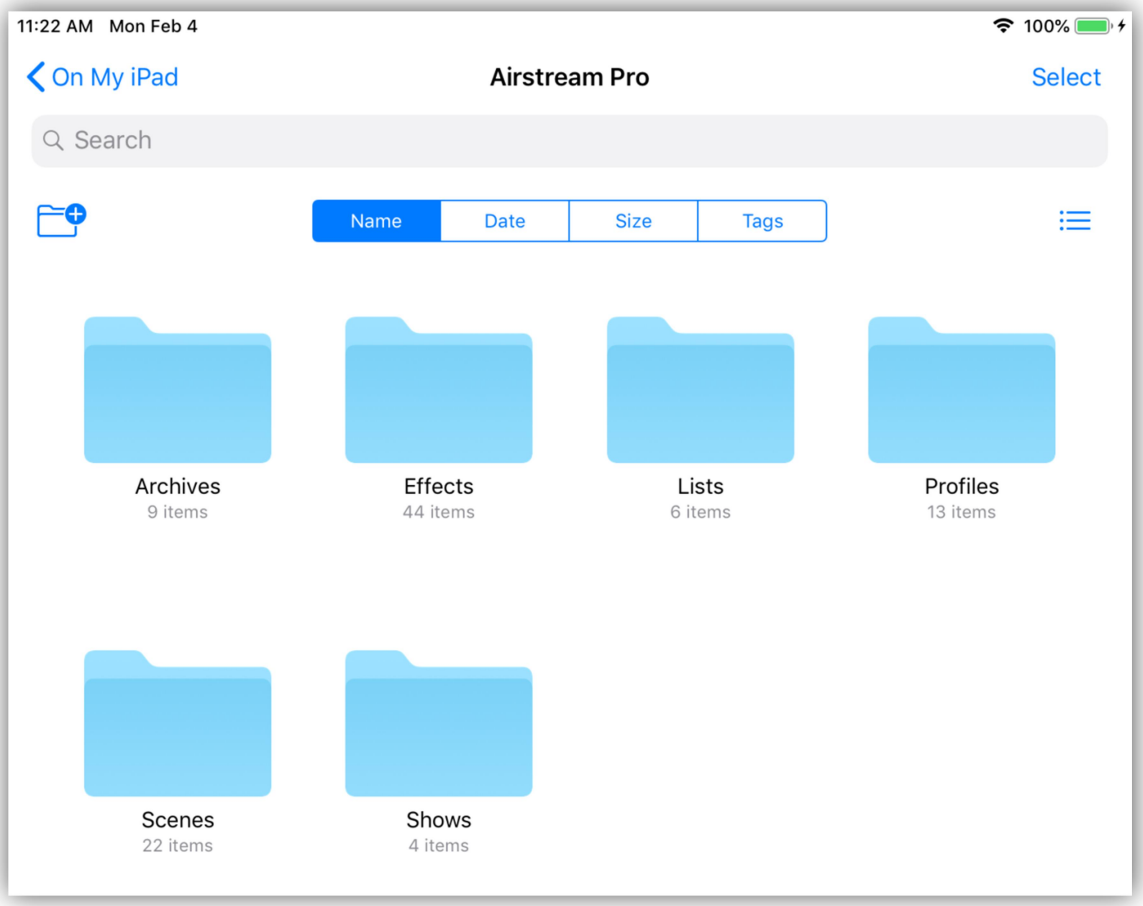
Open it to see something similar to the example below by selecting "locations". In this example the three important locations are ICloud Drive, Dropbox and My IPad. When you select a location, you will be able to view the files there. Note that when using this for the first time you will need to enable your locations using "Edit" in the locations pane.



By selecting "On My IPad" you can choose from apps that support file sharing as in the example below.



