

# Screen Configuration

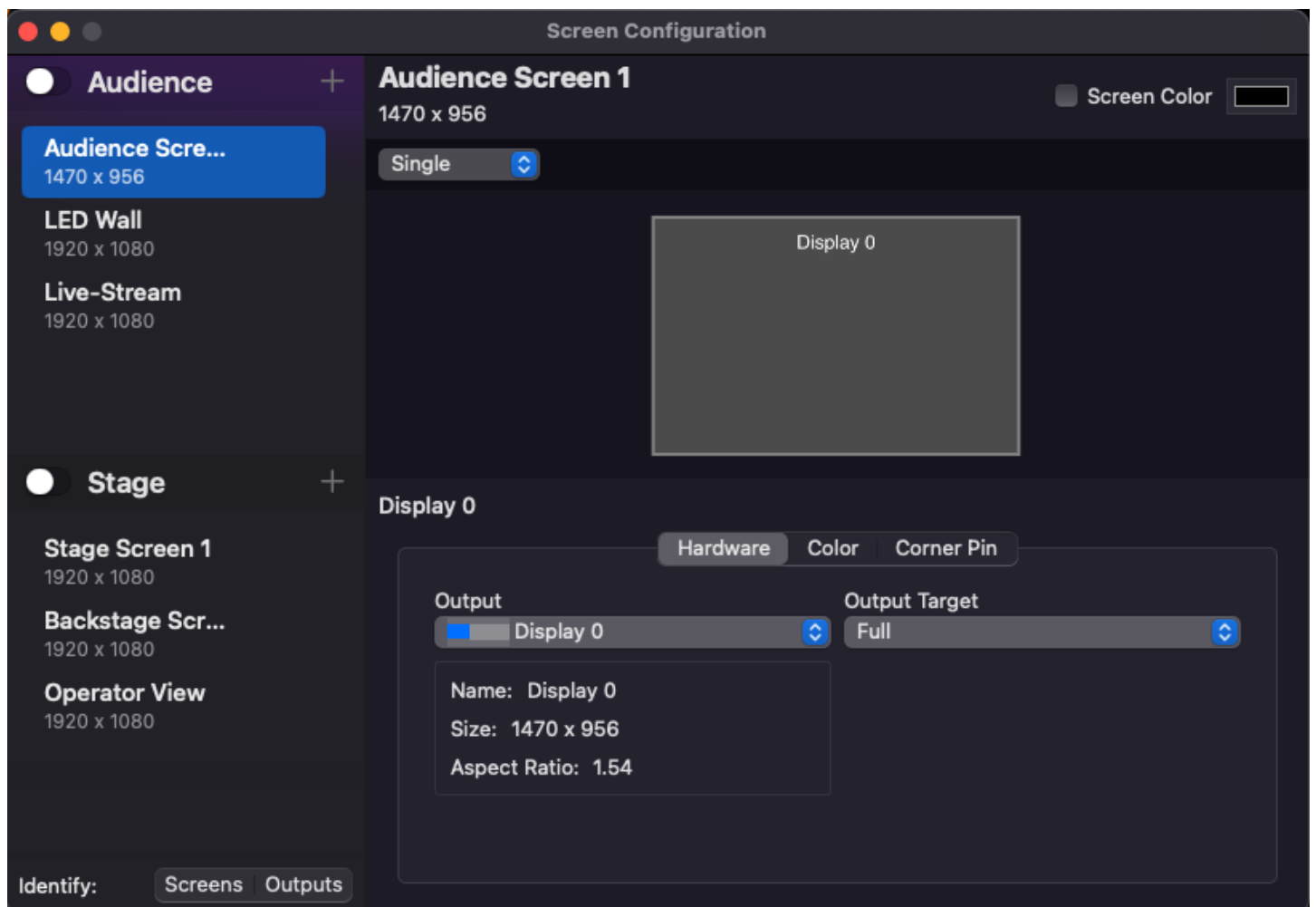
15th Dec 2022

ProPresenter features a powerful render engine capable of outputting to multiple outputs and destinations at the same time. This functionality provides the option to add as many system outputs as your computer can handle to more advanced output types such as SDI, NDI, and Syphon.

## The Configure Screens Window

The **Configure Screens** window is where you set up your Screens and Outputs. Open this window by pressing Command-Option-1 on Mac or Control-Alt-1 on Windows, or by selecting from the menubar **Screens > Configure Screens**.

Note: The Configure Screens window replaces the Display Preference tab in previous versions of ProPresenter.



The Configure Screens window is divided into three main sections: Audience Screens on the top left, Stage Screens on the bottom left, and the Configure area on the right side of the window.

# Display Terminology

To master the Configure Screens window you must first master the terminology that the Configure Screens window uses.

## Audience vs. Stage

ProPresenter has two types of screens: **Audience** and **Stage**. Generally speaking, an Audience screen is a screen that the audience will look at, and a Stage screen is a screen that people on the stage can see.

More specifically, the Audience screens have a full stack of Layers (as discussed in the Layer section) and is where your slides, media, and other content will be displayed. The Stage screens instead take the content that is being sent to the Audience screen, and, along with other content such as clocks, timers, and notes, is displayed in a user friendly way so that the people on stage can quickly see that information.

Tip: Screens that people on the stage can see have been called many things over the years. You might hear it referenced as a Confidence Monitor, Conference Monitor, Foldback screen, or, as in previous versions of ProPresenter, a Stage Display.

## Screen

A Screen is the digital representation of your physical devices inside of ProPresenter. Think of a Screen as one render out of ProPresenter. Note that you can send one Screen to multiple devices (using the Mirror option), allowing ProPresenter to render something once yet drive multiple outputs.

There are four types of Screens (Single, Mirror, Grouped, and Edge Blend); each of these options will be covered more in depth separately.

## Output

An Output is the connection between a Screen (as defined above) and the physical device (or digital equivalent) that ProPresenter will be displaying on. That is, it is a property of a Screen that tells the rendered image where to go.

Here are the various Output types.

1. System -- this will be any physically connected outputs to your computer including VGA, DVI and HDMI outputs
2. BlackMagic -- this is any BlackMagic device that allows for SDI or HDMI output from the program
3. NDI -- this option will create a virtual output that shows over the network on any software programs or external hardware capable of receiving an NDI input
4. Syphon -- this is a Mac only option that allows you to output on the same computer to a program that is capable of receiving a Syphon input
5. Placeholder -- this is used if you are not physically connected to an output, but wish to link it later and begin setting up your Screens and Looks for a program

## Screen Types

There are four types of Screens as described below. When you create a new Screen you can select which type it will be, or you can always change it later by selecting the dropdown at the upper left of the Screen Configuration window.

### Single Screen

Selecting **Single** will have ProPresenter render one Screen that will be sent to one Output. This is the standard option that you'll use in most applications

### Mirrored Screen

Selecting **Mirror** allows you to send one Screen to multiple Outputs. Each mirrored Output will be shown as a separate box in the center of the window. Click on a box to select it to control its properties. The Primary Output will be the leftmost Output that is shown. In the upper right corner of the Configure window, you can select the number of mirrored Outputs you are seeing.

Note: Mirrored Outputs can have a different resolution than the Primary Output, however all Outputs will be rendered at the same aspect ratio as the Primary Output.

### Grouped Screen

If you want for ProPresenter to output one Screen to a grid of multiple Outputs then you would select **Grouped**. The classic example of this would be a wall of TVs with one image stretched across all of the TVs.

In the upper right corner of the Configure window, you can select the number of **Rows** and **Columns** in your grid.

