

# DAKTRONICS SHOW CONTROL SYSTEM

## USER HANDBOOK



# About this Handbook

The purpose of this handbook is to help facilitate a new Show Control System operator's orientation and training on the system. It is laid out in a way that would follow a typical Show Control training session. This document assumes that the user has basic working knowledge of Microsoft Windows, including using menus and navigating a directory. If you are unfamiliar with using Microsoft Windows, there are many resources commercially available which can assist you in becoming acquainted with it.

Terms that describe typical personal computer operations will be used frequently. These terms, and their definitions, are as follows:

- *Point*: Move the mouse pointer to a specified place.
- *Click*: Press and release the left button of your mouse. A click will position a text cursor, activate a window, or select a choice.
- *Double-click*: Press and release the left mouse button twice in rapid succession.
- *Right-click*: Press and release the right button of your mouse.
- *Choose*: Activate an item by clicking on it in order to tell the program what to do.
- *Select*: Click to specify which files, windows, or text the software should act on.
- *The > character* is sometimes used in place of *then choose* in descriptions of user interface paths. For example, **Settings > Account Preferences** means *Click Settings, then choose Account Preferences*.
- *Press*: Press key(s) on your keyboard.

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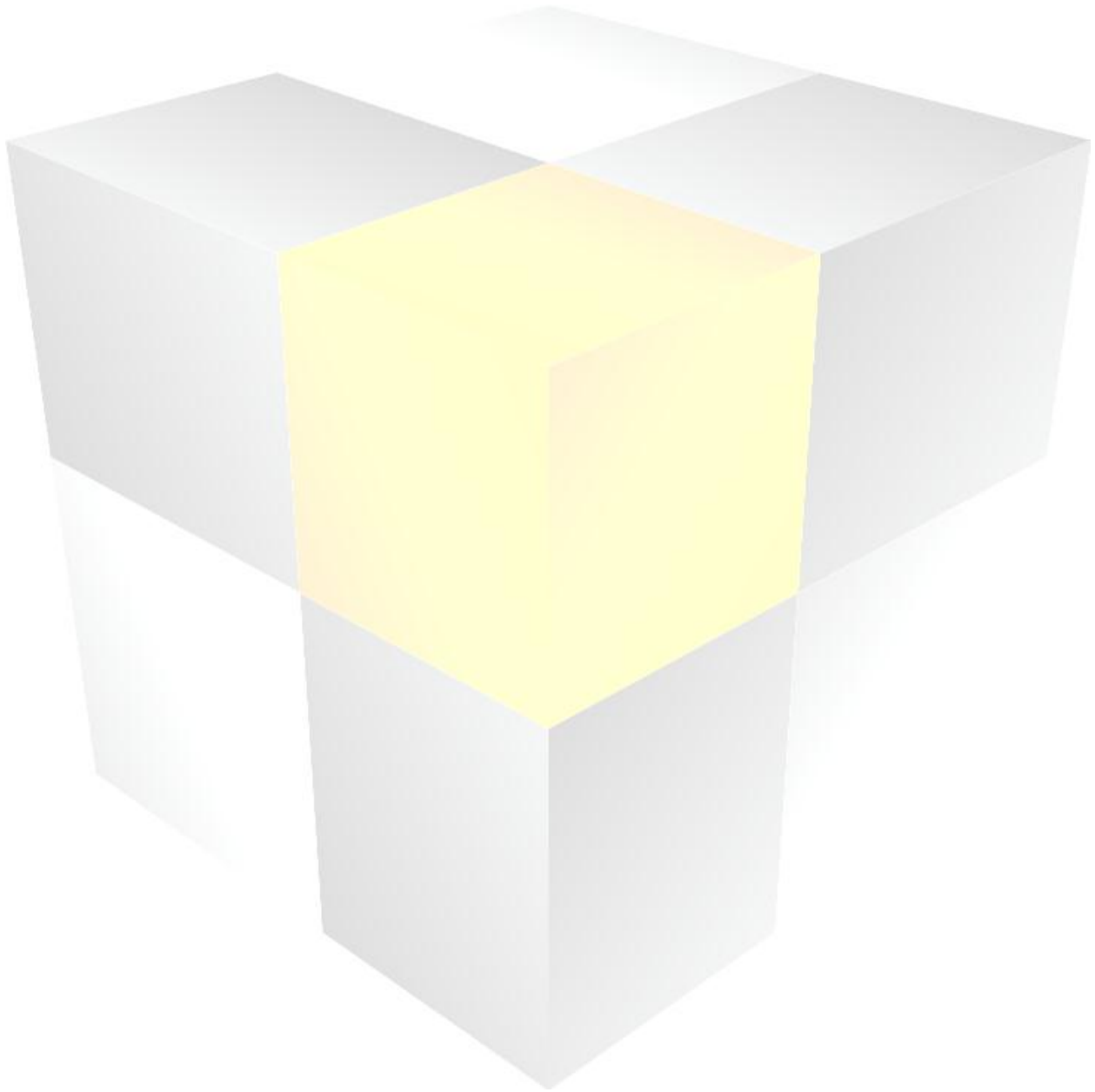
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# Getting to know your Show Control System

Congratulations on your purchase of the latest and greatest in interactive display control system technology! We are confident that you will find your new Show Control System to be powerful yet user-friendly, innovative yet intuitive, and most of all, exactly what you've been waiting for.

Before we get started, you should get familiar with a few different components of your system. It will be helpful to understand these "pieces of the puzzle" and the role they play, and also because we will be referring to them throughout your system documentation.

## Section Contents

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- Your User Station
  - Your Control Rack
    - Digital Media Players
    - Video/Image Processors
- 

## Your User Station



At the forefront of your system is your Show Control user station – the computer from which you will operate your Show Control software to create, plan, prepare and execute your digital shows. Your user station likely includes one or two touchscreen monitors. You will use this computer to run Daktronics Content Studio, Display Studio, and the rest of your Show Control user experience.

## Your Control Rack



Your control rack holds the “brains” of your digital sign system. Here is where you can find your digital media player(s), video/image processor(s), scoring/timing machines, and other components involved in connecting all the pieces of your system together.

## Digital Media Players



A digital media player (sometimes referred to simply as a “player”) is a device used to store and deliver content files to a display. In other words, think of your digital media players like how you think of a DVD player. If you want your television to play a DVD, without a DVD player your TV simply does not know what the disc is or what to do with it. With a DVD player, however, your TV now knows what the disc is, how to retrieve the content from that disc, and the proper way to display that content.

Like many pieces of your Show Control System, different digital media players have different features and capabilities. In various sections of this handbook, features and functionality are discussed which are only available for systems with certain types of players. These sections are identified by the below icons:

- 7** Identifies features which are available for systems containing a DMP-7000 display
- 8** Identifies features which are available for systems containing a DMP-8000 display
- 15** Identifies features which are available for systems containing a DMP-1500 display

**Note:** Sections which have no icon(s) preceding it are available for all Show Control Systems.

## Video/Image Processors



A video/image processor is a device used to accept and process live video and/or computer graphics feeds before sending them to a display. This allows your display to communicate with video production equipment such as video switchers, character generators, and/or cameras, and other devices which output video feeds to display high quality video content clearly, smoothly and vibrantly.

# Navigating the Show Control software

Now that you have a good idea of *what* is in your system, we can get into how to use it. In this section, we'll help you acquaint yourself with Display Studio and Content Studio and how to get around within them.

## Section Contents

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[How do I open Display Studio?](#)  
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[Content Studio's Interface](#)

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## How do I open Display Studio?

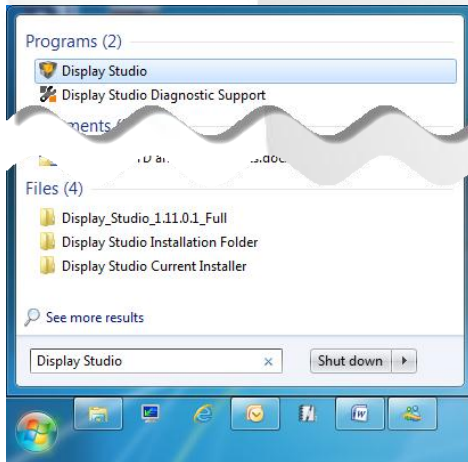
A better first question may be "What is Display Studio?" Display Studio is the "face" of your new display control system – the primary user interface you will interact with to run your digital signs. From Display Studio you will be able to trigger content, send commands, monitor many aspects of your system's health, and monitor what is playing on your displays.

Display Studio can be launched by either of two available navigation paths:

- A) Double-click its icon on your Windows desktop, or

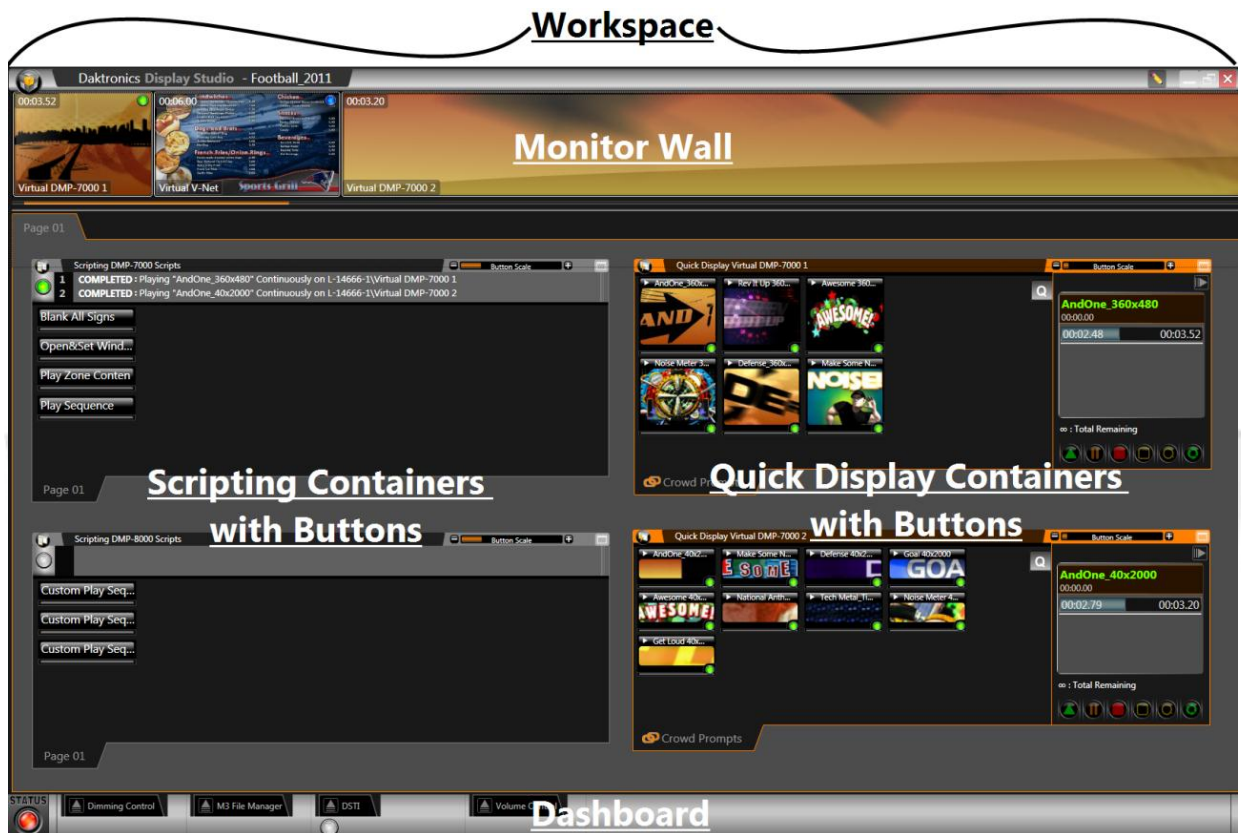


- A) Open the **Start Menu** and in the **Search** box type **Display Studio**, then press **[Enter]**.



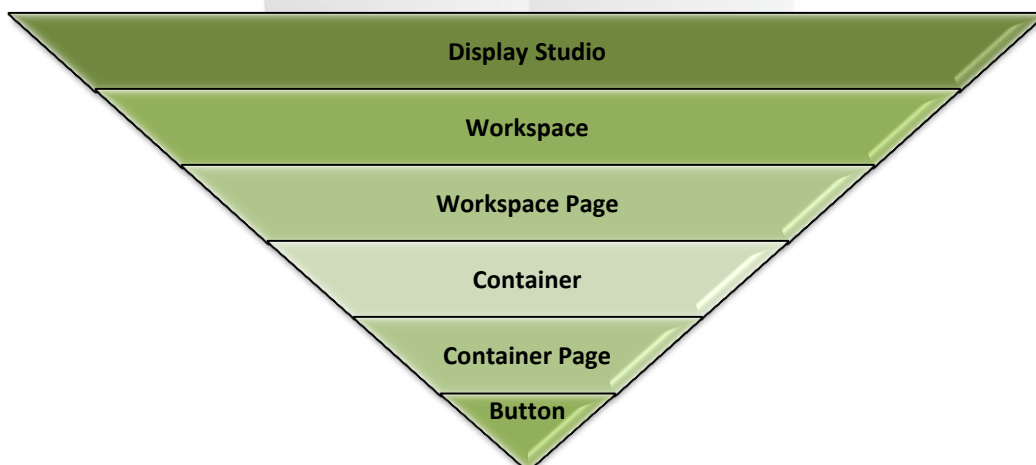
## Display Studio's Interface

Display Studio contains many parts that can help you execute an amazing digital presentation, but these are the most important ones:



**Workspace:** The Workspace is where everything happens in Display Studio. This is where your Monitor Wall is docked and where your containers and buttons are arranged.

As you become acquainted with Display Studio's other components, keep in mind that Display Studio was designed for versatility and flexibility. The user gets complete control over how they create and organize their control interface, so that they can execute their shows in the most efficient manner possible. The illustration below represents Display Studio's organizational framework: **Display Studio** can contain one or more **Workspaces**, each of which can contain one or more **Workspace Pages**, each of which can contain one or more **Containers**, each of which can contain one or more **Container Pages**, each of which can contain one or more **Buttons** (and Buttons can contain one or more media files or script commands, by the way).



## 7 8

**Monitor Wall:** The Monitor Wall holds your signs' display monitors, each of which provides a regularly updating snapshot of what is appearing on that sign.

**Containers and Buttons:** There are two flavors of containers and buttons – **Scripting containers and buttons** and **Quick Display containers and buttons**. Buttons are what you will use to operate your control system – clicking a button is what sends a command to your display, your player, or your video/image processor. And containers are what you can use to store and organize your buttons.

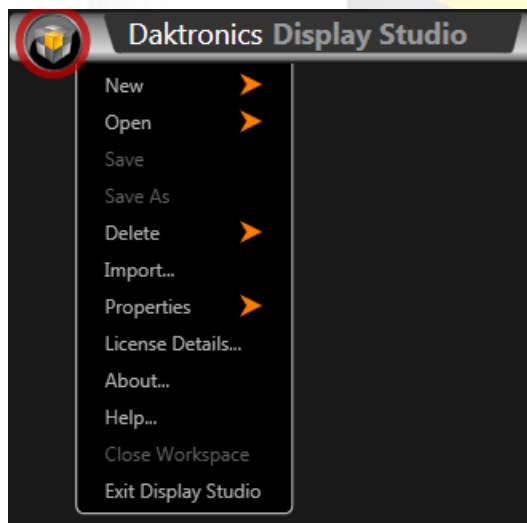
**Quick Display Container and Buttons:** Quick Display buttons are used to simply play one or more media files on a display. Each quick display button is linked to one or more files and when clicked, will play the file(s) on the sign. Think of it as quick and easy access to your entire media library.

## 7 8

**Scripting Container and Buttons:** Scripting buttons are used to send script commands. These commands can provide instructions to your display (Display Control commands), to your player (Player Control commands), to your video/image processor (Video Processor commands), or to other parts of your system (System Control commands).

**Dashboard:** As the name implies, your Display Studio dashboard is a lot like the dashboard in your vehicle. This is where Display Studio's status indicators and widgets are kept. The status button is a helpful tool for letting you know whether all systems are go, or if there might be something wrong. Display Studio's widgets are also handy tools and utilities that help expand Display Studio's functionality to bring all of your control needs to within a single environment.

**Display Studio Hub:** The final piece of this puzzle is the Display Studio Hub. This provides access to Display Studio's main menu, from which a variety of important operation functions are accessed. The button can be found in the upper left corner of the window – simply click it to open the menu.




## Opening Content Studio

Sorry, are we getting ahead of ourselves again? Just in case you're asking "What is Content Studio", we'll introduce you now. Content Studio is Show Control's powerful digital content creation and editing application – the perfect complement to Display Studio's powerful control interface. In Content Studio, you will be creating and editing engaging, content-rich digital presentations in no time!

Content Studio can only be opened from within Display Studio by clicking the **Launch Content Studio Button**.



**Tip:** When switching between Display Studio and Content Studio (after you have Content Studio open already), we don't recommend pressing the **Launch Content Studio** Button each time, as this will open a new instance of Content Studio each time.

Instead, simply press the **Windows button**  on your keyboard to reveal the Windows taskbar, and select your already-open Content Studio window from there! It will be faster, and require less system resources!