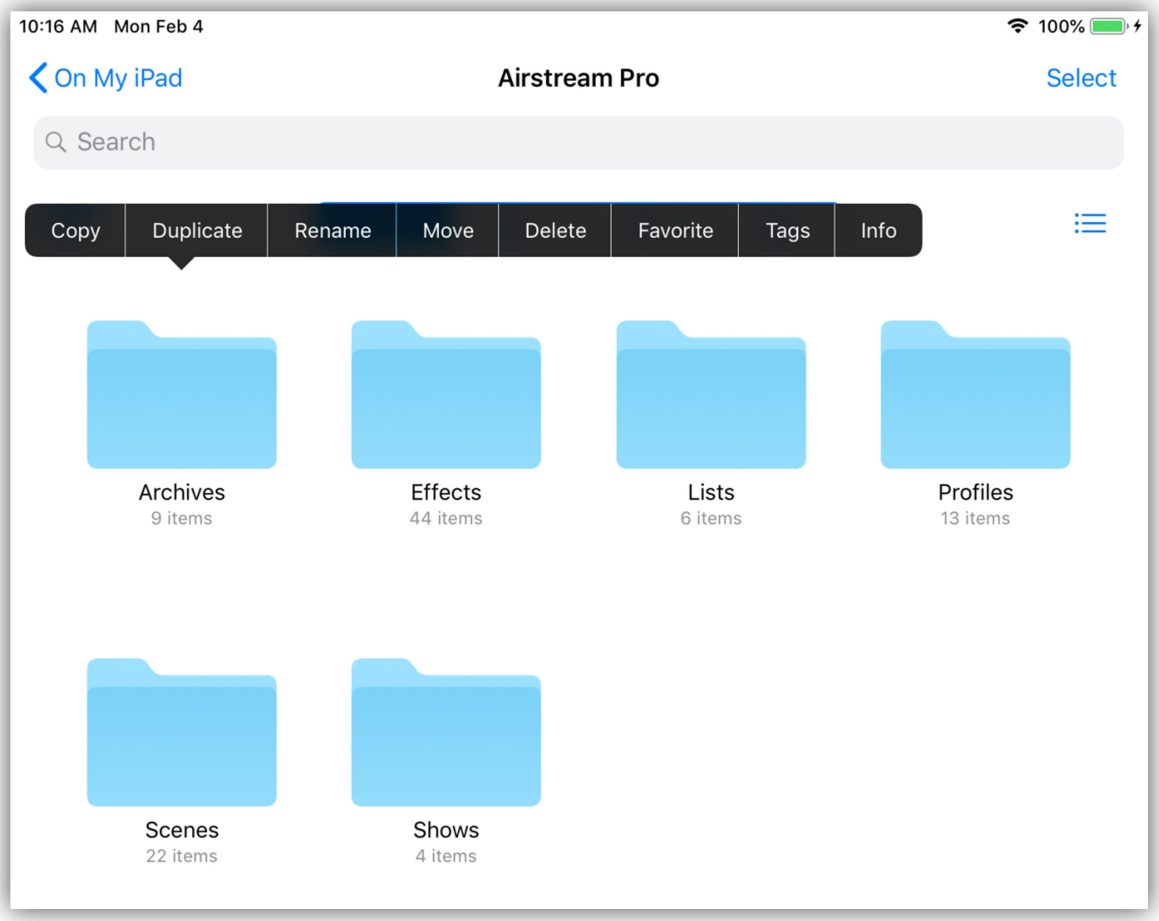
Select Airstream Pro to view the folders in the app's sandbox as shown in the following example.