### Edge Blend Screen

The **Edge Blend** option is perfect if you will be using multiple projectors with their edges blended to create a larger, seamless image.

In the upper right corner of the Configure window, you can select the **Number of Devices** that will be edge blended to create your Screen.

Note: Only horizontal edge blending is supported inside of ProPresenter.

## Audience and Stage Screens

On the left side of the Configure Screens window there are two sections, one for your Audience Screens and one for your Stage Screens. All of your Screens will appear in one of these lists.

Click the toggle button next to the section header to turn on or off all of your Screens in that section.

Note that only System screens can be toggled on/off. SDI, Syphon and NDI screens cannot be toggled off and stay on perpetually once they are created. Click the + button to add a new Screen in the appropriate section.

Click on a specific Screen to be able to edit that Screen. Single clicking on the name of a Screen

allows you to **Rename** the screen or you can right click on a Screen to be able to **Rename** or **Delete** that Screen. If you have a trackpad, you can also **Delete** a Screen doing a full swipe across the Screen name. A partial swipe will bring up a **Delete** option that you can click on.

## Identify

On the bottom left of the Configure Screens window are two **Identify** buttons: **Screens** and **Outputs**. These buttons are useful for troubleshooting during setup.

Clicking on the Screens button will add an overlay on all of your Screens with the name of that Screen, the type of devices that it is being shown on, its resolution, and its aspect ratio shown.

Clicking on Outputs will add an overlay on all of your Outputs with the name of that Output, the hardware driver that is being used, its resolution, its aspect ratio, and its framerate shown.

This is specifically helpful when using an Output Target as the Output will show information on the full output of the hardware whereas the Screen will show each individual Screen that is rendering to the Output.



Audience Screen 1  
Display 0  
1470 x 956  
1.54

The image shows a screenshot of a screen with a semi-transparent overlay in the center. The overlay contains the following text: 'Audience Screen 1', 'Display 0', '1470 x 956', and '1.54'. The text is white and centered. The background of the screen is dark and blurry, showing what appears to be a presentation slide with a blue header and some text.



Note: The Audience and/or Stage Outputs must be turned on for the Identify buttons to work. You may only have either the Identify Screens or Identify Outputs on at any given time.

## Configure Screens

The main area of the Configure Screens window lets you fully customize your Screens, including connecting them to your Outputs.

Across the top of the window you will see the name of the Screen as well as its resolution. Click on the name of the Screen to rename the Screen. Click on the check box next to **Screen Color** to enable that screen's Background Color; click on the color chooser to select which color you would like to use for the background of that Screen.

Below the name and resolution of the Screen is the **Arrangement** option; click the dropdown to select which type of Screen you would like to use: Single, Mirror, Grouped, or Edge Blend. To the right of the Arrangements dropdown is where you can edit the number of Outputs in your Screen (as covered in the Screen Types section).

In the center of the window you will see visual representations of all of your Outputs within the currently selected Screen. Click on an Output to select it and edit the properties below. If you are using an Edge Blend type, click the blend area between the screens to edit the properties for that blend area.

Across the bottom of the window you can configure the currently selected Output, including assigning your physical or virtual devices to that output. There are several tabs you can select to adjust different properties of your Output.

### Hardware Tab

Click the dropdown menu under **Output** to select which device and resolution you will be sending the signal to. Below the dropdown it will show information about the Output; which information is shown depends on what type of Output you have selected, but it may have information such as **Name** and **Resolution**. Similarly, depending on what type of Output you are using, you may be able to change some of these options, such as its Name.

On the right of the Hardware tab you can select the **Output Target**. Click the dropdown menu to choose if you want the rendered image to fill the entire screen or only fill a portion of the screen; you can select one of the defaults (such as 2 X 1, 2 X 2, or 3 X 1), or select Custom to specify a specific location on the Screen.

### Color Tab

This tab allows you to adjust the color of your Output. You might use this feature if you have projectors or TVs whose colors don't match, or you are projecting onto a colored wall and need to compensate for it.

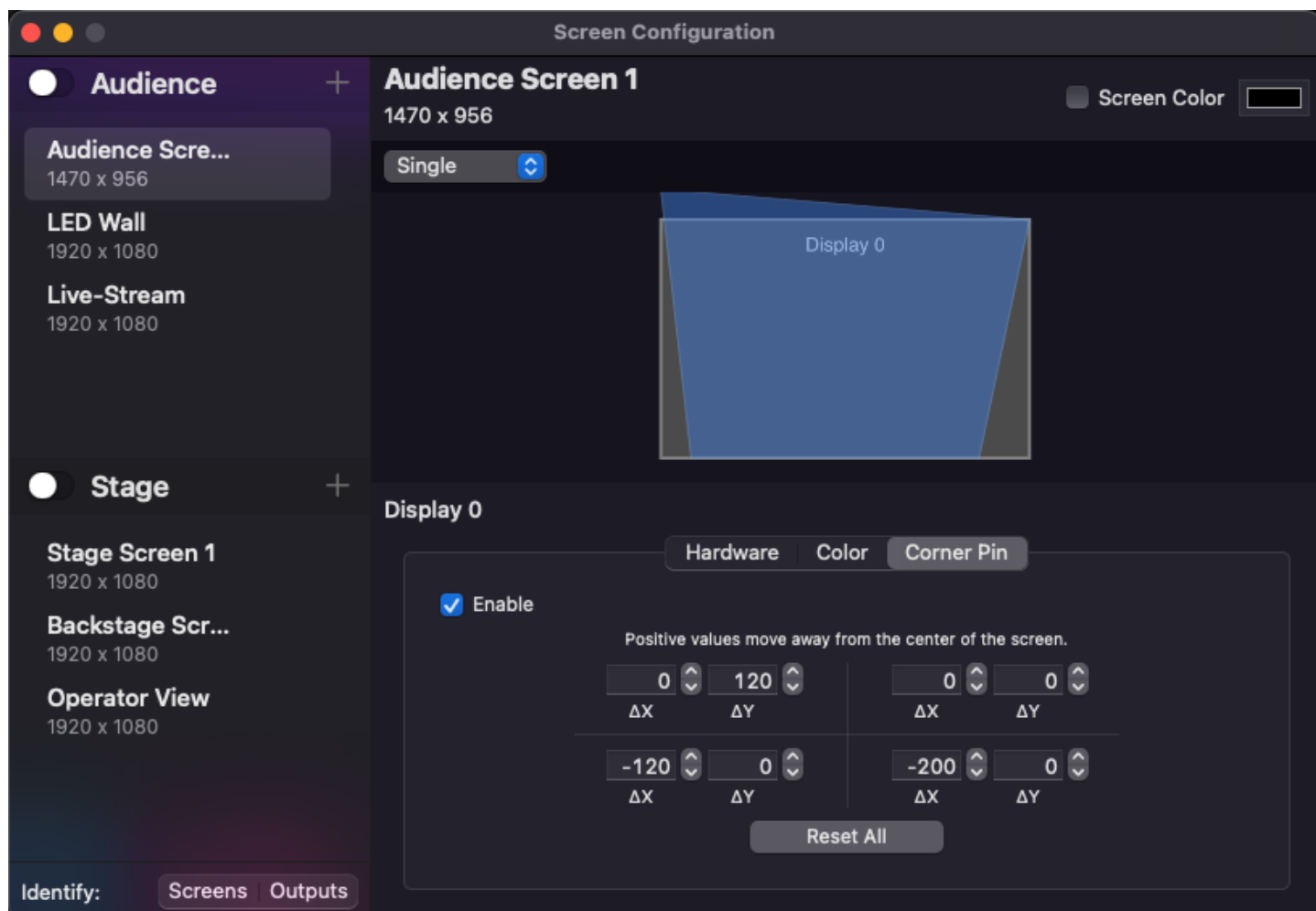
Toggle the checkbox on the left to **Enable** or disable the feature. Click and drag on the slider, type in

a number between -1 and 1, or use the arrows to adjust each color as needed. Click **Reset All** to reset all of the properties back to zero.