## Some Content Studio Terminology

We will be using a lot of terminology when discussing Content Studio, so perhaps it would be a good idea to introduce you to a few of those terms:

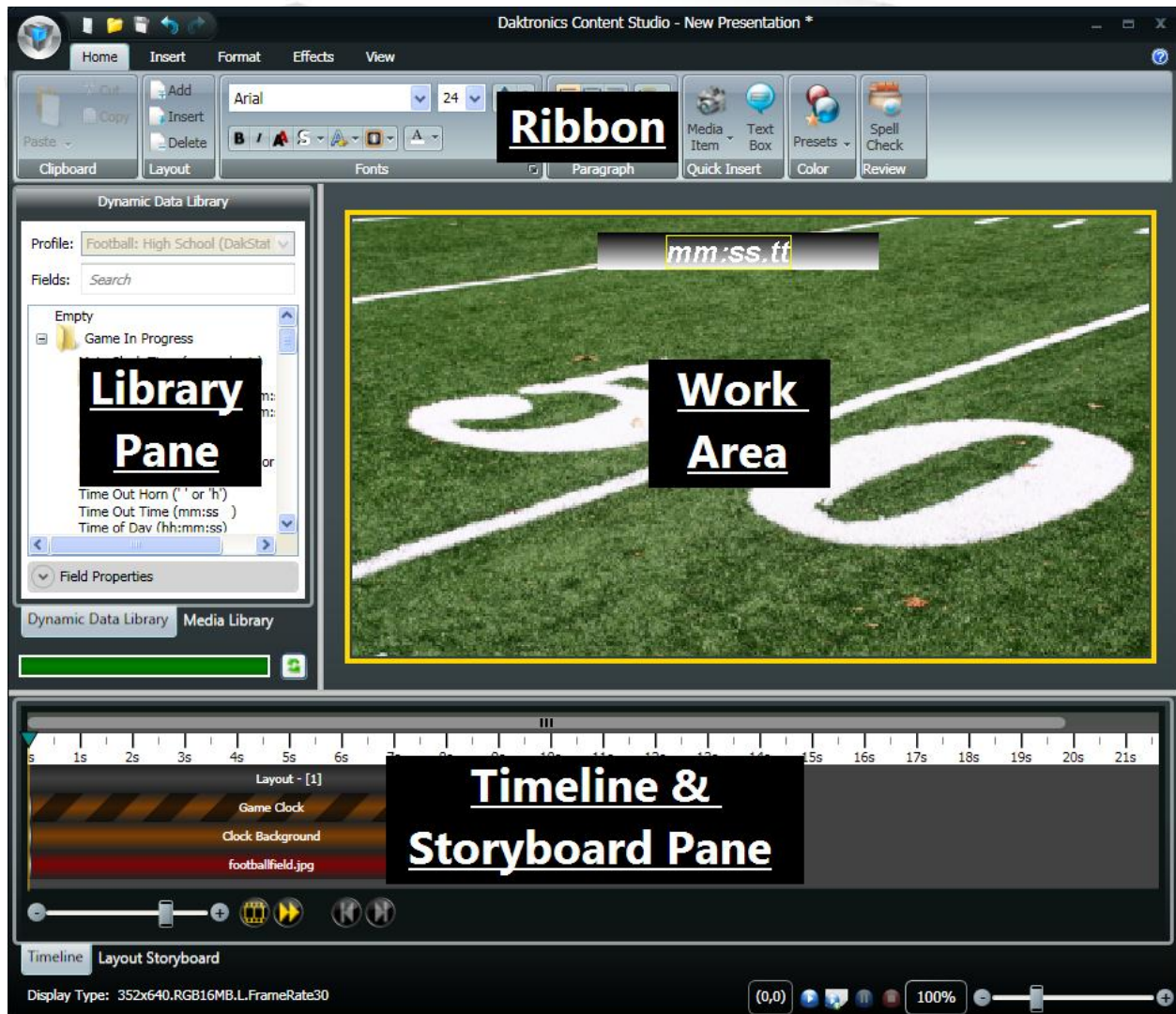
1. **Workspace:** Yes, we did discuss workspaces already when we were talking about Display Studio, but Content Studio has workspaces too, and yes, they are different. A workspace in Content Studio refers to the collection of tools and options that you have set up for creating presentations for a particular player type. If you have a DMP-7000 display and a DMP-8000 display, for example, you'll find that those respective player types have different options available for them in Content Studio. Therefore, the tools and options which are available for creating DMP-7000 presentations make up the DMP-7000 workspace; the tools and options which are available for creating DMP-8000 presentations make up the DMP-8000 workspace; and the tools and options which are available for creating DMP-1500 presentations make up the DMP-1500 workspace.
2. **Presentation:** Presentations are what you create in Content Studio – a collection of layouts and (perhaps) pages which can contain images, text, RTD fields, animations, colors, and videos and which are played in a particular sequence. If comparing to a typed document, a presentation is similar to the entire document.
3. **Layout:** A layout is a single “slide”, and one or more layouts can make up a presentation. Layouts are where you can arrange a set of elements that you want to appear on your display during the same block of time. If continuing with the typed document comparison, a layout is similar to an individual page or section of that document.
4. **Element:** An element is an individual component which can be placed within a layout. Elements include textboxes, images, animations, videos, RTD fields, and paging elements.
5. **Paging Element (DMP-8000 and DMP-1500 only):** A paging element is a “layout within a layout”. It allows you to place multiple “slides” of elements within a single layout.
6. **RTD Field:** A placeholder which is inserted into a presentation which contains the placement and formatting instructions for the inclusion of a specific type of dynamic data into that presentation when it is played on a display.

## Content Studio's Interface

Content Studio is where you'll find all of the tools you need to create digital content that will inform, entertain and amaze.

### Interface Components

These are the most important parts of the Content Studio interface (so they're the main ones you should be aware of):



**Ribbon:** A menu pane which contains many of the tools you will use to create content in Content Studio. Refer to [Content Studio Ribbon](#) for more information.

**Library Pane:** The portion of Content Studio which contains the Dynamic Data Library, which provides access to all of your RTD and other dynamic data fields, and the Media Library, which provides access to your image and video collections.

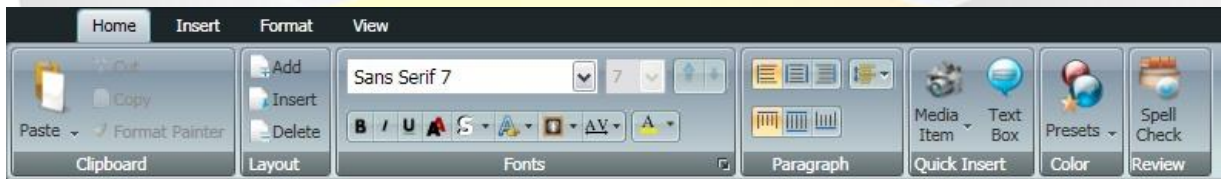
**Work Area:** The "canvas" that provides a representation of your display which you use to assemble your presentation.

**Timeline & Storyboard Pane:** The portion of Content Studio which contains your Timeline Editor, which allows you to control the sequencing and duration of all of the elements of your presentation, and your Storyboards, which allow you to control the sequencing and transitioning between layouts and paging elements.

## Content Studio Ribbon

If you're familiar with Microsoft Office 2007 or later, you already know how to use the Ribbon. The Ribbon gives you easy access to an enormous quantity of tools, options, and features without the need to waste time sifting through menus or clutter up your workspace with toolbars all over the place. Content Studio's Ribbon consists of five tabs: **Home**, **Insert**, **Format**, **Effects**, and **View**.

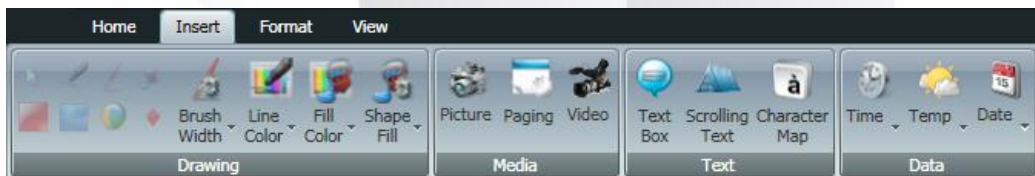
**NOTE:** The tools that are available in the Ribbon depend on the type of display you are creating content for. For the sake of completeness, the below graphics will show all Content Studio features. The tools available on your Ribbon may vary.



*Content Studio Home tab*

The Home tab contains many of the most commonly used features in Content Studio, including:

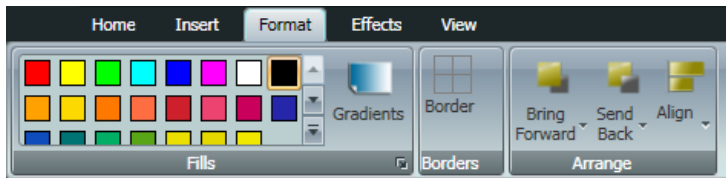
- **Clipboard:** Tools for cutting, copying, and pasting items in your presentations
- **Layout:** Buttons which allow you to Add, Insert, and Delete presentation layouts
- **Fonts:** Options for customizing your presentations' font elements
- **Paragraph:** Options for customizing the paragraph formatting of your presentations' font elements
- **Quick Insert:** Quick and easy access to inserting a new image, video, or text box
- **Color:** A selection of preset color schemes that you can apply to a layout or element
- **Review:** Button which provides access to Content Studio's Spell Check tool



*Insert tab*

The Insert tab contains tools which are used to insert various types of elements into a presentation, including:

- **Drawing:** A set of drawing tools which can be used to modify images that have been inserted into a presentation
- **Media:** Tools for inserting images, videos, and paging elements into presentations
- **Text:** Tools for inserting text elements into presentations
- **Data:** Tools for inserting data fields, such as the current time, temperature, or date into presentations



*Format tab*

The Insert tab holds a set of tools which can be used to make adjustments to how presentation elements look and are arranged, such as:

- **Fills:** Options for adding color to a background or other transparent areas of a presentation
- **Borders:** Options for adding borders to an element or other portion of a presentation
- **Arrange:** Tools which provide help with aligning and arranging elements within a presentation



*Effects tab*

The Effects tab allows you to apply a transition effect, such as Fade In, to an element in a presentation.



*View tab*

The View tab helps you customize your Content Studio work area to make it as easy as possible to work with your content. Features include:

- **Zoom:** Zoom controls for adjusting the level of detail you will be able to see in working with your presentation
- **Show/Hide:** Preferences for showing or hiding tools which can prove helpful in creating your presentations, including gridlines, field indicators, and being able to select all elements
- **Preview:** Preview controls for being able to view what your presentation, or portions of it, will look like when it is played

## Content Studio Plug-Ins

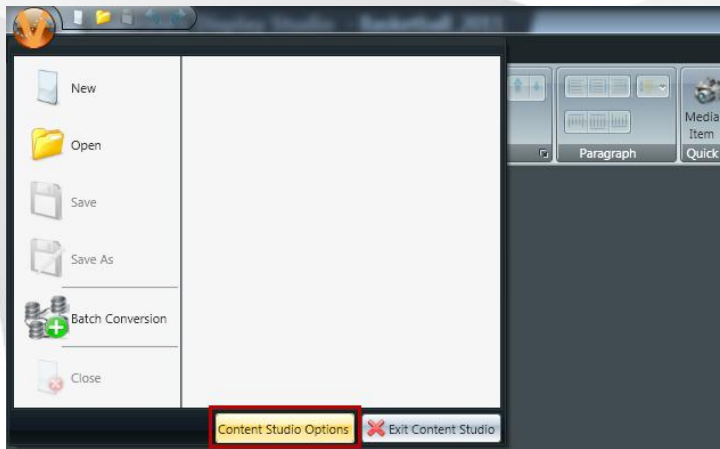
Content Studio plug-ins are features of the Content Studio interface that provide specialized functionality for a particular purpose, and can be either enabled or disabled to suit your preferences. The following plug-ins are available:

- **Dynamic Data Library:** provides access to real-time data which can be imported into a presentation

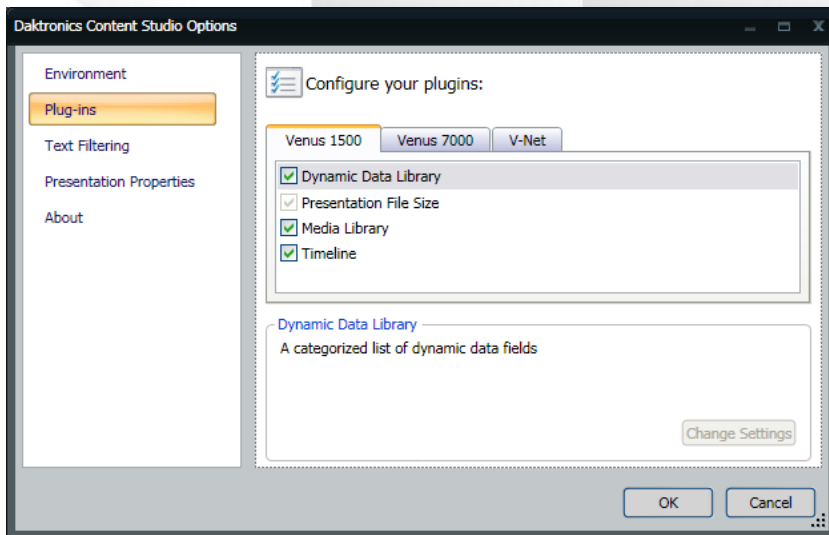
- **Presentation File Size** plug-in: tool which provides an up-to-date calculation of the storage space that the presentation is going to consume
- **Media Library**: provides quick access to media files which can be imported into a presentation
- **Timeline**: visual representation of the durations and sequencing of items contained within a presentation

Complete the following steps to enable or disable Content Studio plug-ins.

1. Click the **Content Studio Button** to open the **Main Menu**.
2. In the Main Menu, click the **Content Studio Options** button to reveal the **Daktronics Content Studio Options** window.



3. From the left column, select the **Plug-ins** option set.
4. In the right pane of the window, select the tab of the digital media player workspace you wish to configure.
5. Check the boxes of the plug-ins that you wish to enable in the workspace (or uncheck boxes of the plug-ins you wish to disable).



# Creating a presentation: Part 1

Now that you and Content Studio are properly introduced, it is time to begin making some presentations. By the time you complete this section, you should be comfortable with the basics of creating a presentation – adding layouts and creating elements. We'll cover how to manipulate and add effects to the elements in part two.

## Section Contents

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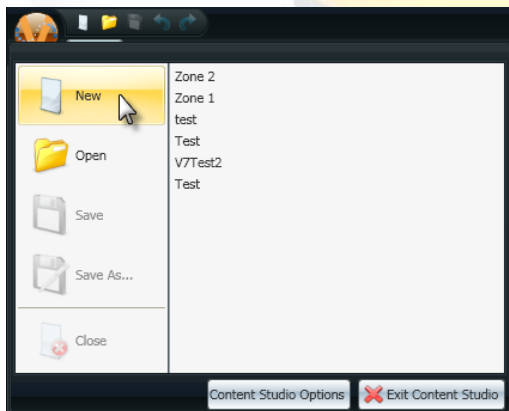
[Create a new presentation](#)  
[Adding and deleting layouts](#)  
[Adding images and video to a presentation](#)  
[Adding text elements](#)  
[Adding Real-Time Data \(RTD\) fields](#)

---

## Create a new presentation

The first step of creating content in Content Studio is starting a new presentation. Keep in mind that each player type has its own workspace with its own tools and options available. Creating a new presentation loads up the workspace for the type of content you are creating, and gives you the blank canvas with which to make your masterpiece.

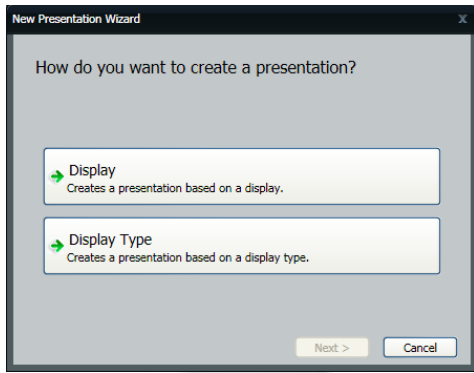
1. From within Content Studio, create a new presentation by either: (a) clicking the **Content Studio Button** and selecting **New**; (b) clicking the **New** button; or (c) by pressing **[CTRL+N]** on your keyboard. Any of these actions will open the **New Presentation Wizard**.



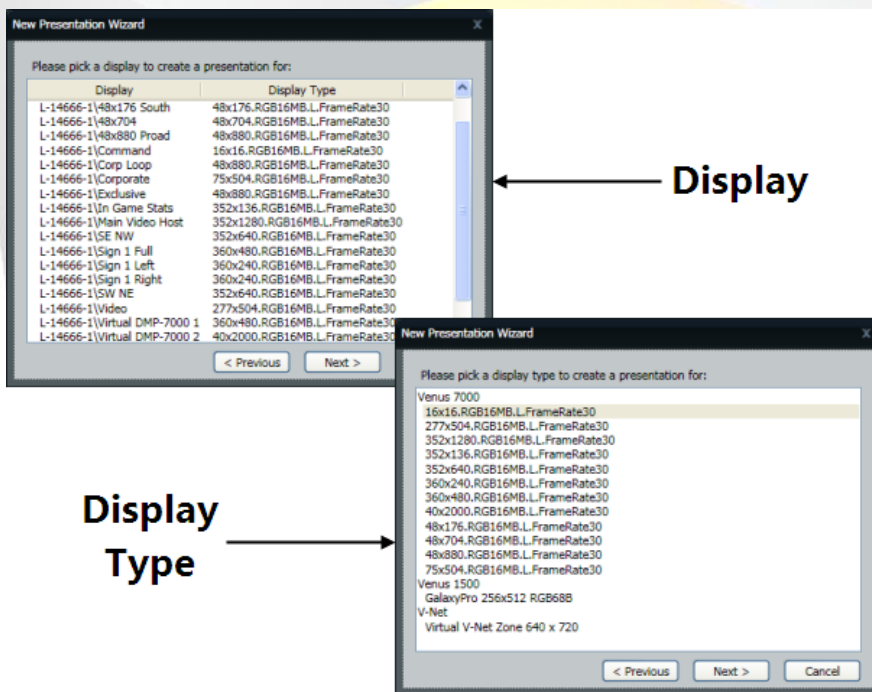
2. The first question that the **New Presentation Wizard** will have for you is **How do you want to create a presentation?** Select to create a presentation for a particular **Display** or for a **Display Type**.