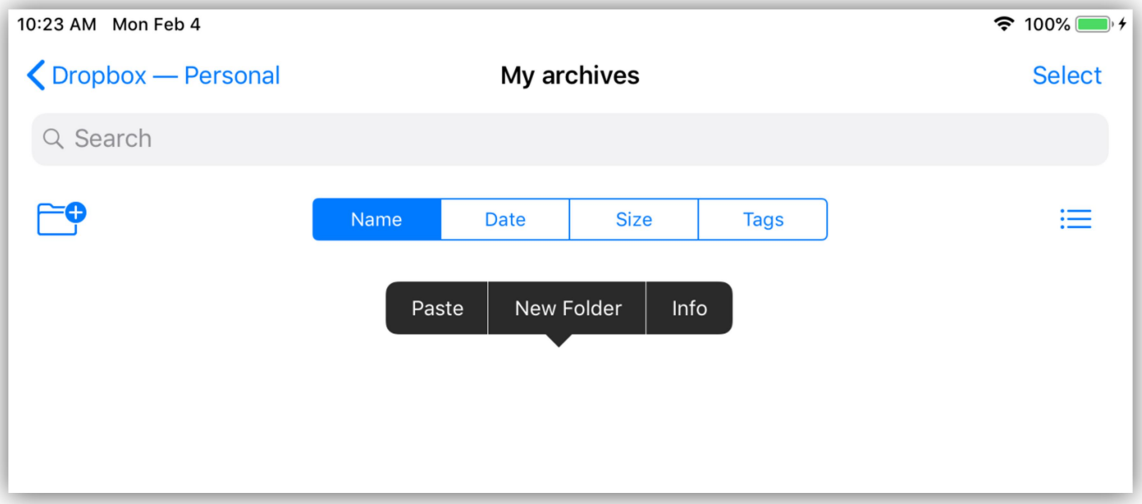
The files app offers several ways to move, copy and duplicate files. There are videos and lots of written material online with instructions on how to fully use this app.

The following is one example of how to back up the Archives folder by copying and pasting it to a Dropbox folder.

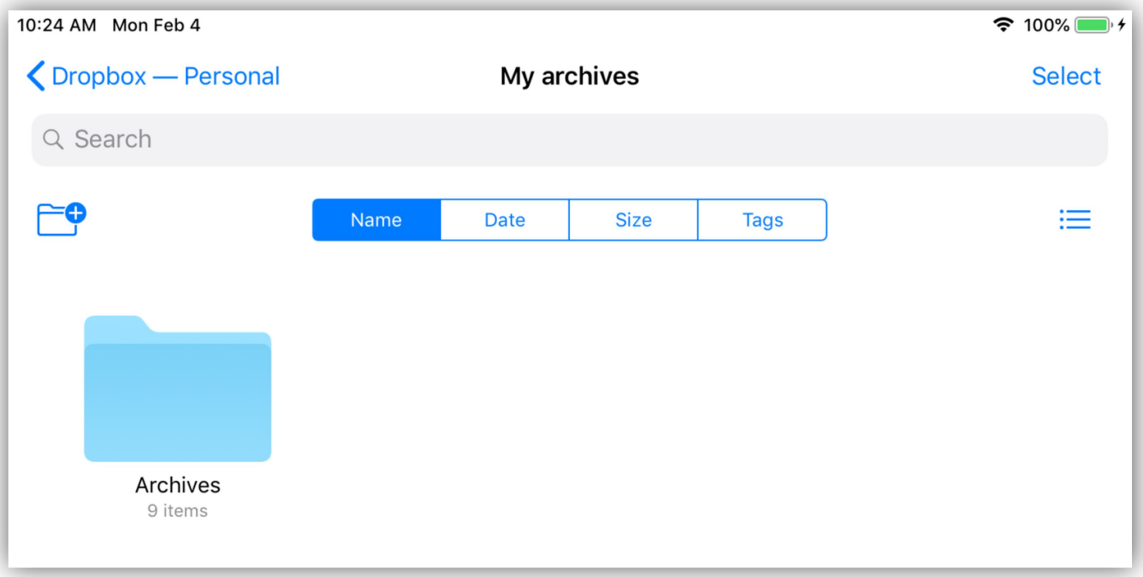
With the Airstream Pro folders displayed as in the example, tap and hold your finger on the "Archives" folder. A selection bar will appear as shown just above the folder. Tap "Copy".