## Corner Pin tab

If you are using a projector, the best case scenario is that the projector is completely perpendicular to what you are projecting onto, but this isn't always an option. For example your projector might be mounted off-center, or the "perfect position" might not be a realistic expectation to have.

This is an example of when you would want to use the Corner Pin feature. This feature lets you adjust (or "pin") one or more of the corners so that the projected image perfectly fits your screen.



Toggle the checkbox on the left to **Enable** or disable the feature. Type in a number into one of the text boxes, or use the arrows to manually adjust each corner as needed. Click **Reset All** to reset all of the properties back to zero.

Each number represents that corner's Delta (represented by ?); this means that typing in a number will adjust that corner that number of pixels away from where that corner normally would be. Negative numbers are towards the center, positive numbers are away from the center.

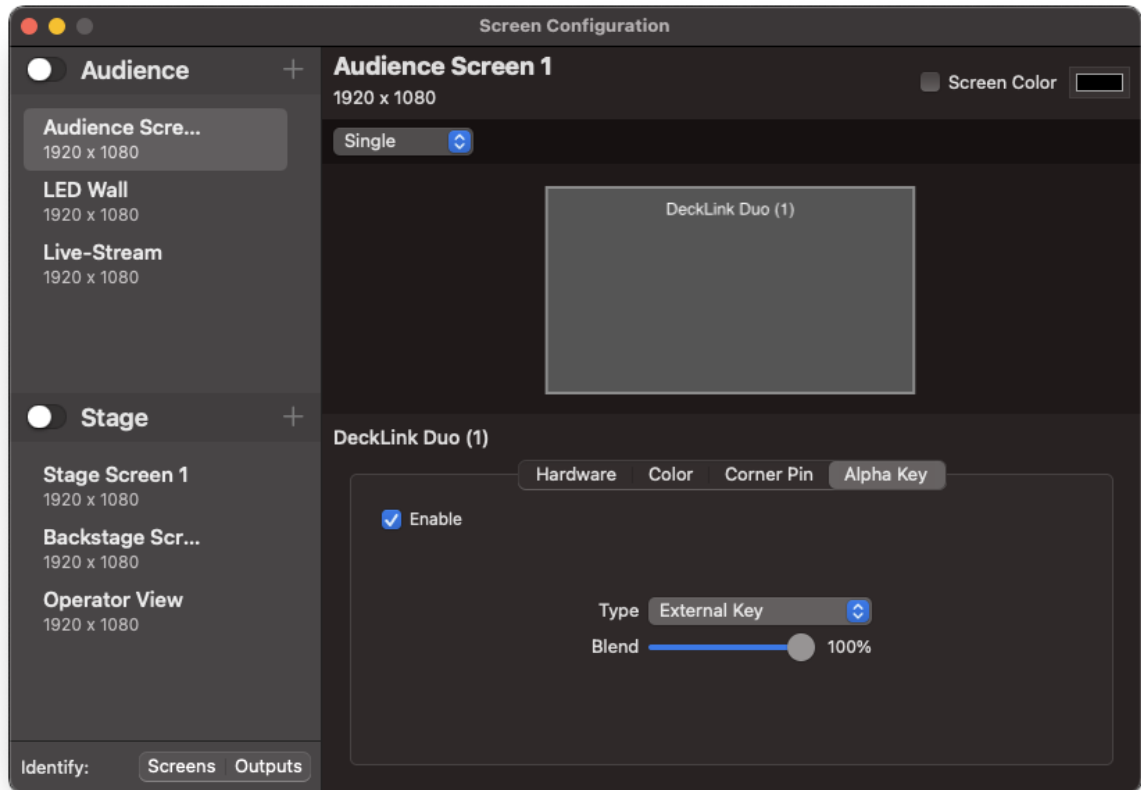
For example, typing in -50 for ?X and -50 for ?Y will move that corner fifty pixels in and fifty pixels down towards the center of the screen.

Note: Each number is limited to one quarter of the overall resolution of that Output. For example, if

your Output is 1920x1080, you divide these numbers by four to get your limits of 480x270, thus your X value is limited to a number between -480 and 480 and your Y value is limited to between -270 and 270.

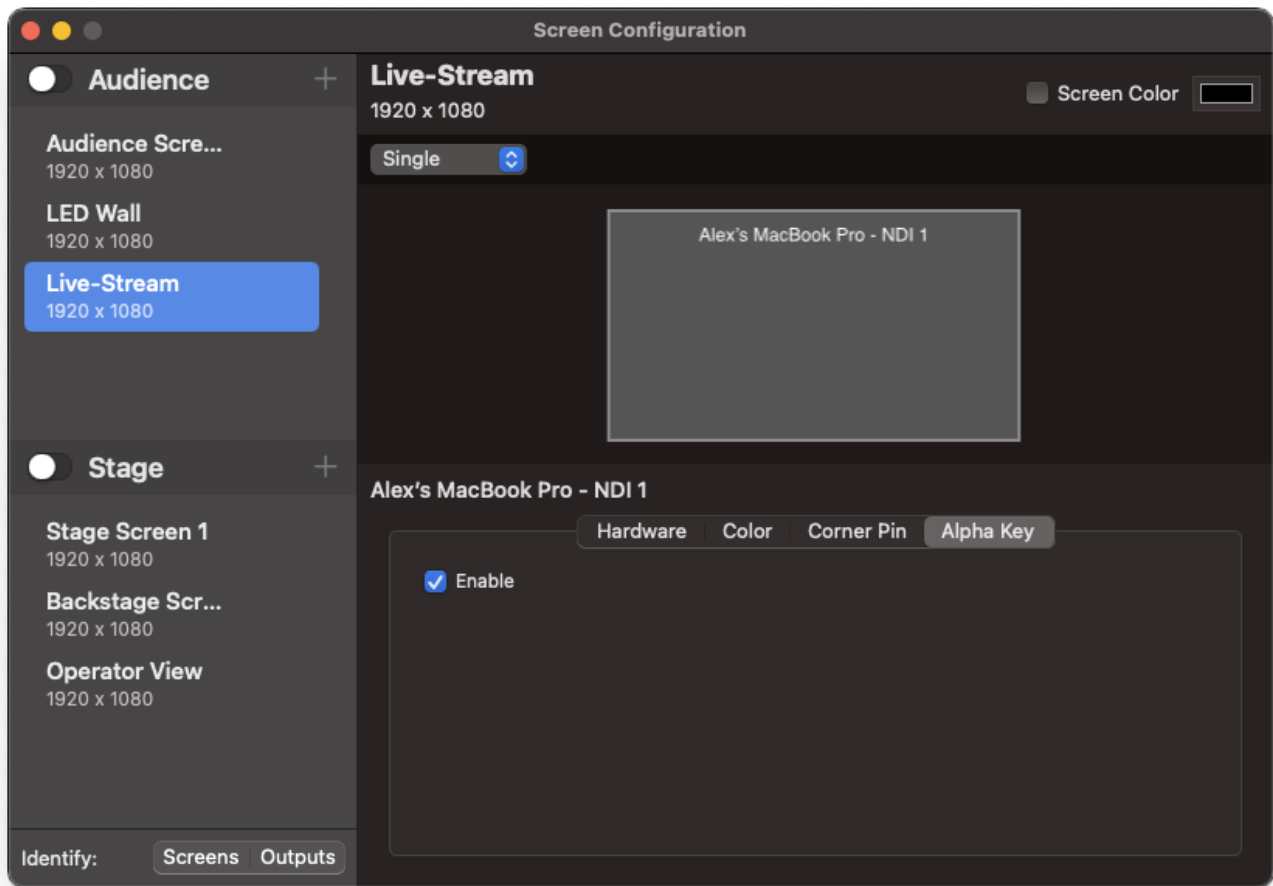
## Alpha Key tab

Note: The Alpha Key tab is only available for NDI Outputs and SDI Outputs with Alpha Key supported hardware.