To help you with the decision, consider the following:

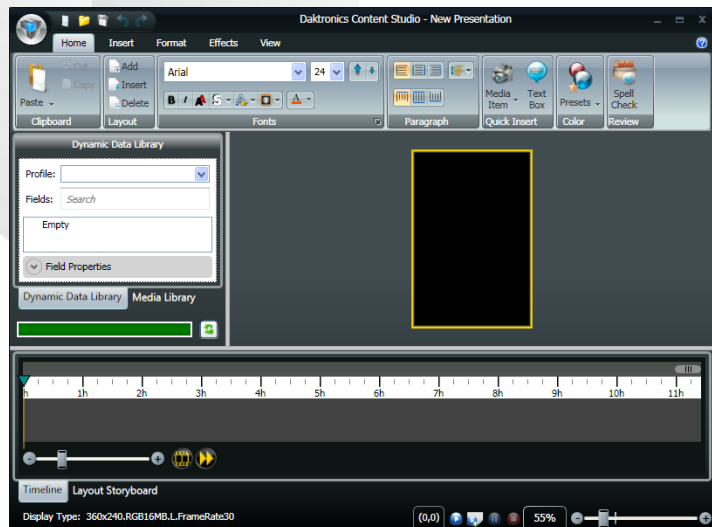
- If you want to create content that you intend to only play on one specific display, select **Display**.
- If you have multiple displays that use the same type of digital media player and have the same dimensions, and you want to create content that will be able to be played on any of those displays, select **Display Type**.



- Next, the New Presentation Wizard will ask you to pick the display or display type that you wish to create a presentation for. Click the desired display or display type, and click **Next** to continue.



- After selecting the display or display type you wish to create a presentation for, Content Studio will load the appropriate player's workspace and create a blank layout for you to get started with.

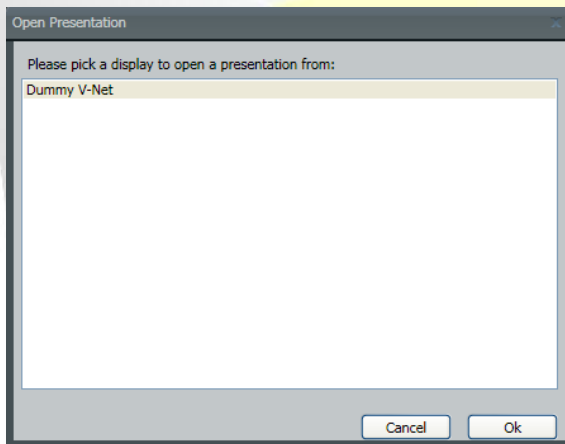










## Open an Existing Presentation

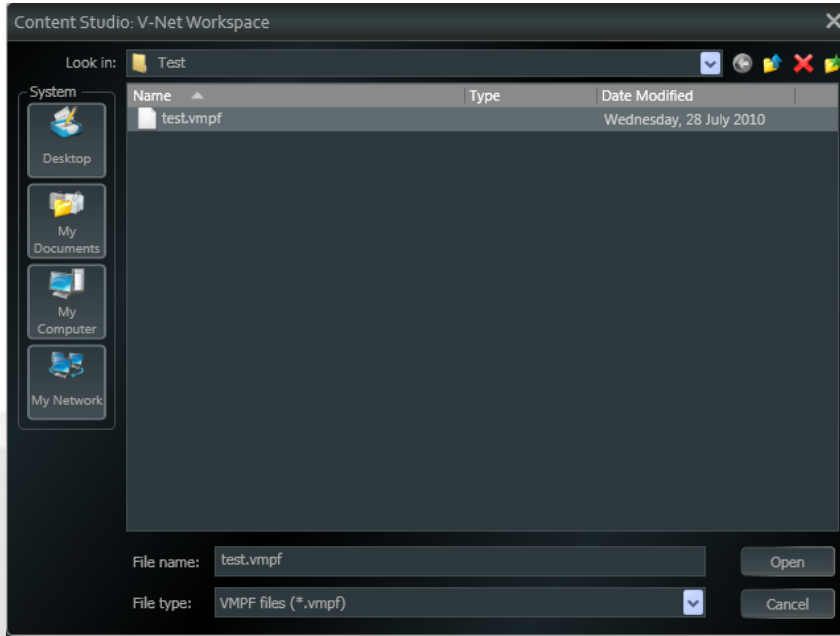
1. Click the **Content Studio** button, and click **Open** (CTRL + O). Or click the **Open** icon in the **Content Studio Toolbar**.



2. From the **Content Studio** pop-up select the player's Content Studio workspace from the drop down menu. Click **OK**.
3. From the **Open Presentation** pop-up select a display to open a presentation from and click **OK**.



4. Use the file browser window to locate the desired presentation.
  - a. **Go to last folder visited** : While navigating through the folder structure, click the  button to return to the last folder visited.
  - b. **Up one Level** : While navigating through the folder structure, click the  button move the search up a level.
  - c. **Delete** : Click the  button to delete the selected file or folder.
  - d. **Create new folder** : Click the  button to create a new folder within the current folder.




5. After selecting the desired presentation, click **Open**.

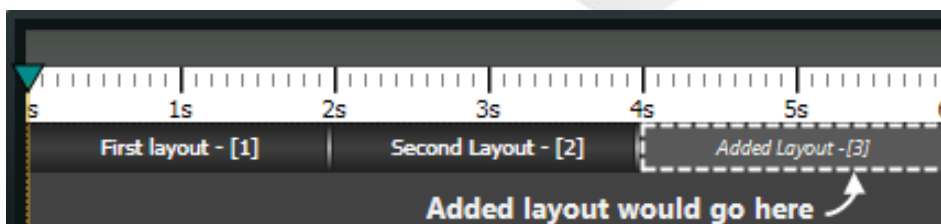
## Adding and deleting layouts

The first of the many groups of buttons available on the Content Studio ribbon that we will explore is the Layout group, available on the Home tab of the Ribbon. This part of the ribbon allows you to **Add**, **Insert**, and **Delete** layouts – important tools for creating any presentation.



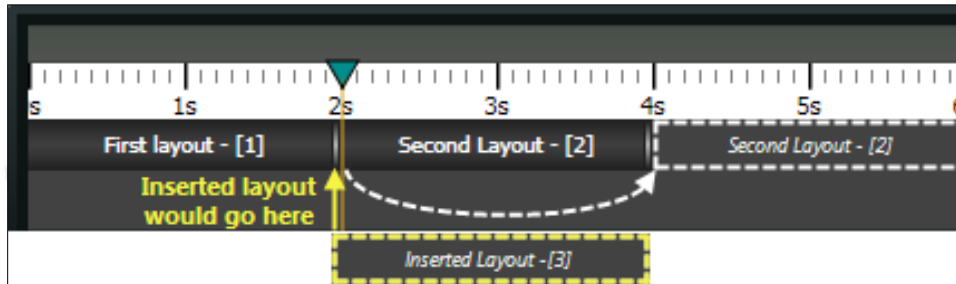
### Adding a layout

To add a layout to your presentation, on the **Home** tab of the Content Studio ribbon, in the **Layout** group, click . A new blank layout will be added to the end of your presentation.



## Inserting a layout

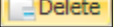
Adding a layout simply *adds* the layout to the end of your presentation. Inserting a layout, on the other hand, *inserts* the new blank layout into your presentation before the currently selected layout. To insert a layout into your presentation, on the **Home** tab of the Content Studio ribbon, in the **Layout** group, click

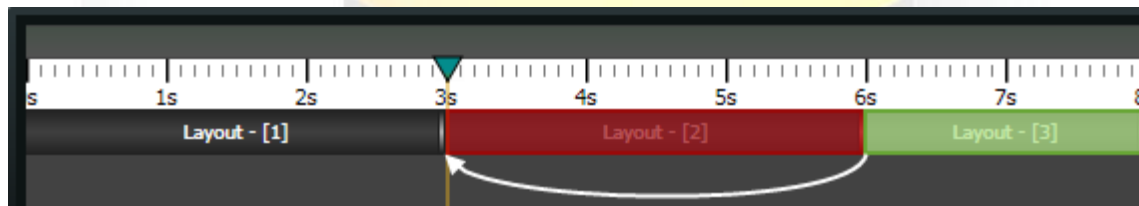


*Note:* In this example, "Second Layout" is selected prior to clicking **Insert**.

## Deleting a layout

If you've decided that you and your layouts just cannot settle your differences, you can delete it. Deleting a layout will completely remove it from your layout, including any elements there were on it. To delete a

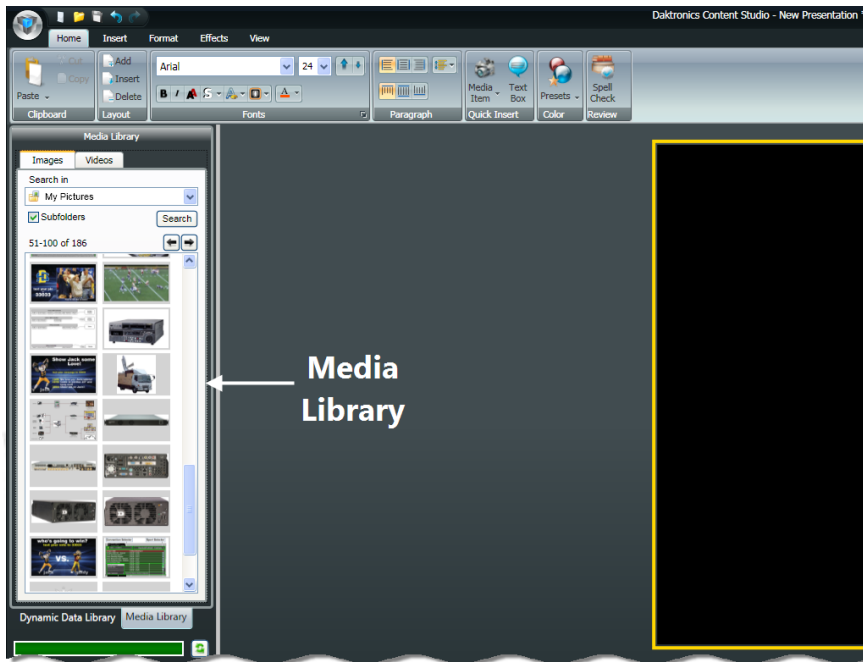
layout, make sure that the offending layout is selected, and click . Any layouts which are after the deleted layout will be moved up in the presentation by an amount of time equal to the duration of the deleted layout.



*In this example, if "Layout - [2]" is deleted, "Layout - [3]" would be moved from playing from 6s - 8s to playing from 3s - 5s.*

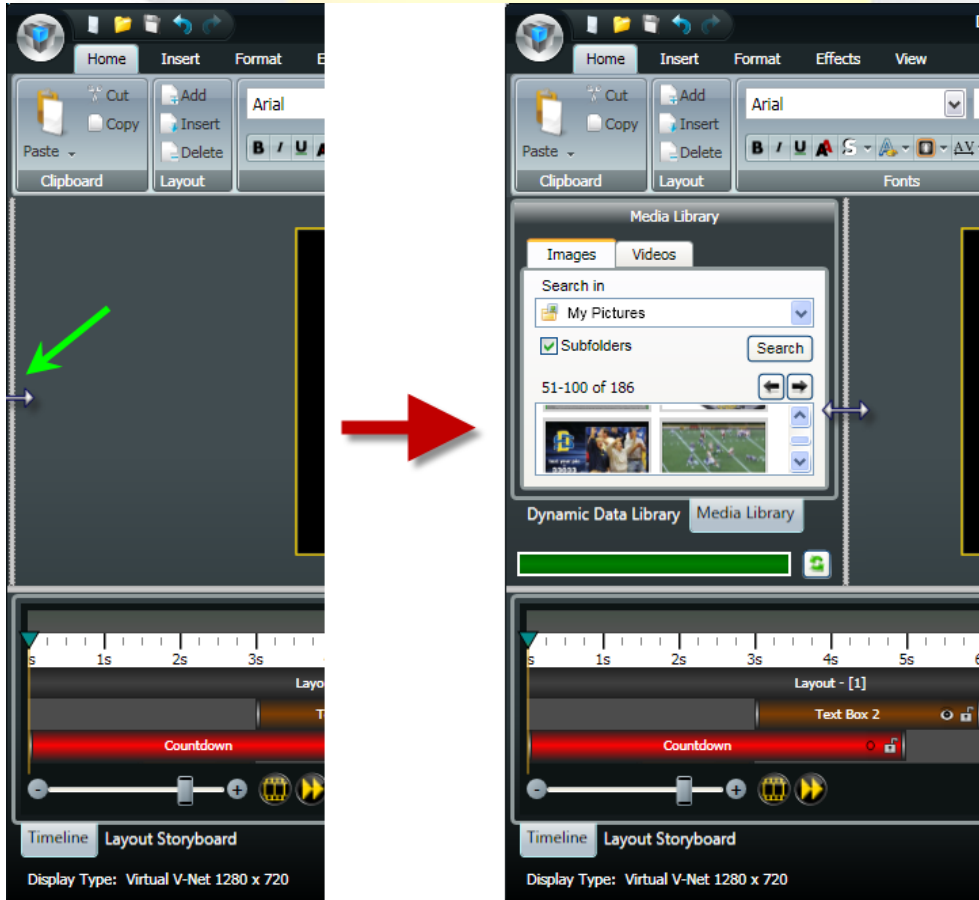
## Adding images and video to a presentation

Any discussion of adding images or video to a Content Studio presentation must start with the Media Library. The Media Library is your one-stop shop for these types of elements, allowing simple and efficient drag-and-drop access to importing them into a layout. The media library is located on the left pane of your Content Studio window.





**Some tips for opening your Media Library...**

- If the Media Library pane is not visible, expand it by clicking and dragging it from the left border of the Content Studio window.



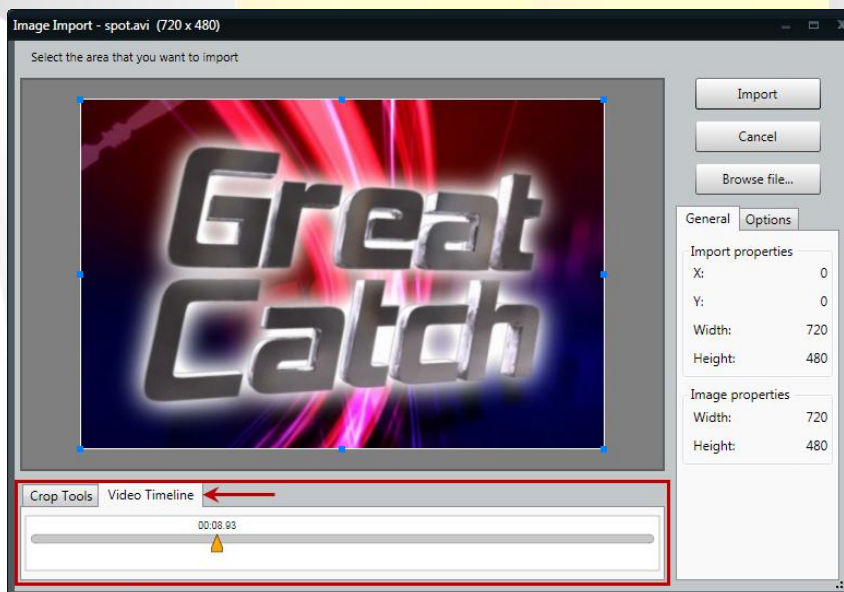
- If the pane is expanded, but Dynamic Data Library appears at the top instead of Media Library, click the **Media Library** tab toward the bottom of the pane to open the Media Library.