Next, return to your locations and select "Dropbox" to view all of your Dropbox files and folders. There you can paste the Archives folder you copied by tapping and holding an empty area of the screen. In the example below, a new empty Dropbox folder named "My archives" was first created before doing this. You can make new folders by tapping the folder icon in the upper left.



After you tap and hold on the empty spot on the screen, a new selection bar will appear as in the example above. Select "Paste" to copy the Archives folder to the Dropbox folder as shown below. It can take some time to copy depending on the size of the folder. This method should also work with other cloud services.



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

Idle Timer and Background State

The Idle timer on your IOS device determines when your device will automatically turn off its screen and call Auto-Lock. This is something that you would normally want to happen as it helps preserve battery life and prevent unwanted access. This app will temporarily disable the idle timer under certain conditions like when it's running a timed effect or a timed show. This insures that there will be no interruption in the playback. When there are no longer any effects or shows running, the timer is re-enabled.

As with most IOS apps, certain events can cause the Airstream DMX app to enter the background state. For example, when the idle timer expires, when you press the home button or press the sleep/wake button the app will enter the background state. When the app goes to the background, it will request extra time from IOS to continue running any effects or shows while in the background. This is usually granted by IOS for around 3 minutes but is not guaranteed. After that time is up, all timers will stop and the connection to the Bridge is temporarily closed until you return the app to the foreground. The bridge can continue to output the most recent DMX512 and Wifly signals while the app is asleep but any effects or shows that were running will pause after the 3 minutes. When the app is recalled from the background state any paused effect or show will then continue as before.

IOS devices were designed to work this way as things like LCD screens and Wi-Fi connections consume battery life. If battery life is not an issue and you would like to keep the app and screen active all the time, go to your IOS device Settings, General, Auto-Lock and select "Never". This will keep your screen on all the time unless you manually shut it down using the sleep/wake button.

App Authentication

To unlock the DMX outputs of the Airstream DMX Pro app requires a one-time authentication process. To do this you must connect your IPad to the Wi-Fi network of an ADJ 4 Stream DMX Bridge or Airstream DMX Bridge then start the Airstream DMX Pro app. The Airstream DMX Pro app will automatically connect and detect the ADJ Bridge then unlock the DMX outputs of the app. This only needs to be done one time. In the Airstream DMX Pro settings there is a row that shows whether or not the app has been authenticated. Look at the "Settings" chapter at the beginning of this manual for details.

Contacts

Information and specifications in this document are subject to change without notice. ADJ Products and KMX Inc. assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual.

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Revision History

1.0 First release.

1.1 Fix minor bugs.

1.2 Fix minor bugs.
Allow empty steps at end of recorded flash chase.

1.3 Fix minor bugs.
Add ability to select or unselect groups of fixture buttons.
Add "Clear" function for all button pages.
Improve the way scenes fade out when toggled off.
Add ability to start a new universe when auto patching.

1.4 Rebrand app to ADJ.
Fix minor bugs.
Add scene sub masters.
Allow Airstream DMX bridge to unlock outputs.

1.5 Fix bug when using profiles from original Airstream app.
Fix bug when using tap/audio beat.
Access file lists from button lists.

1.6 Add a matrix editor and selector.
Add color effects for LED matrices.
Add support for more MIDI controllers.
Add super slow speed for hue effect, up to 2 hrs.
Increase size of touch area on fader knobs.
Fix minor bugs.
Add new ADJ fixtures to library.

1.7 Fix IOS 13 issues.

1.8 Fix more IOS 13 issues.
Update screens to work with IOS 13 dark mode.

1.9 Add new effects editor for "Basic" effect.
Add loop switch so a show can loop or play once.

2.0 Add more lighting fixtures to the library.
Fix minor bugs.

2.1 Add loop counter and link feature to shows.

2.2 Fix minor bugs.
Add fixtures to library.