When the Alpha Key is enabled on an SDI output, you can set what type of Key you wish to use (**External** or **Internal**) and also the percentage level of **Blend** that will be used. An **External** key would be used if you are sending separate key and fill outputs to your broadcast video switcher. It sends the key signal through the preview out of the BlackMagic device and the fill out of the program output. An **Internal** key would be used if you are using the Alpha Keyer as a downstream key, with a video input coming into the BlackMagic device and one going out of it.





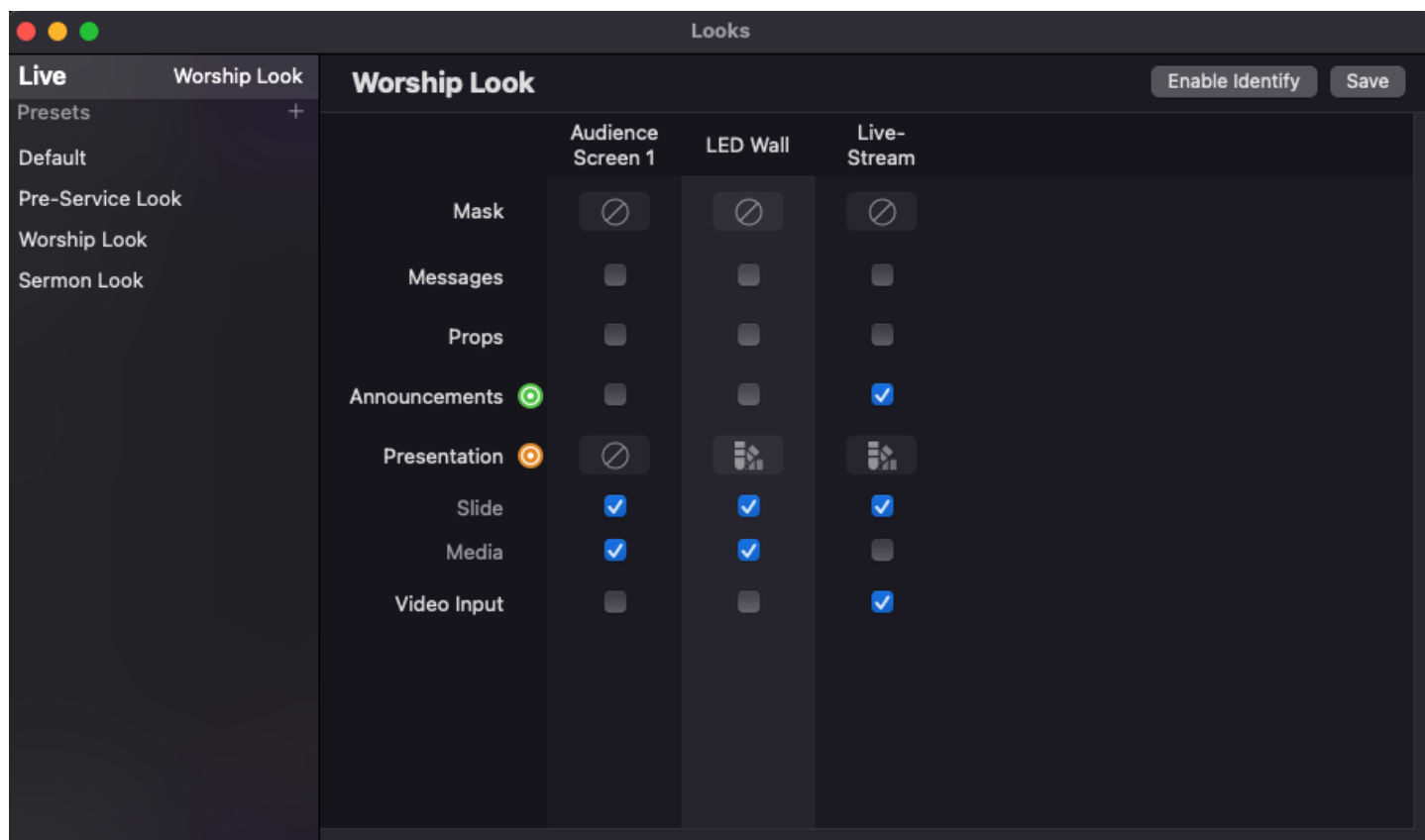
When the Alpha Key is enabled on NDI, ProPresenter will send the rendered image out with an Alpha Key in place of the background color. This can be useful if you want to key your text on top of video, for example. There are no other settings when sending an NDI Alpha Key output, you simply can enable or disable the Key.

Tip: Remember that only the Screen Color & Background Color can be keyed out if “Ignore Background Colors” is enabled in the Screens tab of ProPresenter Preferences; any content in any other Layer will not be keyed out.

## Audience Looks

Looks allow you to choose what components of your content goes to each individual Audience Screen.

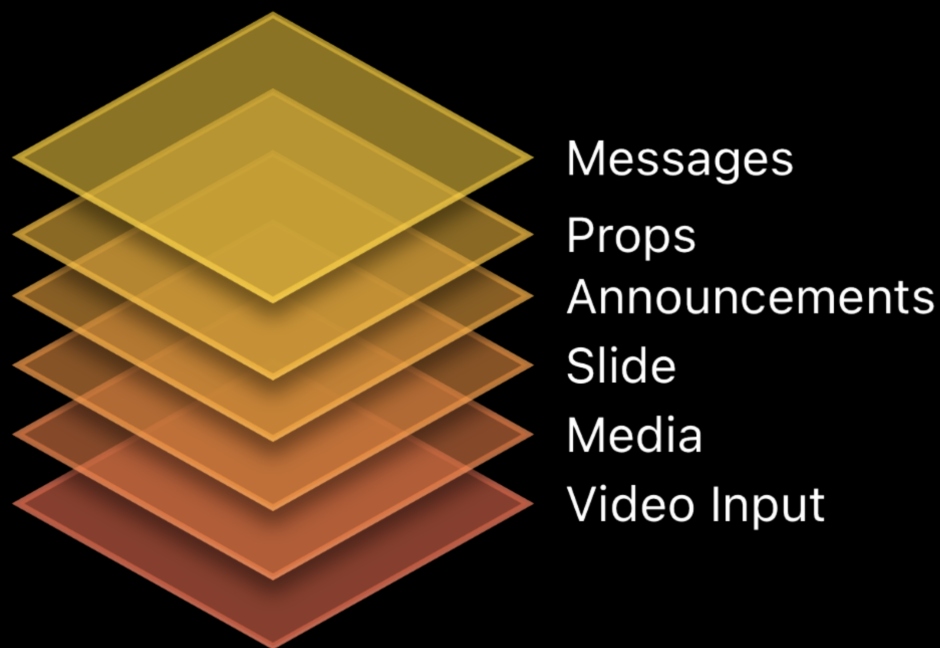
To access the Looks pane, go to the Destination Target button in the Presentation header and hit Edit Looks, use the keyboard shortcut of Shift-Command-1 on Mac or Control-Shift-1 on Windows or go to Screens>Edit Looks in the menubar.