### **And now how to use your Media Library...**

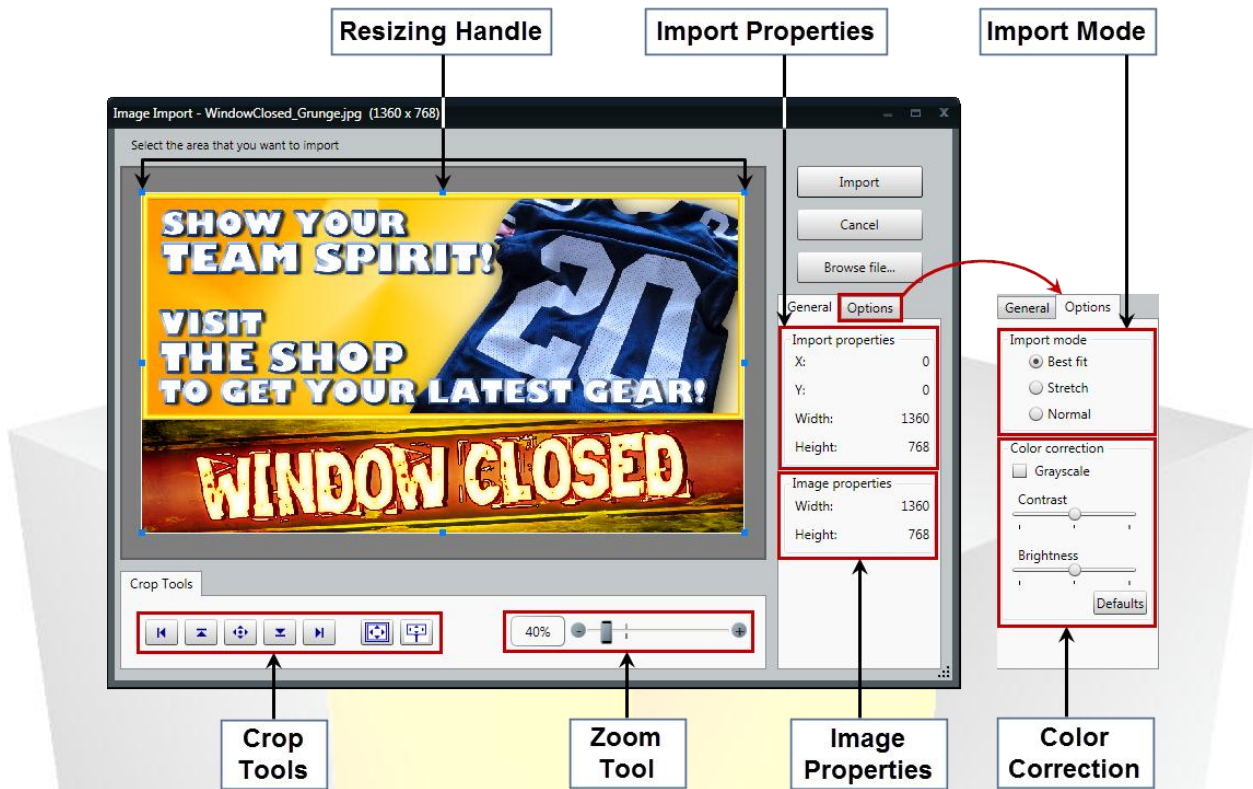
1. Select the appropriate Media Library tab for the type of element you want to add to your layout – **Images** or **Videos**.
2. Confirm that the Media Library is looking for your desired media item in the correct location by ensuring that that location appears in the **Search in** box.
3. Locate the image or video that you wish to add to your presentation. Click the  and  buttons to browse through different pages of items.
4. Click and drag the desired image or video onto your layout. The **Image Import** or **Video Import** window will appear.

### **Image Import**

- a. If you are importing a picture from a video file, use the **Video Timeline** slider bar to locate the frame you wish to use as an image in your presentation by clicking and dragging the slider until the desired image appears in the preview window.



- b. Next, use the image import tools to select the area of the picture that you want to import. The adjustable box that surrounds the picture (the Selector Box) represents the area that will be imported into your presentation. The following steps describe how to use each of the image import tools, identified in the below graphic.



- i. **Resizing Handles:** Use the blue resizing handles located around the selector box to adjust the box's size
- ii. Click and drag the picture to adjust its position within the selector box.
- iii. **Import Properties:** Provide the current location and dimensions of the selector box
- iv. **Import Mode:** Located on the **Options** tab, the picture's **Import Mode** determines how, and whether, the picture will be able to be resized after it is imported into your presentation
  - **Best fit** import mode allows you to resize the picture and keep the aspect ratio. Best fit is the default import mode. A black area adds to the side of the video to keep the aspect ratio correct
  - **Stretch** import mode allows you to resize the picture, but it does not keep the aspect ratio. The picture stretches across the resizing square. Pictures imported in Stretch import mode are often distorted
  - **Normal** import mode imports the picture exactly. You are not able to enlarge the picture, but you can crop the picture to allow only certain parts of the picture to display. The picture anchors to the left side of the resizing square. You cannot transform the picture itself; only the resizing square that contains the picture
- v. **Crop Tools:** Use the crop tools to align the picture within the selector box



**Dock left:** Aligns the picture with the left side of the selector box



**Dock top:** Aligns the picture with the top of the selector box



**Center:** Centers the picture within the selector box



**Dock bottom:** Aligns the picture with the bottom of the selector box



**Dock right:** Aligns the picture with the right side of the selector box



**Select All:** Sizes the selector box to surround the entire image

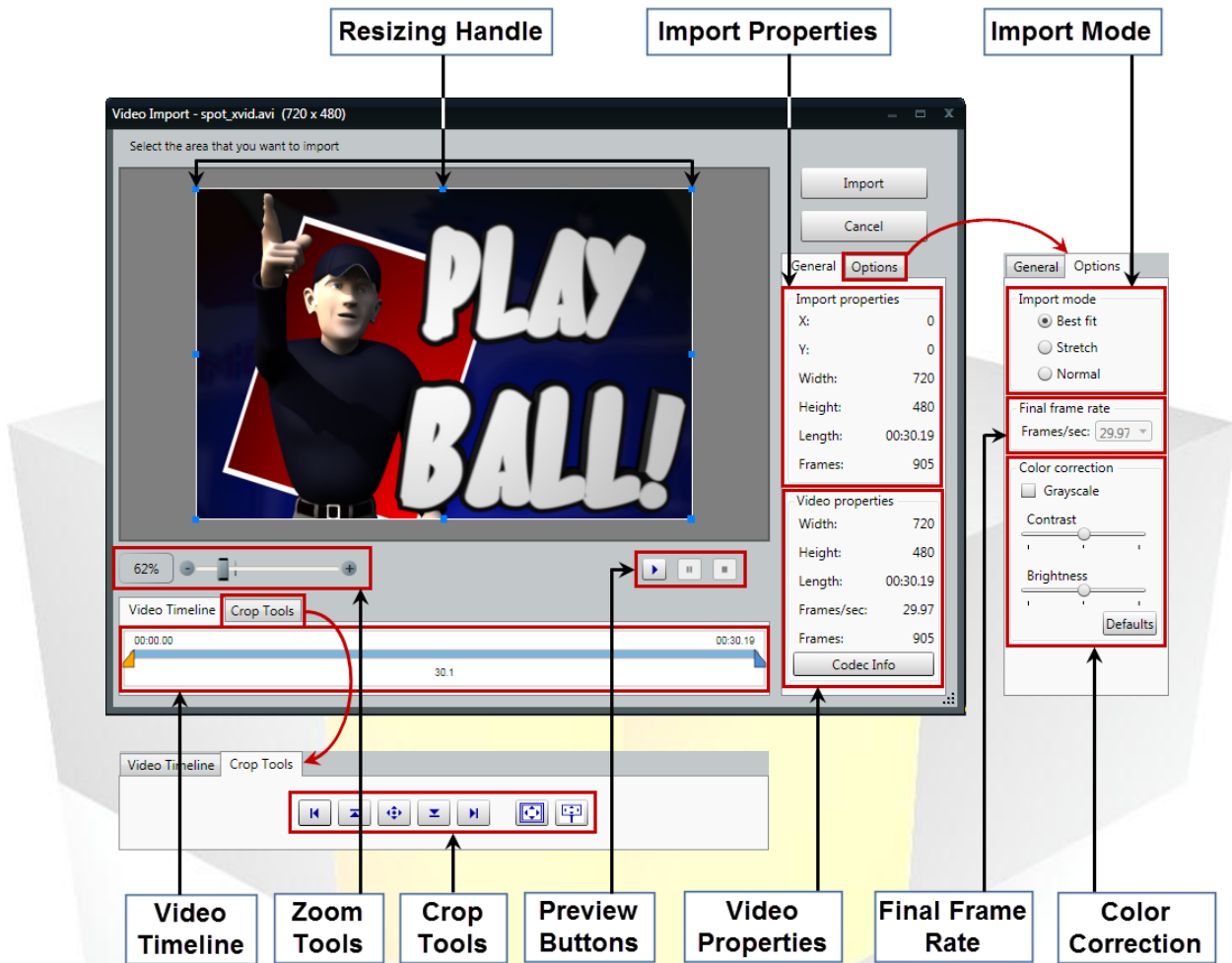


**Display dimensions:** Sizes the selector box to match the current display's dimensions

- vi. **Zoom Tool:** Use the **Zoom** drop-down menu to adjust the zoom level of the picture, which increases or decreases its size
- vii. **Image Properties:** The full dimensions of the image
- viii. **Color Correction:** Located on the **Options** tab, the **Color Correction** tools allow you to adjust the picture's color
  - Checking the **Grayscale** box will convert the image from color to grayscale.
  - Use the **Contrast** slider to change the contrast of the image. Contrast options range from -50 to 50. -50 makes the image the same color as the background; 50 makes the image much lighter and brighter. 0 is the default setting for contrast.
  - Use the **Brightness** slider to change the brightness of the picture. Brightness options range from -50 to 50. -50 makes the picture darker, 50 makes the picture brighter. 0 is the default setting for brightness.
  - Press the **Defaults** button to restore the picture to the default settings for brightness, contrast, and color settings.
- c. After the picture looks the way you want it, click **Import**. The picture will appear on your layout.

## Video Import

- a. In the Video Import window, use the video import tools to select the how you wish to import the video into your presentation. The adjustable box that surrounds the video (the Selector Box) represents the area that will be imported into your presentation. The following steps describe how to use each of the video import tools, identified in the below graphic.



- i. **Resizing Handles:** Use the blue resizing handles located around the selector box to adjust the box's size
- ii. Click and drag the video preview to adjust its position within the selector box.
- iii. **Import Properties:** Provide the current location and dimensions of the selector box
- iv. **Import Mode:** Located on the **Options** tab, the video's **Import Mode** determines how, and whether, the video will be able to be resized after it is imported into your presentation.
  - **Best fit** import mode allows you to resize the video and keep the aspect ratio. Best fit is the default import mode. A black area adds to the side of the video to keep the aspect ratio correct.
  - **Stretch** import mode allows you to resize the video, but it does not keep the aspect ratio. The video stretches across the resizing square. Videos imported in Stretch import mode are often distorted.
  - **Normal** import mode imports the video and does not manipulate size. You are not able to enlarge the video, but you can crop the video to allow only certain parts of the video to display. The video anchors to the left side of the resizing square. You cannot transform the video itself; only the resizing square that contains the video.

- v. If you wish to import only a portion of the video, set the duration of the clip by using the **Video Timeline** slider bar. Click and drag the left slider to the desired starting point of the clip. Click and drag the right slider to the desired ending point of the clip.
- vi. **Zoom tools:** Use the **Zoom Tools** to adjust the zoom level of the video, which increases or decreases its size
- vii. **Crop Tools:** Use the crop tools to align the picture within the selector box



**Dock left:** Aligns the video with the left side of the selector box



**Dock top:** Aligns the video with the top of the selector box



**Center:** Centers the video within the selector box



**Dock bottom:** Aligns the video with the bottom of the selector box






**Dock right:** Aligns the video with the right side of the selector box



**Select All:** Sizes the selector box to surround the entire video



**Display dimensions:** Sizes the selector box to match the current display's dimensions

- viii. Use the **Preview Buttons** to view a preview of the video clip. Press  to play the clip using the start and end points selected on the **Source video** slider bar. While the clip is playing, press  to pause the clip and press  to stop the clip.
  - ix. **Video Properties:** Provides the full dimensions, length, and other information about the video
  - x. **Final Frame Rate:** If the frame rate of the video is able to be modified, use the **Final Frame Rate** drop-down menu to select the frame rate of the clip.
  - xi. **Color Correction:** Located on the **Options** tab, the **Color Correction** tools allow you to adjust the picture's color.
    - Checking the **Grayscale** box will convert the video from color to grayscale.
    - Use the **Contrast** slider to change the contrast of the video. Contrast options range from -50 to 50. -50 makes the video the same color as the background; 50 makes the video much lighter and brighter. 0 is the default setting for contrast.
    - Use the **Brightness** slider to change the brightness of the video. Brightness options range from -50 to 50. -50 makes the video darker, 50 makes the video brighter. 0 is the default setting for brightness.
    - Press the **Defaults** button to restore the video to the default settings for brightness, contrast, and color settings.
- b. After the video looks the way you want it, click **Import**. The video will be inserted onto your layout.

## Adding text elements

In this section we'll go over how to add text to your Content Studio presentations, and how to perform some of the most common management functions of text that you will use.

### Create a text box

The most frequently used way to add text to presentations in Content Studio is by using textboxes. Textboxes allow you to create text which you can then edit, move, resize, and arrange as much as you like.

1. On the **Insert** tab, in the **Text** group, click **Text Box**. A square cursor will appear.
2. Click on a location within the layout where you would like the text to be. A yellow box with a blinking cursor will appear.



3. Type your message.

#### To resize or move the text box:

4. After entering the message, click outside of the text box, and then click back inside it. A green box with resizing handles will appear.
5. To resize, move your cursor over a green resizing handle and click and drag the box to the desired size.



6. To move, click inside the green box and drag it to the desired location.

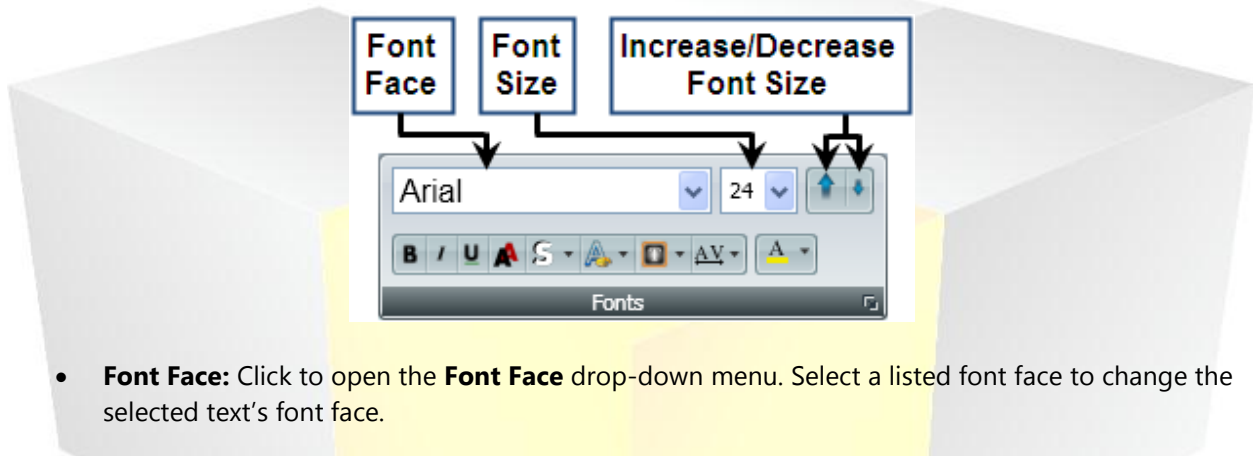
## Formatting text

There are a number of font appearance attributes which can be managed in Content Studio. These characteristics may be used to directly customize the appearance of text characters so that your message appears exactly how you want it.

1. Select the text you wish to modify.

**Note:** Selecting an entire text box will modify all text within the box.

2. Go to the **Home** tab, in the **Fonts** group, to change the following attributes:



- **Font Face:** Click to open the **Font Face** drop-down menu. Select a listed font face to change the selected text's font face.

### Notes:


- If creating dynamic content in which it is important for the positioning and spacing of characters to be static as it changes (such as game clock feeds), using fixed-width fonts will ensure that the text does not "jump around". For example, compare the following fonts. In the first font, notice how every character is the same width – even 1's and 0's. This is not the case in the 2<sup>nd</sup> font.

```
Courier New (Fixed width) 09:11
Courier New (Fixed width) 10:00
1111
2222
```


```
Berlin Sans FB (Variable width) 09:11
Berlin Sans FB (Variable width) 10:00
1111
2222
```


- Not all fonts are supported by each player type. For more information on supported font types, refer to [Media File Recommendations](#).
- **Venus Fonts** are Daktronics-created fonts. You cannot change the size or bold, italicize, or underline Venus fonts. **TrueType Fonts** are the most flexible fonts. You can change the font size and bold, italicize, and underline TrueType fonts.


- **Font Size:** Click to open the **Font Size** drop-down menu. Select the desired font size to resize the selected text.

 **Increase/Decrease Font Size:** Click the appropriate arrow to increase or decrease the size of the selected text one increment at a time.



 **Bold:** Click to toggle **boldface** for the selected text.



 **Italics:** Click to toggle *italics* for the selected text.



 **Underline (DMP-8000 & DMP-1500 Only):** Click to toggle underlining for the selected text.

 **Smooth Text:** Click to toggle anti-aliasing to smooth the edges of the selected text.

 **Shadow Text:** Click the  to open the Shadow Text options box. Refer to [Shadow Text](#).


 **Outline Text:** Click the  to open the Outline Text options box. Refer to [Outline Text](#).

 **Flashing Text:** Click the  to open the Flashing Text options box. Refer to [Flashing Text](#).


 **Character Spacing (DMP-8000 Only):** Click the  to open the Character Spacing options box. Refer to [Character Spacing](#).