The Looks Pane offers a column for each Audience Screen created in Screen Configuration. This allows you to set which elements go to each screen, and allows you to change the formatting of your slides if necessary.

The left side of the pane shows the currently Live Look at the top and then lists any Presets you've created below. To add a new Preset, click the + button and it will automatically appear at the bottom of this list. You can click on the Preset name to rename this preset to better describe what Look this is used for.

Once you select a Look Preset on the left, that preset's settings will appear on the right. At the top of the right side of the pane, the name of the preset will appear. The **Enable Identify** button allows you to visually see on your Audience Screen the layering of what components are enabled on that Screen for that particular Look Preset.



You can also make changes to a Look Preset and click on the **Save** button to update the Preset you're using or **Save as** a new Preset to use in the program.

### Audience Look Components

There are eight different layers that you can choose to send an Audience Screen depending on how your Look is setup.

- **Mask** -- Masks allow you to “mask” (or cover up) a part of your Screen to create custom projection screens or to keep the projector from projecting onto something you don’t want. You can choose which Mask (if any) you wish to use in the dropdown here. More information on creating and using Masks can be found [here](#).
- **Props** -- Props are used to put a persistent image or text on top of one or more slides. More information on Props can be found [here](#).
- **Messages** -- Messages are used to put a persistent image or text on top of one or more slides. More information on Messages can be found [here](#).
- **Announcements** -- The Announcements Layer allows you to send a presentation set with a Destination Target of Announcements to some screens while sending a different presentation to the main Presentation Layer. More information on setting a Presentation for this Layer and how this works can be found [here](#).
- **Presentation** -- The Presentation Layer is a static layer with two components. The dropdown menu allows you to change the Theme used to reformat your Presentation slides. This allows you to send the same text to multiple Audience Screens, but have it formatted differently on each Screen.
- **Slide** - This shows any text/shape object component on a slide on the Presentation Layer
- **Media** - This shows any media action that has been added to a slide on the Presentation Layer. This also would affect standalone Media from the Media Bin.

- **Video Input** -- The bottom-most layer on a Screen is the Video Input Layer. This allows you to show previously created Video Inputs in the program. You can learn more about setting up and enabling your Inputs in the Video Input section [here](#).

## Audience Look Actions

Use Audience Look Actions on slides to quickly change which Look you are using to show content to the audience screens.

Add Audience Look Actions to slides by either:

- Opening the Action Palette and dragging the Audience Look Action onto a slide or
- Right clicking on a slide and hovering over Add Action > Audience Look and choosing which Audience Look you want to use

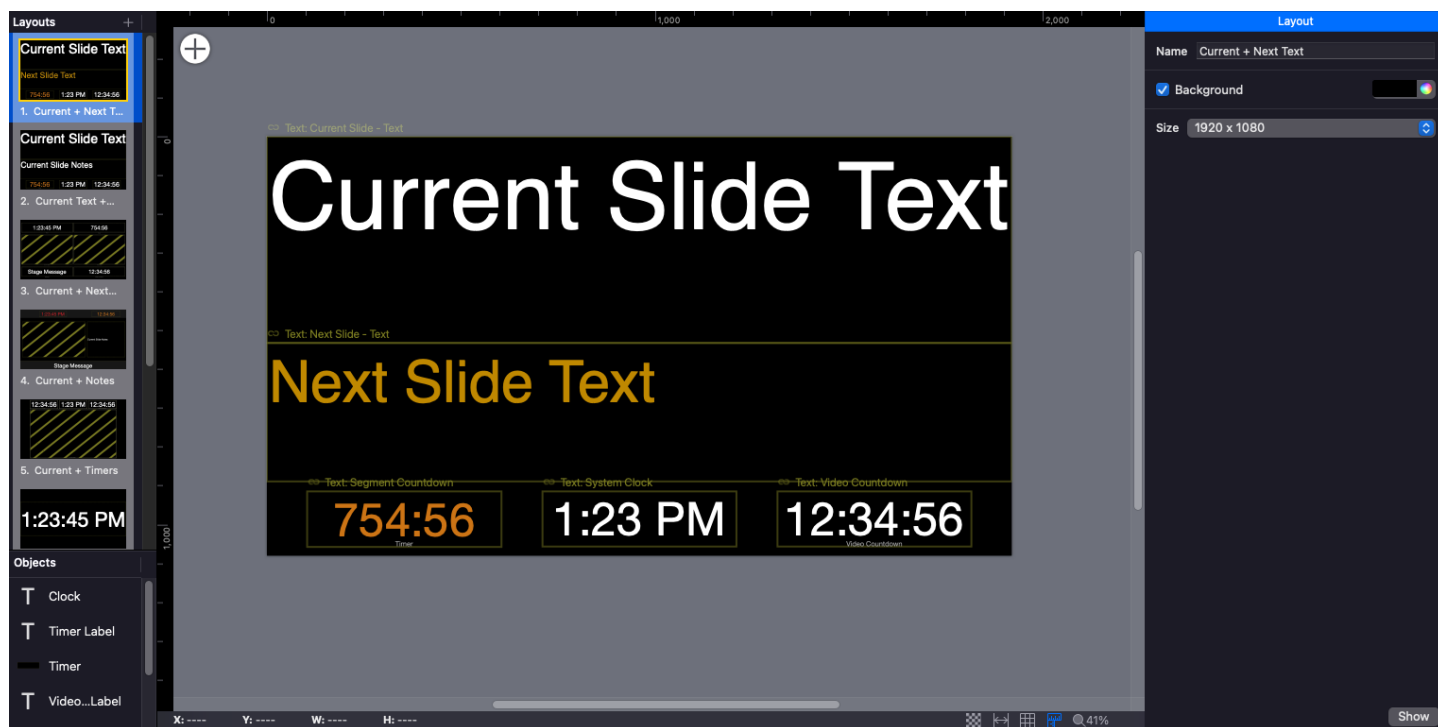
When adding or editing an Audience Look Action you will be able to select which Look you want to use when that slide is clicked. This will change the Live **Look** that is used until a new Look is selected either via an Action, through the **Looks** menu, or by clicking the Looks icon at the top right corner of ProPresenter.

You can only have one Audience Look Action per slide.

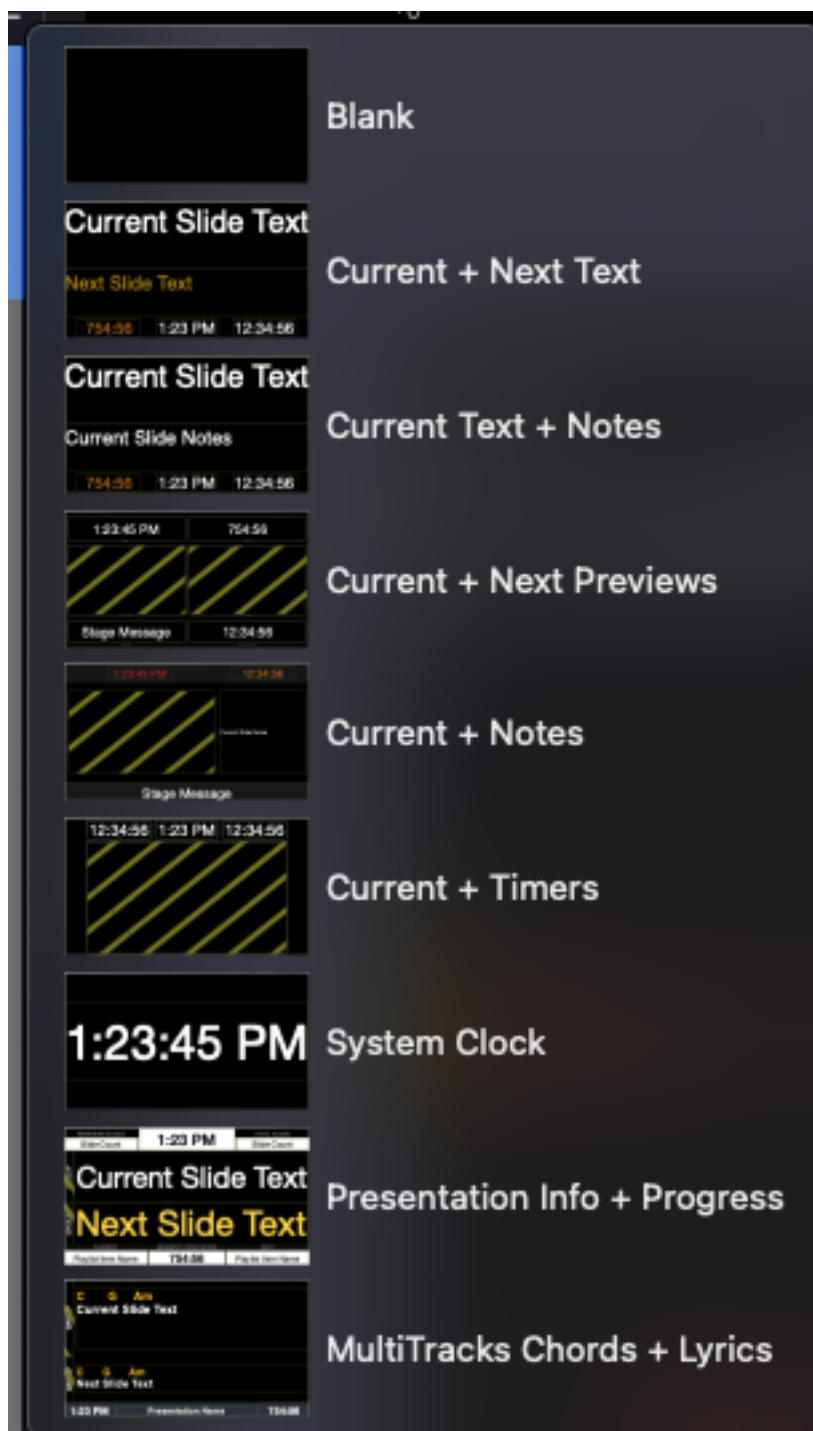
## Stage Layouts

The Stage Screen feature provides a “foldback”/“confidence” monitor so that the people on stage can receive information such as the Current and Next slides, clocks, timers, notes, chord charts, and even custom messages that only they can see. Stage screens continue to evolve and ProPresenter has even more flexibility now than ever before as to what components can be sent to these screens.

To setup these layouts, you will need to open the Stage Layout Editor. To open this, you can hit Command-4 on Mac or Control-4 on Windows, go to Screens>Edit Layouts... in the menubar, or click on More along the toolbar and selecting Stage Editor.

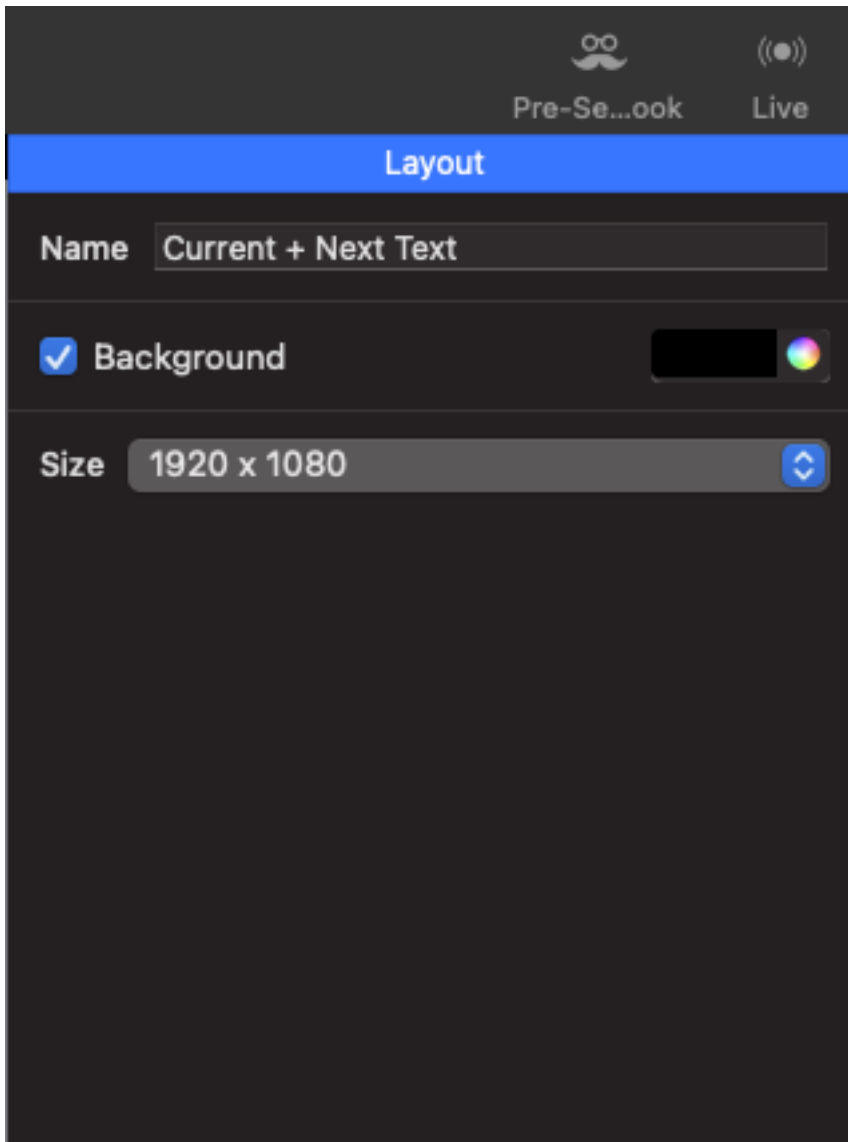


The Stage Layout Editor works similarly to the main Slide Editor, adding more options for linking to other parts of the program. To create a new layout, you can choose from a premade layout or add a blank layout by hitting the + button in the upper left of the Editor in the Slide Navigator.