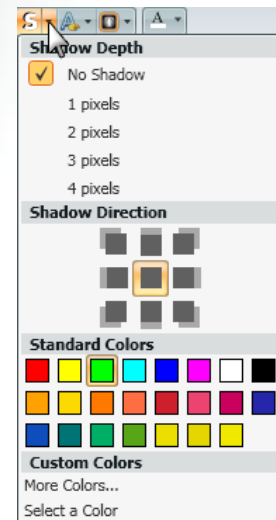
 **Font Color:** Click the  to open the Font Color options box. Refer to [Font Color](#).




**Note:** Font appearance attributes may also be managed in the **Font Properties** dialog box. To open the Font Properties dialog box, click the  button.

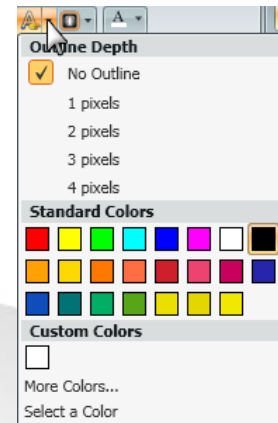
### Shadow Text

1. Select the text to which you want to add a shadow.
2. Click the arrow on the  button to open the **Shadow Text** options box.
3. Select the desired attributes of the text shadowing:
  - a. **Shadow Depth:** Select the desired depth (in pixels) of the shadow.
  - b. **Shadow Direction:** Select the direction in which you want the shadow to extend.
  - c. **Colors:** Choose the desired color of the shadow.
    - i. **Standard Colors:** Select from the listed colors.
    - ii. **More Colors...:** Click to open up a palette from which to specify the desired color.
    - iii. **Select a Color:** Click to use the color selector tool to choose an existing color from the layout.




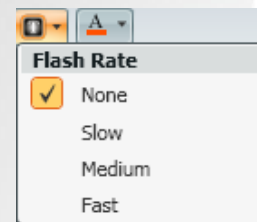
### Outline Text

1. Select the text to which you want to add outlining.
2. Click the arrow on the  button to open the **Outline Text** options box.
3. Select the desired attributes of the text outlining:
  - a. **Outline Depth:** Select the desired depth (in pixels) of the outline.
  - b. **Colors:** Choose the desired color of the outline.
    - i. **Standard Colors:** Select from the listed colors.
    - ii. **More Colors...:** Click to open up a palette from which to specify the desired color.
    - iii. **Select a Color:** Click to use the color selector tool to choose an existing color from the layout.



### Flashing Text


1. Select the text to which you want to add the flashing effect.
2. Click the arrow on the  button to open the **Flashing Text** options box.
3. Select the desired **Flash Rate** for the text.

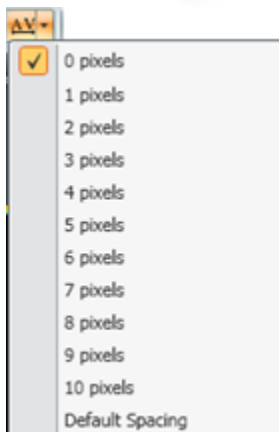


## 8


### Character Spacing

The Character Spacing menu allows you to specify the amount of space (in pixels) you want to appear between characters of text.

1. Select the text for which you want to modify the character spacing.
2. Click the arrow on the  button to open the **Character Spacing** options box.
3. Select the desired character spacing (in pixels) for the text.



## Font Color

1. Select the text of which you want to change the color.
2. Click the arrow on the  button to open the **Font Color** options box.
3. Select the desired font color from the following options:
  - a. **Standard Colors:** Select from the listed colors.
  - b. **Custom Colors:** Select from the listed colors, or:
    - i. **More Colors...:** Click to open up a palette from which to specify the desired color.
    - ii. **Select a Color:** Click to use the color selector tool to choose an existing color from the layout.



## Formatting paragraphs

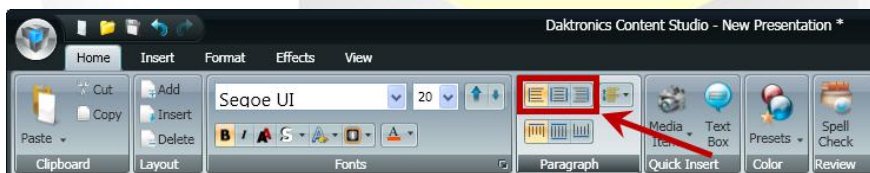
Content Studio also contains options to aid the user in making sure that paragraphs of text are aligned correctly.

### Horizontal Text Alignment

Horizontal text alignment involves managing how a paragraph of text is lined up in relation to the left and right sides of a text box or layout.

1. Select the text you wish to modify the alignment of.

**Note:** Modifying alignment changes the alignment of the whole paragraph that text is a part of. If a text box is chosen, it will modify the alignment for all of the text within the text box.
2. On the **Home** tab, in the **Paragraph** group, click the appropriate horizontal alignment button.



**Left Align:** Aligns the selected text to the left side of the layout or text box

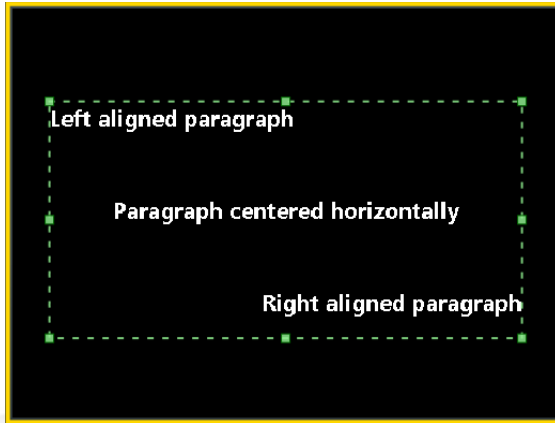


**Center Horizontally:** Centers the selected text between the left and right sides of the layout or text box



**Right Align:** Aligns the selected text to the right side of the layout or text box

3. After clicking the appropriate alignment button, the selected text will be aligned according to your selection.



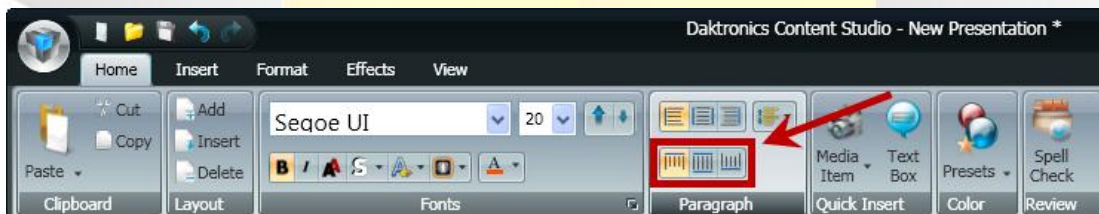
### Vertical Text Alignment

Vertical text alignment involves managing how text is lined up in relation to the top and bottom of a text box or layout.

1. Select the text you wish to modify the alignment of.

**Note:** Modifying vertical alignment changes the alignment of all of the text within the selected text box or layout.

2. On the **Home** tab, in the **Paragraph** group, click the appropriate vertical alignment button.



**Top Align:** Aligns the selected text to the top of the layout or text box



**Center Vertically:** Centers the selected text between the top and bottom of the layout or text box



**Bottom Align:** Aligns the selected text to the bottom of the layout or text box



3. After clicking the appropriate alignment button, the selected text will be aligned according to your selection.

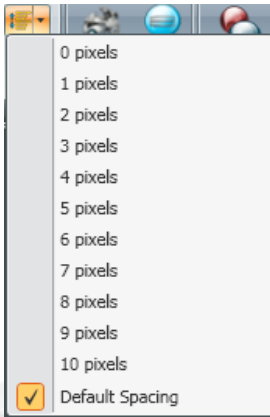
### Line Spacing

The Line Spacing option allows the user to adjust the space (in pixels) which is left between the lines of text in a selected text box or layout.

1. Select the text you wish to modify the line spacing of.

**Note:** Modifying line spacing changes the line spacing of all of the text within the selected text box or layout.

2. On the **Home** tab, in the **Paragraph** group, click the  on the  button to open the **Line Spacing** options box.

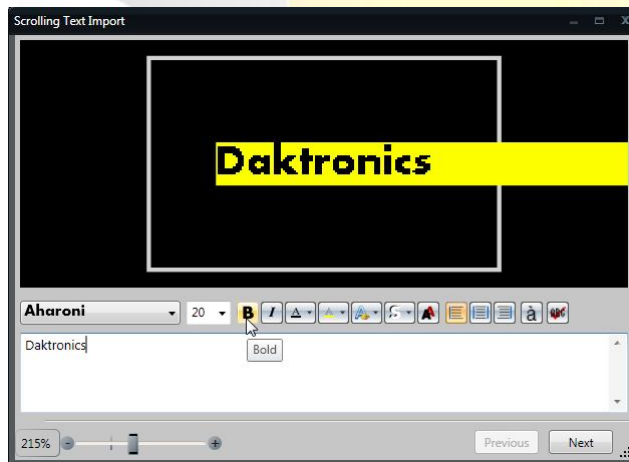




3. Choose the desired line spacing (in pixels). The spacing between all lines of text in the selected text box or layout will be aligned accordingly.

## 8 15 Add Scrolling Text

As you may have already guessed, scrolling text is text which scrolls across the display when it appears. Content Studio provides a wide variety of options for customizing scrolling text, including changing the font appearance, scrolling direction, and scrolling speed.

1. On the **Insert** tab, in the **Text** group, click **Scrolling Text** to open the **Scrolling Text Import** window.

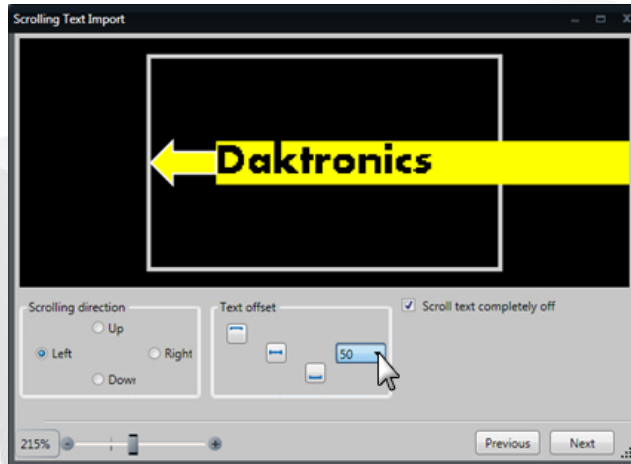


2. In the text box, type the message. To include symbols and special characters in your message, use the **Character Map** .
3. If you wish to check the spelling of your scrolling text message, use the **Spell Check** function .
4. Use the available tools to adjust the appearance of the font. *For help with using the font appearance tools, refer to [Managing Font Appearance](#).*

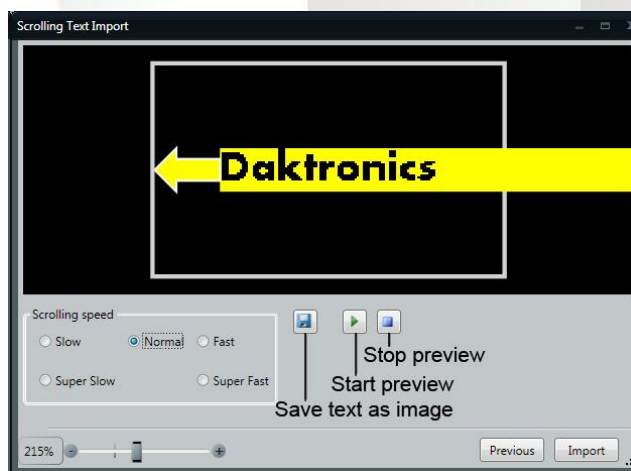


**Tip:** To get a better look at the preview of your scrolling text, use the **Zoom Slider**, located in the bottom left corner of the window. Click the + and – buttons to increase or decrease the zoom level.

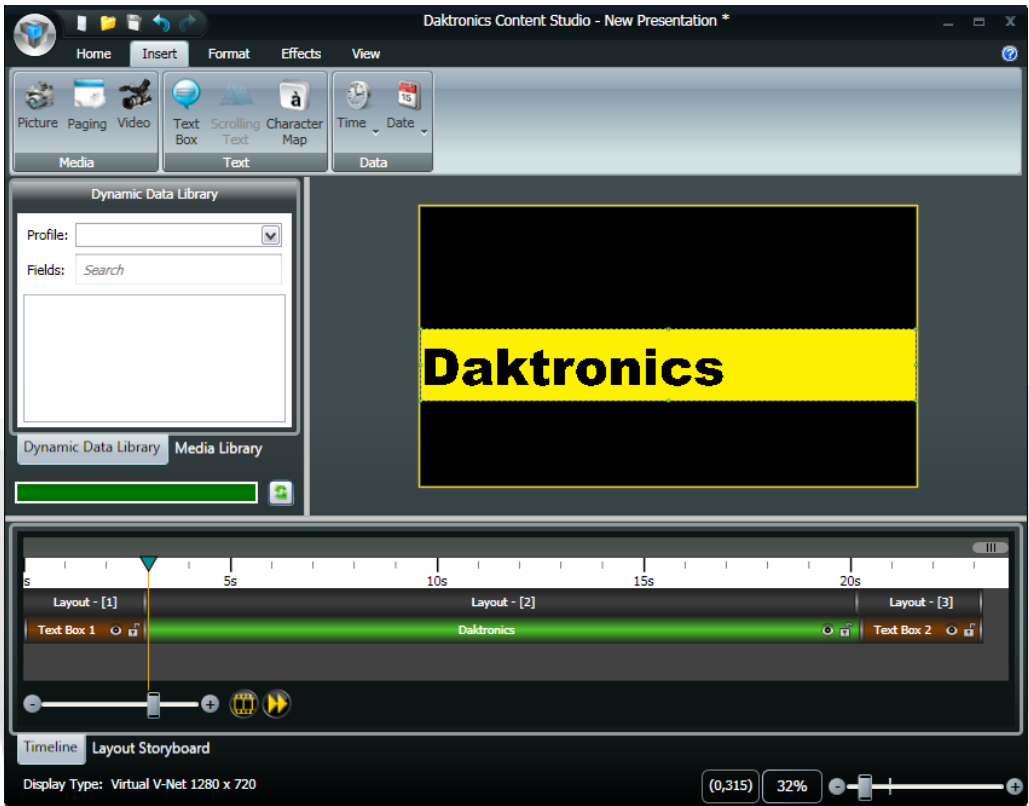
- When finished creating the message, click **Next** to proceed to the next step.
- Select the preferred **Scrolling Direction** to identify the direction in which the text will scroll. Click the appropriate radio button.
- Select the **Text Offset** to identify where on the layout the text will scroll across. Click one of the standard setup buttons or choose a value from the drop-down menu.



- Choose whether or not you want to **Scroll text completely off** the screen.  
In the above example, if **Scroll text completely off** is activated, the message would continue to scroll until the 's' in Daktronics scrolls off the left side of the screen before the message reappears on the right side of the screen. If **Scroll text completely off** is not activated, once the message reaches the left side of the screen, it will restart scrolling from the right side of the screen.
- Click **Next** to proceed to the next step.
- Select the **Scrolling Speed** of the text by choosing the appropriate radio button. To preview what the scrolling speed will look like, use the **Start preview** and **Stop preview** buttons.

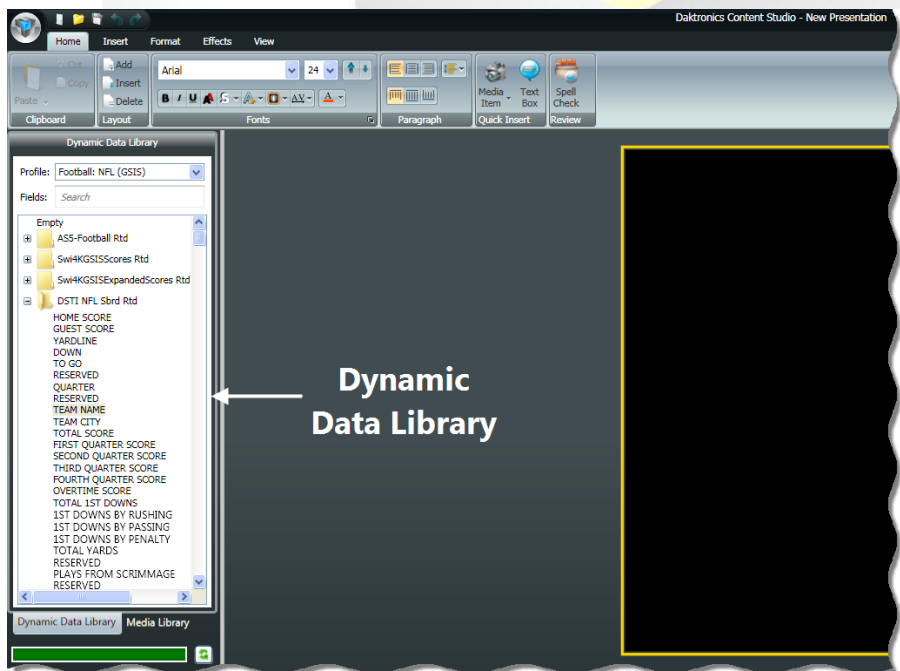


- To save the scrolling text as an image file, click the **Save** button.
- When finished creating your scrolling text, click **Import** to import it into your layout.



## Adding Real-Time Data (RTD) fields

Remember how we mentioned that adding images and video to a presentation had to start with talking about the Media Library? Well adding RTD fields to a presentation has to start with the Dynamic Data Library. The Dynamic Data Library is your one-stop shop for all of your needs when it comes to adding statistics, game-in-progress data, and other dynamic information to your presentations.