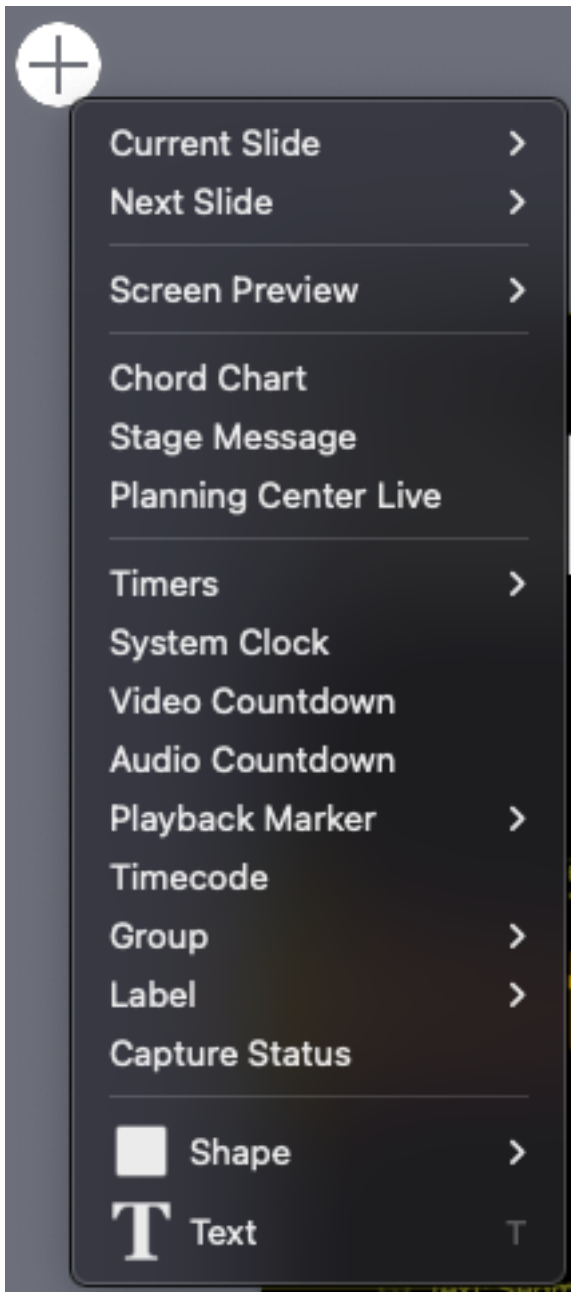


There are three basic formatting options on the Stage Layout when you have no objects selected on it.

- **Name** - The Stage Layout's name, shown throughout the program. This can be seen in the Screens menu when choosing Stage Layouts for each Screen.
- **Background** - this allows you to set the Background color for the Layout to something other than the default Black using the Color Palette to better integrate in your setup
- **Size** - this allows you to set the resolution this Layout will run at. It's recommended to set this Size to match the resolution of the Output you'll be displaying this Stage Layout on.



The Stage Layout Editor is similar to the Slide Editor in that you have a lot of flexibility as to the different items you can add onto your Layout. This primarily uses the Linked Text and Fill options in the Editor to send different portions of the program's data to the Stage Screen at any given time. To add an object to the Layout, click on the + button in the upper left of the Editor's Canvas, just as you do in the main Slide Editor. Linked Objects will show in the Layout Editor window with a yellow outline and yellow text at the upper left of the object bounds will show what the Object is linked to.

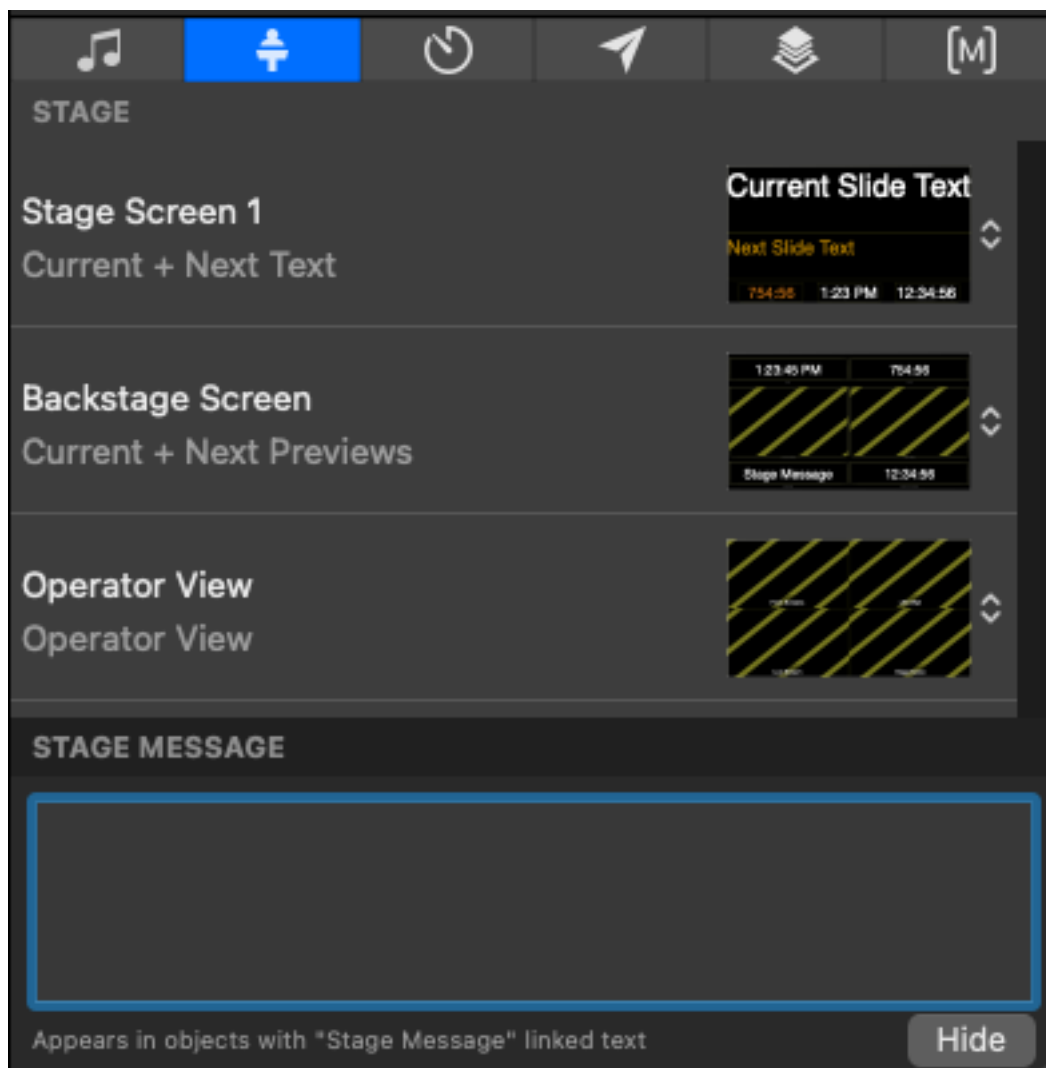


The Objects that you can add to your Stage Layout are described below.

- **Current Slide** -- This is the current slide shown on the Audience screen. There are four options for Current Slide data
  - Text -- this is the text from the slide itself and will be formatted to whatever text style you set in the Text Tab of the Inspector on the right side of the Stage Layout Editor
  - Preview Image -- this will send a static image of the Slide to your Stage Layout similar to the thumbnail shown in the main "Show" view
  - Notes -- this will send the Slide Notes that have been added in the Slide Editor to this box
  - Text + Chords -- if you are using the Multitracks integration with ProPresenter you can add the current slide text. Along with the chords from imported Multitracks songs.
- **Next Slide** -- This is the slide after the current slide. There are four options for Next Slide data



- Text -- this is the text from the slide itself and will be formatted to whatever text style you set in the Text Tab of the Inspector on the right side of the Layout Editor
  - Preview Image -- this will send a static image of the Slide to your Stage Layout similar to the thumbnail shown in the main "Show" view
  - Notes -- this will send the Slide Notes that have been added in the Slide Editor to this box
  - Text + Chords -- if you are using the Multitracks integration with ProPresenter you can add the next slide text. Along with the chords from imported Multitracks songs.
- **Screen Preview** -- this allows you to send a live version of any of your Screens to your Stage Layout. This allows the Stage Layout to show any Screen including your Announcements Layer, main Presentation Layer or even another Stage Layout
  - **Chord Chart** -- this will show a PDF or JPG chord chart that has been added to your Presentation
  - **Stage Message** -- The Stage Message allows you to send a message specifically to the Stage. It's not visible on the Audience screens. To access this feature, select the Stage section of Show Controls. Type your message and click **Show** for it to send the screen. **Hide** removes the message from the Stage Layout, but doesn't delete the message.