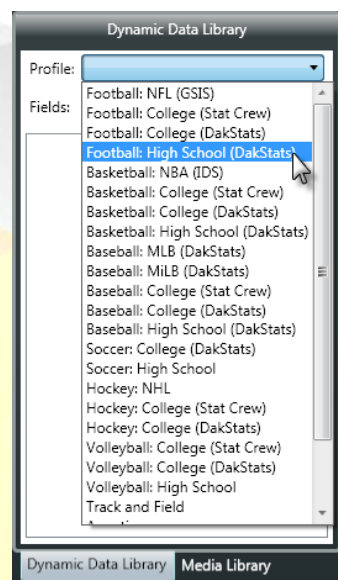




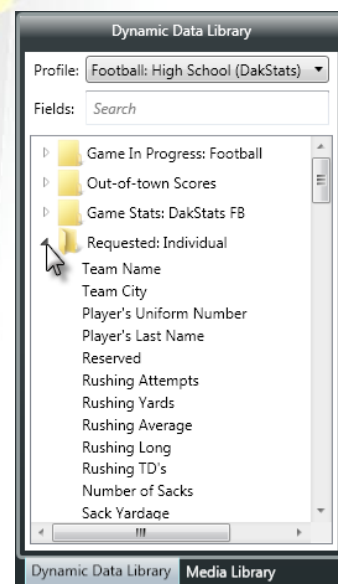
**Tip:** If your Dynamic Data Library isn't visible, remember that it could either be collapsed on the left edge of the Content Studio window, or if you only see the Media Library, you may need to click the **Dynamic Data Library** tab to reveal it.

## Locating the correct RTD field

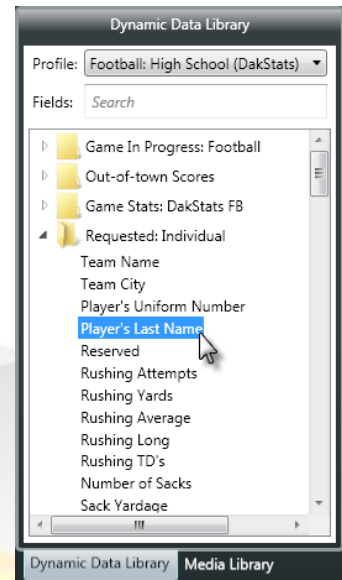
**Step 1 – Profile:** The first step of locating the correct RTD field is determining which RTD Profile it belongs to. In the Dynamic Data Library, click the **Profile:** drop-down list. Each profile corresponds to a different source of data, and they are typically separated according to sport and level of play. Select the desired profile.



**Step 2 – Template:** After selecting the correct RTD profile, you will need to select the appropriate RTD template which contains that field. Each RTD template is a subdivision of the selected profile which contains a group of related information. In the graphic to the right, showing templates in a high school football profile, there are templates for game in progress data, out of town scores data, individual statistics data, and other categories of data. Locate the desired RTD template and click the ▶ button to reveal its list of fields.

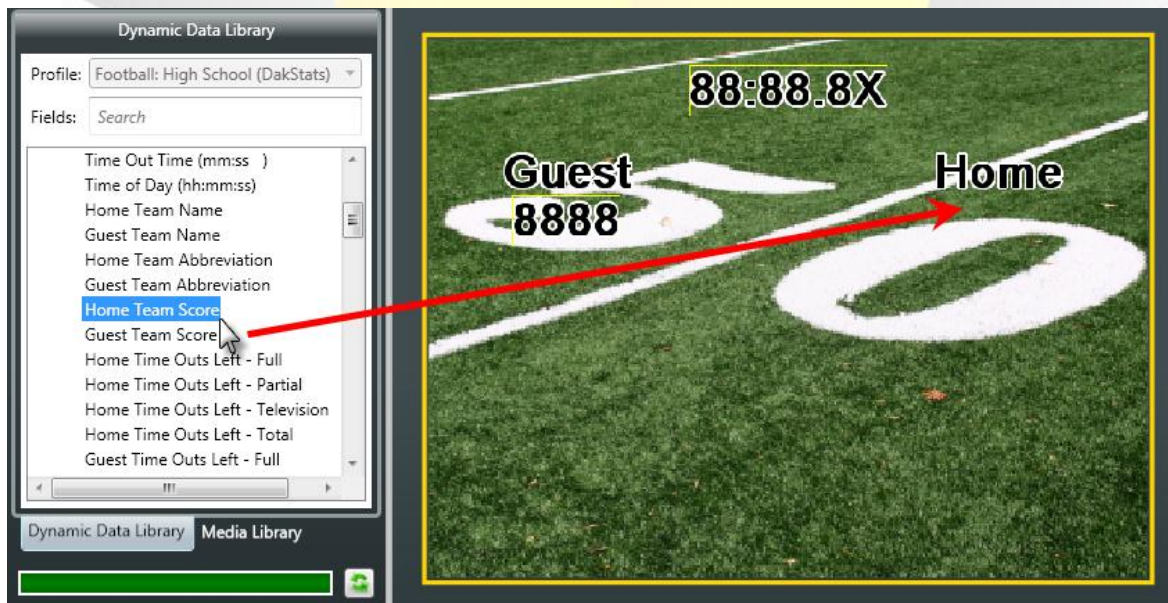


**Step 3 – Field:** After selecting the correct RTD template, you can now locate the RTD field which contains the data you wish to insert into your presentation.



### Adding an RTD field to your presentation

Once you've selected the RTD field you want to add to your presentation, inserting it into your layout simply requires clicking and dragging it to the desired location. The field will appear as a placeholder which represents the maximum number of characters which will be able to appear in the field.

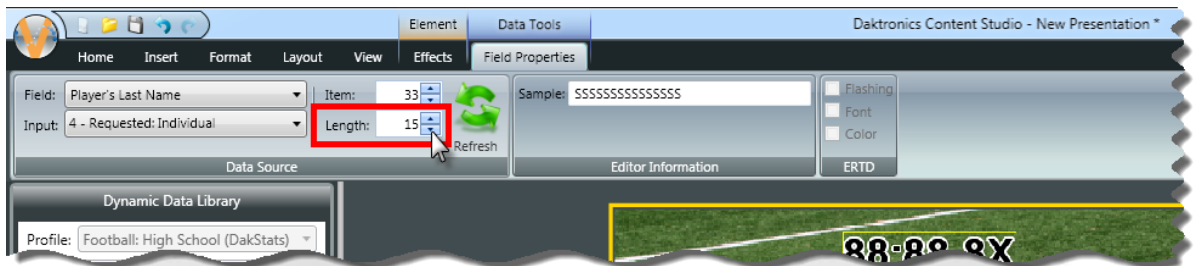



### Changing the length of an RTD field


Suppose you want to shorten the length of a data field to save some space in your layout. For example, you notice that the "Total Score" data field (see the image to the right) is five characters long, but when you consider the likelihood of a team scoring more than 99 points in a single football game, you're pretty confident that two or three characters would be sufficient. By modifying the **Length** property for the data field, you can reduce the number of characters that are reserved for that field's information.

1. [Add an RTD field to your presentation.](#)

2. With the RTD field selected, open the **Field Properties** context tab in the Content Studio Ribbon.
3. Locate the **Length** property, and adjust its value to the desired number.




 **Note:** Adjusting the **Length** property also causes the **Item** property to be adjusted. Ensure that the field's starting point remains in the correct spot to avoid cutting off the beginning of your data.

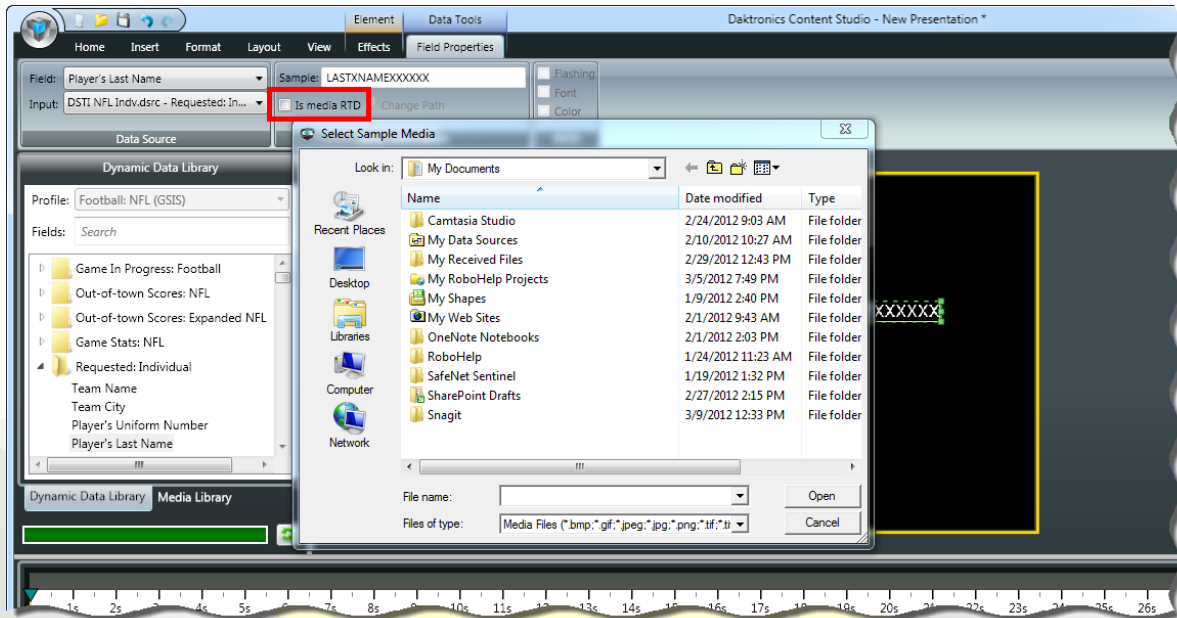
 **Tip:** An RTD field type which usually benefits from shortening its length is one that is for persons' names. Since field lengths for last names are generally 15 characters long, if the longest last name in your league is 8 characters long, you can shorten this field to 8 characters and free up that extra space on your layout.

## Adding Media RTD to your presentation

Suppose you want to show a headshot of your team's players anytime they are mentioned on your video board during a game, or whenever they are introduced at the beginning of the game. Or, suppose there are other situations when you would like an image or video file to be played in an RTD field instead of the text which would otherwise appear. Media RTD can make this happen.

 **Note:** Presentations containing multiple animated or video media RTD fields that play simultaneously may cause degraded system performance. If you notice that your system lags or is otherwise slow to respond when playing such presentations, please consider reducing the number of RTD elements in your content.

1. **Add an RTD field to your presentation.**
2. With the RTD field selected, open the **Field Properties** context tab in the Content Studio Ribbon.
3. Click the **Is media RTD** checkbox. This will open the **Select Sample Media** file browser window.



4. Navigate to and select the desired sample media file, and then click **Open**.

The sample media file is any file that is representative of the media RTD files that will appear in the content. It will be added to your Content Studio editor canvas to assist you with creating the rest of your presentation.

5. Ensure that the media files you wish to use for Media RTD are supported by the digital media player you are creating the content for, and are stored in the proper folder for the player. Follow the below guidelines:

**For DMP-7000**, media RTD supports the following file types: BMP, JPG, PNG, GIF, and TIF. The media files must be stored in the **Bitmaps** subfolder of the DMP-7000's C:\V7000 or D:\V7000 folder.

**For DMP-8000**, media RTD supports the following file types: VMPL, VMPF, AVI, BMP, JPG, JPEG, PNG, MPG, MPEG, and SWF. The media files must be stored in the **MediaRTD** subfolder of the player's content folder. **Note** that the file types are listed in their order of priority – if multiple files with the same name are in the MediaRTD folder, the DMP-8000 will use the file that is of the type listed first above (i.e. if the MediaRTD folder contained both Player Name.JPG and Player Name.AVI, it would insert Player Name.AVI into the content).

**Tip:** Transparency can be incorporated into your media RTD files to help seamlessly incorporate them into your layouts by following the following guidelines:



**7** **For DMP-7000**, any areas which are black (RGB 0,0,0) will be transparent when played.

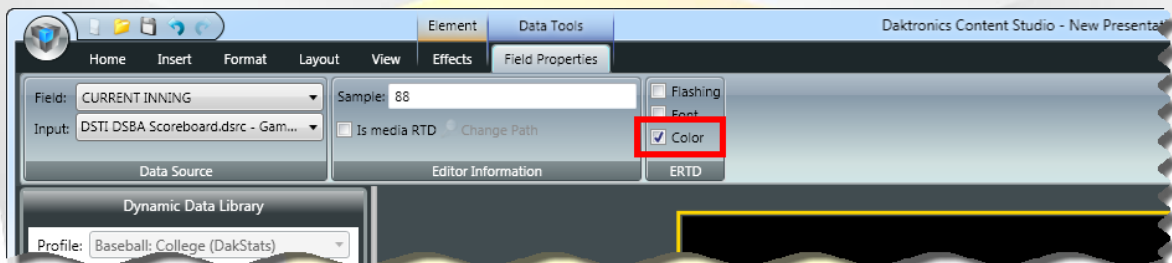
**8** **For DMP-8000**, images which have transparent areas and are saved as a PNG file will retain that transparency. Videos must be saved as an uncompressed AVI file with an alpha channel to have transparency.

## 7 8 Adding Color RTD to your presentation

Another feature that you can use to accent your dynamic data is Color RTD. Suppose you're preparing content for a baseball game and want an easy and creative way to communicate what player is at bat (other than "At Bat: Insert name here"). By using Color RTD, you can display a team's full lineup and instruct the system to show the current batter in a different font color. This allows you to communicate two helpful pieces of information at once: the current batter and where they are in the lineup.

**Note:** Color RTD must be configured in DakStats before it can appear on your display. After configured, complete the following steps to activate Color RTD for a data field in your presentation.

1. **Add the Color RTD-configured RTD field to your presentation.**
2. With the RTD field selected, open the **Field Properties** context tab in the Content Studio Ribbon.
3. In the **ERTD** section, place a check the **Color** checkbox.



## Creating a presentation: Part 2

Now that you've managed to successfully create layouts and elements for your presentation, we can discuss how to make each of those pieces of your puzzle come together to form an organized, coherent, and engaging professional presentation.

### Section Contents


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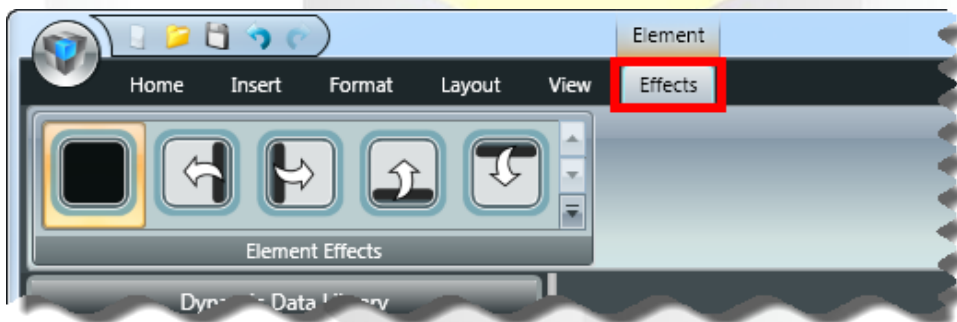
[Adding element effects](#)  
[Adding gradients](#)  
[Aligning elements](#)  
[Arranging elements](#)  
[Content Studio Timeline](#)  
[Layout Storyboard](#)  
[Viewing your presentation](#)

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### 7 8 Adding element effects

Element effects give you a simple way to add eye-catching animated effects to your presentations by specifying a particular manner in which you want an element to appear in the presentation. Effects can include having the element gradually zoom in to its full size, gradually scroll into view from top to bottom, gradually appear in a circular fashion like a radar scan, or many other options.

1. Select the text or picture element for which you want to set an effect.
2. On the **Effects** tab, in the **Element Effects** menu, choose the effect you wish to apply. To view more effect options, click the  button.



### 7 15 Adding gradients


Another tool that Content Studio offers to help you apply your own personal touch to your presentations is the gradient tool. Gradients can be applied to any background in your presentation – whether it is a layout's background or an individual element's background.

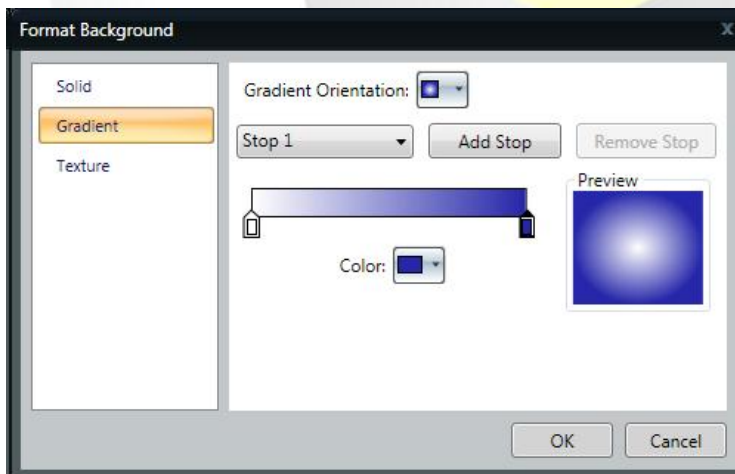
1. Select the element(s) on which you want to apply the gradient, or deselect all elements to apply the gradient to the layout.
2. On the **Format** tab, in the **Fills** group, click the **Gradients** button to open the **Gradients** menu.

3. Select a gradient color and pattern from the **Gradients** drop-down menu.

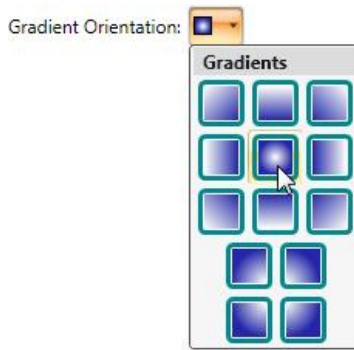
**Note:** To change the background color, go to the **Format** tab and select a color from the **Fills** group.




4. To choose a color that is not available in the **Gradient Colors** palette, click **More Colors...** to open the color selector.
5. Customized gradients, including multiple color gradients, may be applied by using the **Format Background** dialog box. To open the Format Background dialog box, click the  button.
6. Click **Gradient** to display the gradient tool set.

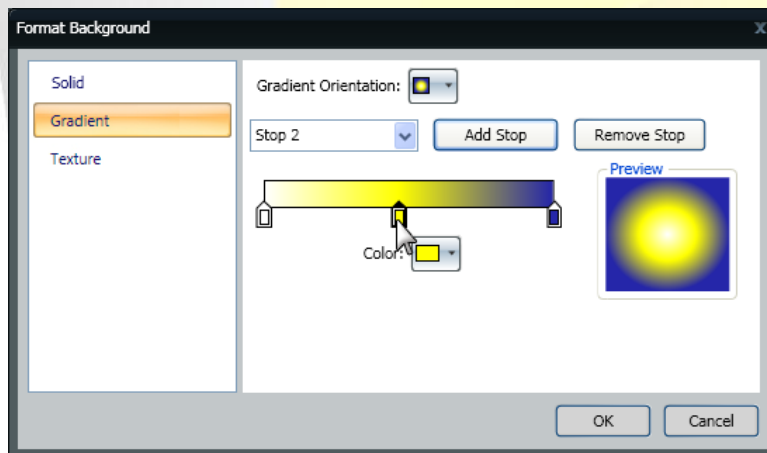


7. Choose the orientation of the gradient from the **Gradient Orientation** drop down box.



 **Note:** Use the **Preview** box to see a preview of what the gradient will look like when it is applied to your presentation.

- To add additional color(s) to the gradient, click the **Add Stop** button. The additional color will be added to the gradient, and an additional slider will be added to the **Stop Position** slider bar.



**Note:** Maximum number of stops is 10.

- Click and drag the Stop Position sliders to adjust the distribution of the gradient's colors until you reach the desired look.
- To remove a gradient stop, select the stop you wish to remove on the Stop drop-down menu, and then click **Remove Stop**. That stop's color will be removed from the gradient.
- When finished creating the gradient, click **OK**.

## Aligning elements

After you have all the elements you want added to your presentation and looking the way you want, it is important to get them properly aligned to ensure a neat and organized appearance on your display. Content Studio provides a number of tools to allow you to achieve this result by assisting with aligning elements both with other elements and within a layout.



### Tips:

- To show gridlines on your layout (to assist with arranging your elements), on the **View** tab, in the **Show/Hide** group, select **Gridlines**. Note that it may be necessary to zoom in on your layout to view the gridlines.
- To easily select all elements contained on a layout, on the **View** tab, in the **Show/Hide** group, select **Select All Elements**.

1. Select the elements you want to align.
2. On the **Format** tab, in the **Arrange** group, click **Align** to open the Alignment menu.

**Note:** You can also right-click the element(s) to access alignment options.

3. Click the desired alignment option(s).

**Align to Top:** Moves the selected element to the top of the layout.

**Center Vertically:** Moves the selected element to the vertical center of the layout.

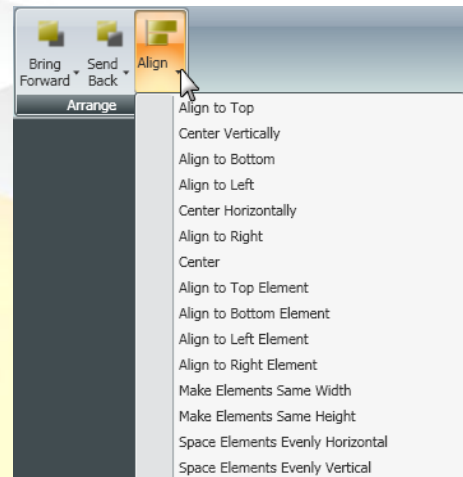
**Align to Bottom:** Moves the selected element to the bottom of the layout.

**Align to Left:** Moves the selected element to the left side of the layout.

**Center Horizontally:** Moves the element to the horizontal center of the current line.

**Align to Right:** Moves the selected element to the right side of the layout.

**Center:** Places the selected element in the direct center of the layout.



**Note:** The following options are only available when multiple elements are selected.

**Align to Top Element:** Moves all selected elements to the top-most selected element.

**Align to Bottom Element:** Moves all selected elements to the bottom-most selected element.

**Align to Left Element:** Moves the selected elements to the left-most selected element.

**Align to Right Element:** Moves the selected elements to the right-most selected element.

**Make Elements Same Width:** Changes the width of all the selected elements to the same width of the widest element.

**Make Elements Same Height:** Changes the height of all the selected elements to the same height of the highest element.

**Space Elements Evenly Horizontal:** Spaces all selected elements evenly between the farthest-left and the farthest-right elements.

**Space Elements Evenly Vertical:** Spaces all selected elements evenly between the farthest-top and the farthest-bottom elements.



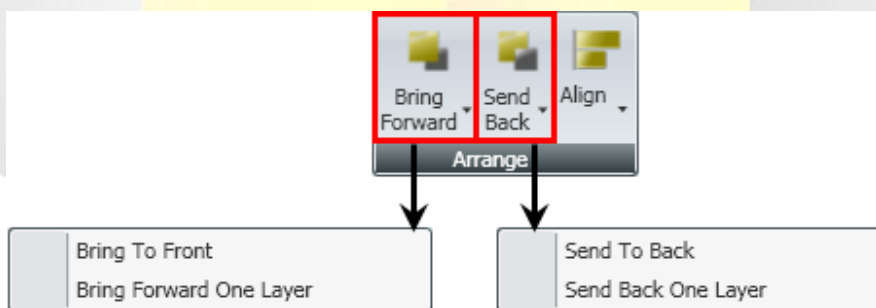
**Tip:** When lining up elements horizontally, it is recommended to select the elements, and then **Align to Top Element** to line each of them up with the top-most selected element.

When lining up elements vertically, it is recommended to select the elements, and then **Align to Left Element** to line each of them up with the left-most selected element.

## Arranging elements

When multiple elements are placed on a layout, Content Studio allows those elements to overlap over each other in a series of layers. This helps you create effects (such as by combining text and picture elements) that otherwise would not be possible, or would be more difficult to achieve. Arranging elements involves the managing of multiple layers of elements – bringing elements toward the front of other elements, or sending them behind other elements.

1. Select the element you want to move forward or back.
2. On the **Format** tab, in the **Arrange** group, select either **Bring Forward** or **Send Back** (or right-click on the element and go to the **Order** submenu) to open their respective submenus.



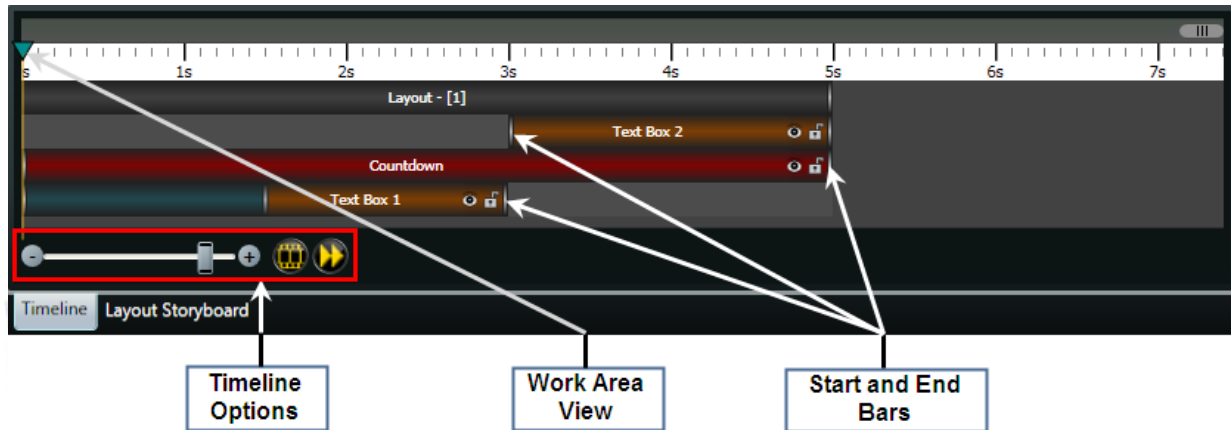
3. Choose the appropriate option:
  - **Bring to Front:** Brings the selected element in front of all other elements, making it the top-most layer
  - **Bring Forward One Layer** (or **Bring Forward**): Brings the selected element forward by one layer, placing it on top of the layer immediately above it
  - **Send to Back:** Sends the selected element behind all other elements, making it the bottom-most layer
  - **Send Back One Layer** (or **Send Backward**): Sends the selected element back by one layer, placing it behind the layer immediately below it

## Content Studio Timeline

At this point you may be asking yourself “what if I don’t want all of the elements on a layout to appear at the same time?” or “what if I want certain layouts to last longer than other layouts?” Those are very good questions, and the answer to them is the Content Studio Timeline (the bars at the bottom of the window that you may have noticed).

## Adjusting element and layout durations

First, there are a few pieces of the timeline that you should be familiar with:



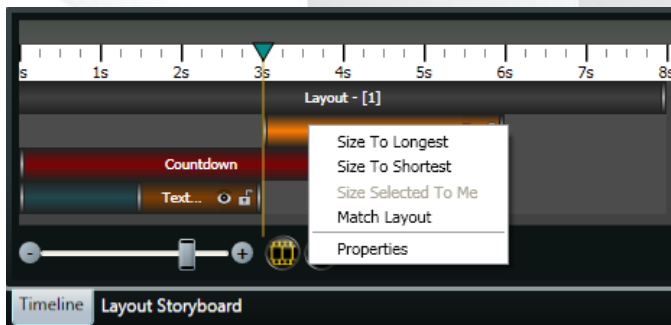
The example above is of a layout containing an image and two text boxes. The bar on top (labeled "Layout - [1]") represents the layout's duration, which is currently set at five seconds. The bars below the layout's bar represent each element on the layout, and designate each element's start and end times. They will cause the elements to be displayed as follows:

- 00:00.00 – "Layout - [1]" starts, "Countdown" image appears and the transition set for "Text Box 1" begins
- 00:01.52 – "Text Box 1" transition completes
- 00:03.00 – "Text Box 1" disappears, "Text Box 2" appears
- 00:05.00 – "Text Box 2" and "Countdown" disappear and layout ends

To adjust the duration of a layout, and the start and end times of elements, click and drag the appropriate **Start** or **End Bar** to set the desired start or end point for the element or layout.

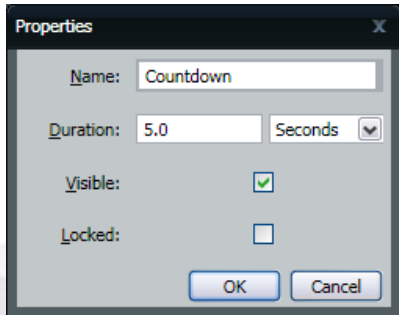
## Additional Layout and Element Options

1. Right-click on an element or layout to open its context menu.



2. Choose from the following menu options to assist in adjusting an element's duration:
  - **Size To Longest:** Adjust the element's duration to match the element with the longest duration.
  - **Size To Shortest:** Adjust the element's duration to match the element with the shortest duration.
  - **Size Selected To Me:** Adjust multiple selected elements' duration to match this element's duration.

- **Match Layout:** Adjust the element's duration to match the layout's duration.
3. Select **Properties** to view additional options.
  4. Edit the layout's or element's options as desired.



- **Name:** Edit the name of the layout or element, as it appears in the Timeline.
  - **Duration:** Adjust the duration of the layout or element.
  - **Visible:** Designate whether or not an element should be visible when the presentation is played.
  - **Locked:** Place a checkmark in the **Locked** checkbox to prevent an element's start time, end time, duration, size or position from being modified.
5. When finished, click **OK** to save changes or **Cancel** to discard any changes.

## Adjusting the Timeline View

Content Studio also provides options for customizing the Timeline to best meet your needs. Use the following **Timeline Options**:



**Work Area View:** Click and drag the arrow to view elements active at a certain point in time in the Work Area.



**Scroll bar:** Click and drag the Scroll bar to view earlier or later in the Timeline.



**Presentation/Layout View:** Click to toggle viewing the entire presentation or only the current layout on the Timeline.



**Zoom level:** Click the **+** and **-** buttons to adjust the time increment in which you want to view the Timeline.



**Scroll to Current:** Click to scroll the Timeline to the currently selected layout.



**Resizing Cursor:** The Timeline may be resized vertically to reveal more of or conceal the line items on it. Move your mouse to the top border of the Timeline until it changes into a resizing cursor, and then click and drag the Timeline to the desired height.

## Layout Storyboard

Now that you've used the Timeline, you may have also noticed the tab labeled "Layout Storyboard". This is another useful little tool in Content Studio that it would be worth acquainting yourself with. As you would probably expect from a tool called a storyboard, the Layout Storyboard provides a graphical representation of your presentation's layouts to give you a quick preview of what's going to play and in what order it's going to play, so that you can easily rearrange the sequencing of your layouts. The storyboard also allows you to apply and manage transition effects that may be put in place between layouts.

### Changing the order of layouts

Using the Layout Storyboard, rearranging the order of the layouts in your presentation is as easy as clicking and dragging or copying/cutting and pasting – depending on which method you prefer.




1. Click the **Layout Storyboard** tab at the bottom of the window.
2. Select the layout you wish to move.
3. Move the layout to the desired location by one of the following methods:

#### Click and drag

Click and drag the layout to the desired new location. A gray line will appear to indicate where in the sequence the layout will be placed.




#### Copy/Cut and Paste


4. After selecting the layout you wish to move, click the **Copy**  or **Cut**  button.
5. Select the layout which is in the desired location for the layout you are moving.
6. Click the **Paste**  button.

### Adding layout transitions

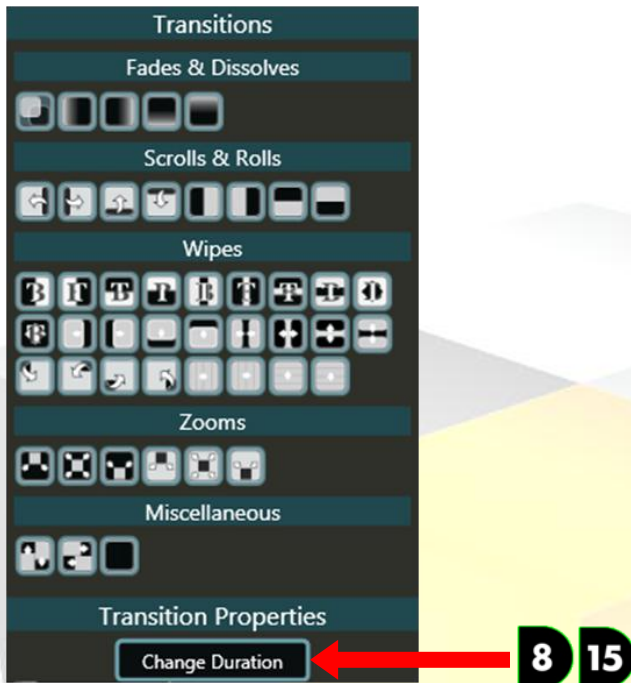
Similar to how Content Studio allows you to apply effects to elements for when they are introduced in the presentation, it also allows transition effects to be applied to layouts to smooth the progression from layout to layout. This can be managed from the layout storyboard.

1. Open the **Transitions** menu by selecting the place in your presentation where you wish to add or edit a transition, as follows:

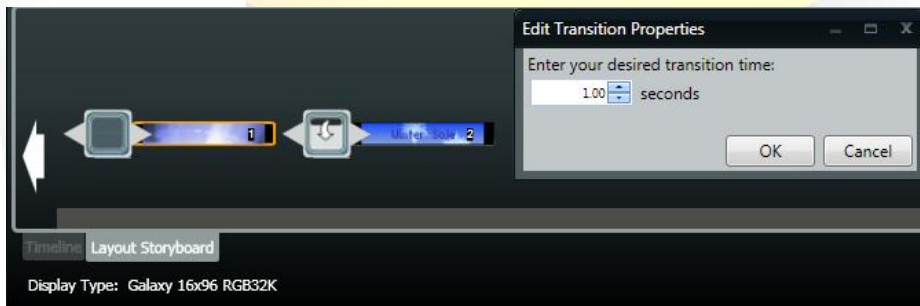
**To add or make changes to a single transition**, click the **Transition Placeholder**  which is located between the layouts where you wish to apply a transition.