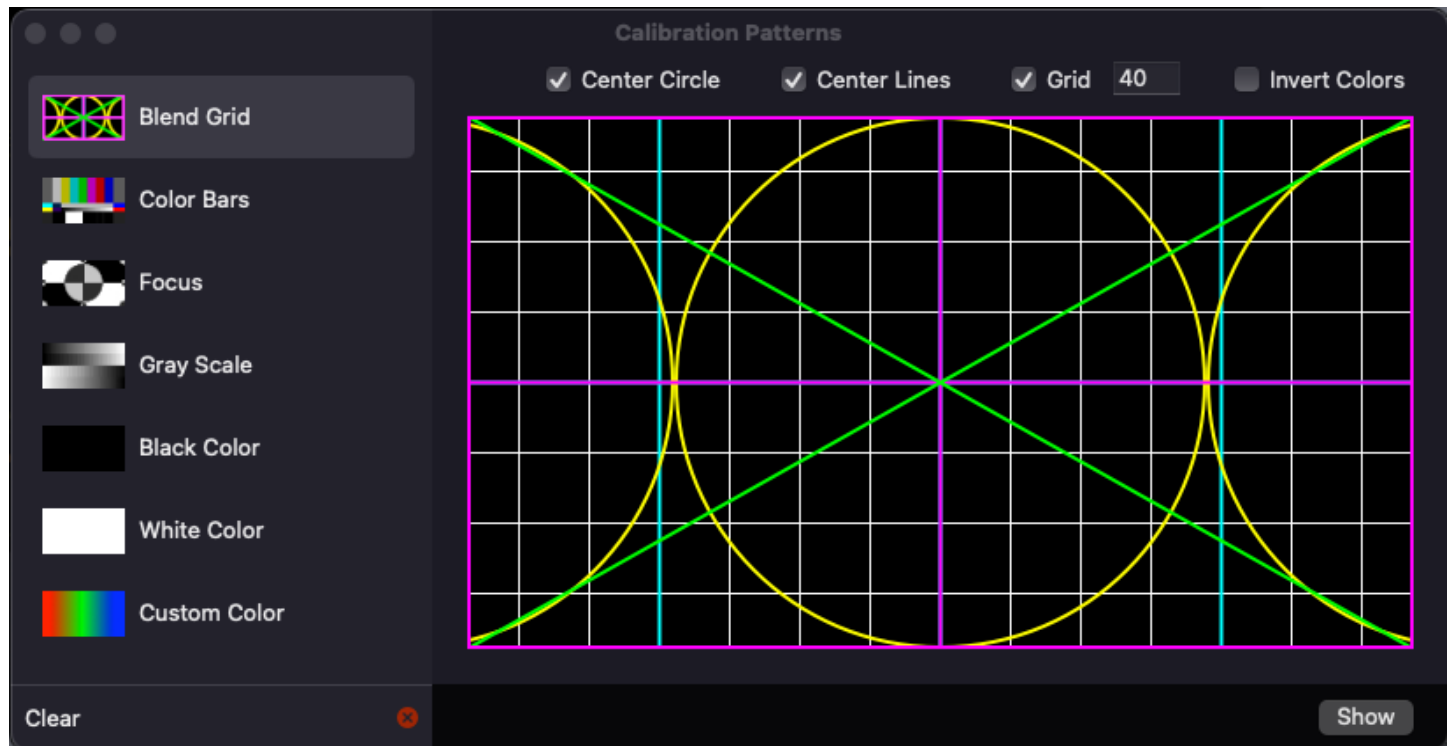


- **Planning Center Live** -- Planning Center Live is a web object that loads on the Stage Layout and can display the countdown time, current item, and next item as linked from Planning Center Live. More information on integrations with Planning Center can be found [here](#).
- **Timers** -- this menu will show any currently created Timer from the Timers window. You can set Color Triggers and formatting for the Timer in the Text tab of the Inspector on the right side of the Stage Layout Editor. More information on Timers can be found [here](#).
- **System Clock** -- this is the actual System Clock showing both the date and time or any part of these items. You can set what format you would like the date and time to show in using the Text tab of the Inspector on the right side of the Stage Layout Editor.
- **Video Countdown** -- Video Countdown shows the time remaining on the currently playing video. This feature is helpful for those on stage to know how much time is left in a video, such as a countdown video or intro video.
- **Audio Countdown** -- Audio Countdown shows the time remaining on the currently playing audio file.
- **Playback Marker** -- Playback Marker shows the time remaining until the next Playback Marker is triggered.
- **Timecode** -- Timecode will show the current place of a timecode input setup in ProPresenter.
- **Group** -- this allows you to display either the Group of the current slide, the next slide, or the group of the next arrangement. You can find more info on Groups and Arrangements [here](#)
- **Label** -- this allows you to show the Label of the current slide or the next slide.
- **Capture Status** -- this allows you to see the current status of the integrated streaming in ProPresenter. Inactive indicates you are not streaming/recording. Active indicates you are streaming/recording.
- **Shape** -- In the same vein as the main Slide Editor, you can add a Shape to your Stage Layouts. The same formatting options apply for this and you can even choose to Fill this with either a Video Input or piece of Media to brand your Stage Layout.
- **Text** -- A Text box can be added if you wish to have Text on your Layout that shows at all times. This can be helpful to label the elements on the Layout or to place a constant piece of information that needs to show on the Stage Screen.

There is no Build tab in the Layout Editor as this is a single Layout that would not have animations of any kind, but the Shape and Text tabs in the Inspector work the same way they do in the main Slide Editor.

You can dynamically change your Stage Layout as you trigger Slides and also choose whether you wish for slides to show only on the Stage Layout and not to the Audience Screens through Stage Actions. These are discussed in the Slide Action section [here](#).

# Test Patterns



ProPresenter provides several **Test Patterns** to help you with your setup. For example, the Blend Grid will help to align your projectors, the Color Bars helps to make sure your outputs are showing the correct colors, and Focus helps to make sure your device is properly focused.

Note: All of the Test Patterns are rendered on the fly. For example, the Focus grid will render differently depending on the resolution of your output, thus allowing you to see an actual representation of what different font sizes will look like on that display.

Open Test Patterns by going to the menubar and selecting **View > Test Patterns**. Close the window by clicking the X in the upper corner. Show the current Test Pattern to the audience screen(s) by clicking the **Show** button in the lower right. Clear the current Test Pattern by clicking the **Clear** button in the lower left.

Below are the available Test Patterns and their options:

- **Blend Grid**
  - Center Circle
  - Center Lines
  - Grid and how large each subdivision in the grid is
  - Invert Colors
- **Color Bars**
- **Focus**
- **Gray Scale**
- **Black Color**
  - Black Level, where 0 = Black and 50 = Gray
- **White Color**
  - White Level, where 100 = White and 50 = Gray
- **Custom Color**

- Custom Color, a color chooser where you can choose any solid color