**To add or make changes to all transitions**, click the **Apply Transition to All**  button.

2. Click the corresponding icon of the transition you wish to apply to the presentation.



- a. **(DMP-8000 and DMP-1500 Only)** To change the transition's duration, click the **Change Duration** button to open the **Edit Transition Properties** dialog box.
- b. Enter the **Desired Duration Time** (in seconds) in the text box.



- c. Click **OK**.

**To clear a single transition:**

1. Click on the transition you want to clear to open the **Transition** menu.
2. On the **Transitions** menu, under the **Miscellaneous** group, select **No Transition** .

**To clear all transitions:**

Click the **Clear All Transitions** button .

## Viewing your presentation

In addition to its extensive set of tools and features that allow you to get everything you want into your presentation, Content Studio offers multiple options for helping you to verify that all of your work will pay off. These tools can assist you with verifying the accuracy and precision of your entire presentation – from viewing minute details in a small corner of a layout to viewing an entire layout all at once; and from previewing your entire presentation at once to view a single moment in time. Content Studio allows you to perform as broad or as narrow of an inspection as you would like.

### Layout zoom control

The layout zoom control allows you to zoom in or out on your layout to make detailed or broad edits to your work. This can be particularly helpful when working with very small or very large display sizes. Content Studio offers three methods that you can use to adjust your current zoom factor when working with a layout.

#### Method #1: Zoom Ribbon Tools




**Zoom In:** Click to zoom in on your layout. Each click will increase the zoom factor by 25 percent.


**Zoom Out:** Click to zoom out on your layout. Each click will decrease the zoom factor by 25 percent.

**Best Fit:** Click to restore your layout to its default zoom level – only sufficiently zoomed out to allow the entire layout to fit in the available space.

#### Method #2: Zoom Slider Bar



**Zoom In:** Click the  button to increase the zoom factor by 5-10 percent.

**Zoom Out:** Click the  button to decrease the zoom factor by 5-10 percent.

#### Method #3: Mouse Scroll Wheel



Your mouse can also be used to zoom in and out on your layout. Just hold down **[CTRL]** on your keyboard while rolling your mouse's scroll wheel forward to zoom in on your layout, or roll backward to zoom out. Rolling the wheel one notch will increase or decrease the zoom factor by 25 percent.

## Previewing your presentation

To get the most accurate idea of how your presentation will look on your sign, you can preview your content from directly within Content Studio. This preview can be used to see what an entire presentation will look like, or what an individual layout will look like.

The **Preview Controls** can be found in two locations:











On the **View** tab of the **Ribbon**, in the **Preview** group



On the bottom of the Content Studio window, next to the **Zoom Control**

Click the control buttons to perform the following functions:

Ribbon button	Footer button	Function
		<b>Play:</b> Shows a preview of the entire presentation
		<b>Play Current:</b> Shows a preview of the current layout
		<b>Pause:</b> Pauses playback of the preview in progress
		<b>Stop:</b> Stops playback of the preview in progress

# Saving your presentation

Saving a presentation serves many important functions, such as preserving the presentation's creation progress, making the presentation accessible to your digital media player to play it on a display, and preventing the agony and frustration of redoing lost work. This section will address how to save your presentation in such a way as to allow your digital media player to access the file and play it on your sign.

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[Mapping a network drive](#)

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## Media organization recommendations

This is just a shorter way of saying "Daktronics' recommendations for how to organize the folders that store your displays' media files, and where to store your media files in them". First and foremost, we will cover the guidelines that ensure your digital media player is able to access all of your media files. Secondly, we will provide you Daktronics' best recommendations to help you with run your show effectively and efficiently.

### DMP-7000

Content must be located on the DMP-7000 computer and placed within a library folder named and located according to the following requirements:

*Drive Letter*\V7000\*Sign Folder*\*Library folder*

**Drive Letter:** C: or D:, depending on where your DMP-7000 folder is located

**Sign Folder:** The folder created for the display type your content is intended for, named according to '*height x width*'.*color technology*'.*pixel technology*'.Sign (e.g. 720x1280.RGB16MB.L.Sign)

**Library Folder:** Your content library folder, which must be named according to '*Library name*'.Lib (e.g. Sponsors.Lib)

The full path of the example library would be D:\V7000\720x1280.RGB16MB.L.Sign\Sponsors.Lib\

### Guidelines:

- The library folder can be created by you and named according to your preferences; however its name must have ".Lib" at the end.
- The sign folder may have multiple library folders, but library folders *may not* have any subfolders within them. Therefore, content can be stored within *Sign Folder*\Sponsors.Lib but it cannot be stored within *Sign Folder*\Sponsors.Lib\Corporate.
- It is recommended to map a drive letter on your Show Control user station to your DMP-7000 content folder. For help with doing this, refer to [Mapping a network drive](#).

## DMP-8000

Content must be located on the DMP-8000 computer and placed within the following folder:

**For Windows XP machines:** C:\Documents and Settings\All Users\Application Data\Daktronics\VNET4\Content

**For Windows 7 machines:** C:\ProgramData\Daktronics\VNET4\Content

### Guidelines:

- Content may be placed within the C:\...\Content folder or within a subfolder of this folder. Note that you may only place content one subfolder deep from the Content folder to use the files with Display Studio. (i.e. C:\...\Content\Sponsors would be OK; C:\...\Content\Sponsors\Corporate would not work)
- It is recommended to map a drive letter on your Show Control user station to your DMP-8000 content folder. For help with doing this, refer to [Mapping a network drive](#).

## DMP-1500

Content must be created and stored in the following manner:

- (1) Content which is created outside of the Show Control environment must be stored on a portable storage medium or on your Show Control user station.
- (2) Content must next be saved to your system's database. This must be done in Content Studio – either by creating the content in Content Studio and saving it, or by importing the content into a Content Studio presentation and saving that presentation. Here, content may be simply saved in your display's root folder, or in a subfolder.
- (3) Prior to when content is anticipated to be played on the display, it needs to be transferred from the database to the digital media player. This is done with the help of the Display Studio M3 File Manager widget.

For step-by-step help with getting content onto your digital media player, refer to [Adding content to digital media player](#).

### Guidelines:

- Content may be stored in any imaginable manner when it is saved on your portable storage medium or user station.
- When saving content to your system's database, you may place content within your display's root folder or within a subfolder. Note that you may only create subfolders one level deep from the root folder, however. (i.e. you can create a GalaxyPro 256x512 RGB68B\Sponsors folder, but not a ...\Sponsors\Corporate folder)
- There is no way to organize content which is transferred to your digital media player – it all gets placed within a single storage area.
- Be aware of the storage limitations of the digital media player when deciding which, and how many, files to copy to it.

## Mapping a network drive

If your Show Control System consists of multiple computers, you will find that you will routinely be working on one computer, generally a user station, and need to access files or folders on another computer, such as a digital media player. The easiest way to access these network drives is by “mapping” to them, whereby a local drive’s identifying letter (A through Z) is associated with a shared storage area on another computer. This allows quick and easy access to shared files and folders and eliminates the need to browse through an entire list of network resources to locate the desired file or folder.

A common mapping scenario is making media items stored on a DMP-8000 computer accessible by a Display Studio User Station. By mapping, instead of needing to locate the correct DMP-8000 on your list of network computers, and then navigate to C:\Documents and Settings\All Users\Application Data\Daktronics\VNET4\Content; you can simply navigate to (for example) F:\Video Board Content on the user station, and the rest of the work will be done for you.

The below sections detail the proper steps for mapping a network drive on computers using Windows XP and Window 7 operating systems.



**Note:** When selecting a drive letter to associate with a shared network location, it is recommended to choose letters that are lower in the alphabet.

### Windows XP User Station

1. On the computer from which you wish to access the shared folder, click **Start**, and then click **My Documents**.
2. Click the **Tools** menu, and then click **Map Network Drive**.
3. In the **Map Network Drive** dialog box, select the **Drive** letter you wish to associate with the shared folder (if desired).
4. Click **Browse**.
5. In the **Browse For Folder** dialog box, click the folder you want to connect to, and then click **OK**.
6. In the **Map Network Drive** dialog box, note the drive letter which was selected, and then click **Finish**. The selected folder can now be accessed from **My Computer** by selecting the appropriate drive letter.

### Windows 7 User Station

1. On the computer from which you wish to access the shared folder, click **Start**, and then click **Computer**.
2. Click **Map Network Drive**.
3. In the **Map Network Drive** dialog box, select the drive letter you wish to associate with the shared folder (if desired).
4. In the **Folder** text box, type the path of the shared folder, or click **Browse** to locate the folder.
5. In the **Browse For Folder** dialog box, click the folder you want to connect to, and then click **OK**.

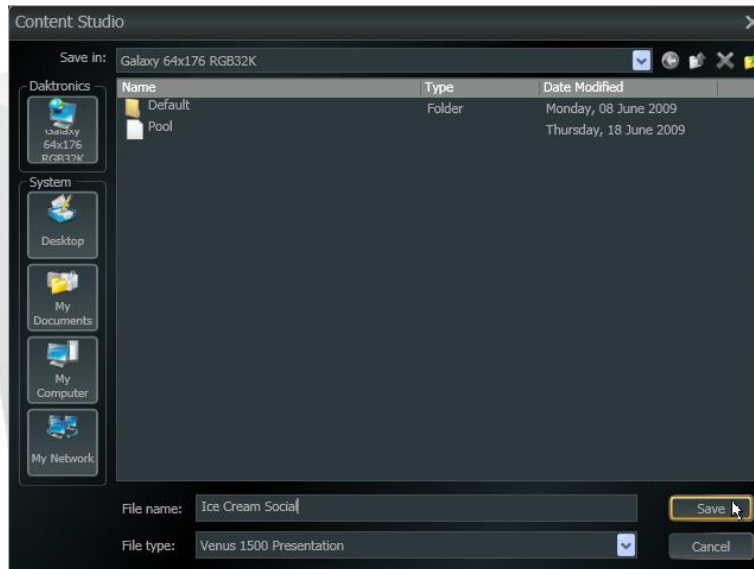
In the **Map Network Drive** dialog box, note the drive letter which was selected, and then click **Finish**. The selected folder can now be accessed from **Computer** by selecting the appropriate drive letter.





## Saving your presentation

Once you've got your plan figured out for where you need to save your presentation, Content Studio makes actually doing it very simple.

1. When ready to save, either click the **Content Studio Button** and select **Save** or click the **Save** shortcut button. The **Save As** dialog box will appear.

**Note:** If you wish to save your presentation with a new filename, click the **Content Studio Button** and select **Save As...**



2. Use the navigation tools to locate the proper destination for the presentation file.
  - **Go to last folder visited** : Click to return to the last folder you visited.
  - **Up one Level** : Click to go up one level in the folder structure.
  - **Delete** : Click to delete the selected file or folder.
  - **Create new folder** : Click to create a new folder within the current folder.
3. Type the presentation name in the **File Name** text box.
4. Click **Save** to save the presentation or click **Cancel** to return to the presentation without saving.

# Media File Recommendations

The recommended practices for working with media files in a Show Control System are addressed in a standalone document Daktronics Media File Recommendations available from:

- DakInfo @ [Media File Recommendations – DD2175346](#)
- Show Control Installer

It discusses helpful guidelines to follow when creating media files; what types of files a system can support; tips and guidelines for working with different types of fonts; and steps for how to import media files from a portable storage device.

It also includes video file conversion with recommendations for converting video files into a format supported by the Show Control System.

The **Media File Recommendations** includes:

Media Item Creation Guidelines  
Image and Video File Support  
Text Input Support  
Media File Batch Conversion  
Loading Media from Portable Storage  
Installation, Configuration and Use of Conversion Applications:  
    Quicktime  
    VirtualDub  
    ffmegX  
    Dak Video File Converter Utility

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[Media File Recommendations – DD2175346](#)

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## Display Studio preliminary setup

Now that you've created your presentations, you are probably interested in learning how to get those presentations to play on your sign. That is where Display Studio comes in. In the upcoming sections, we will introduce you to many of the exciting and powerful tools and features that Display Studio has to offer and provide recommendations for using them to put on an excellent show. Before you begin putting together containers and buttons, though, there are a few preparation steps to take to help get your Display Studio workspace ready.



**Tip:** Keep in mind that much of the upcoming sections consist of simply our recommendations for how to set up your workspaces. Once you understand the mechanics of how Display Studio works, you are encouraged to experiment and adapt your workspaces as you see fit to make them work for you.

### Section Contents

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[Create a new workspace](#)  
[Create workspace pages](#)  
[Rename workspace pages](#)  
[Adding content to digital media player](#)  
[Updating your Show Control Server](#)  
[Configuring your Monitor Wall](#)

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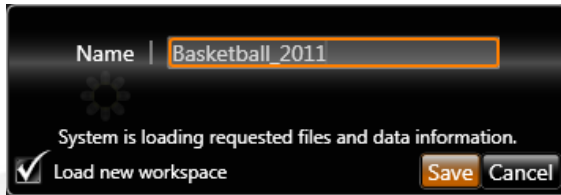
### Create a new workspace

The first part of getting started in Display Studio is creating your workspace. As we discussed in [Navigating the Show Control software](#), your Display Studio workspace is what organizes all of your containers and buttons for your digital display show. You can create as many workspaces as you need, for whatever purposes you need them for, such as different workspaces for different types of events; different workspaces for different operators; different workspaces for different facilities; workspaces based on combinations of these scenarios; or workspaces for any other possible type of scenario.

1. From within Display Studio, click the **Display Studio Hub** to open the Display Studio Main Menu.
2. On the menu, select **New** and click **Workspace**. The **Workspace Name** dialog box appears.



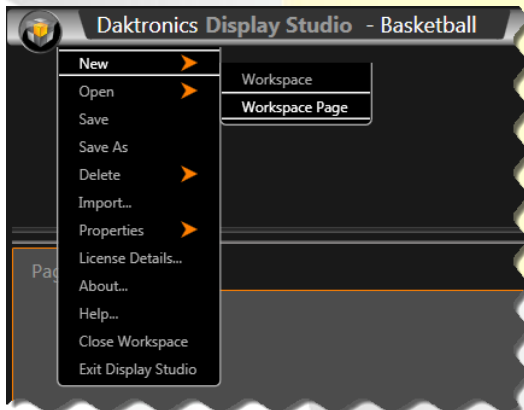
3. Enter a name for your new workspace in the **Name** textbox.
4. If you would like for the new workspace to automatically open after it is created, ensure there is a checkmark in the **Load new workspace** checkbox.
5. Click **Save**. If you chose to **Load new workspace**, your new workspace will open automatically.



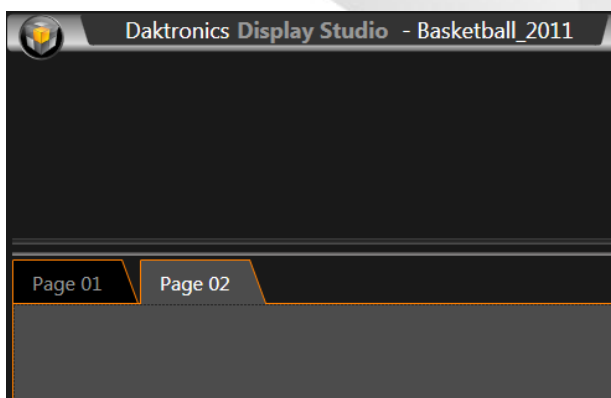
## Create workspace pages

After creating your new workspace, we recommend first creating your desired workspace pages according to how you would like to divide up your workspace, such as having a workspace page for each group of displays you intend to control at the same time.

1. From within Display Studio, click the **Display Studio Hub** to open the Display Studio Main Menu.
2. On the menu, select **New** and click **Workspace Page**.



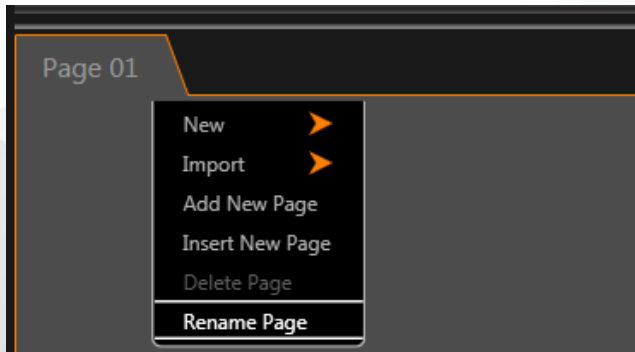
3. The new page is added to your workspace. For help with renaming your workspace pages, proceed to the next section.



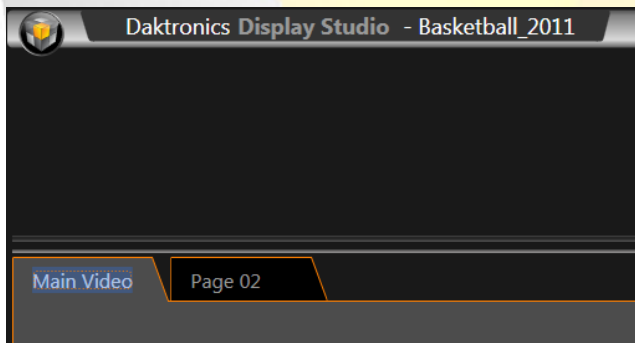
## Rename workspace pages

To assist with keeping your workspace organized so that you can keep straight which containers and buttons belong on each page, Display Studio allows you to rename your workspace pages. This provides another layer of categorization to help make operating your signs as efficient as possible.

1. Right-click on the workspace page you wish to rename to open its context menu.
2. Select **Rename Page**. The page name becomes editable.



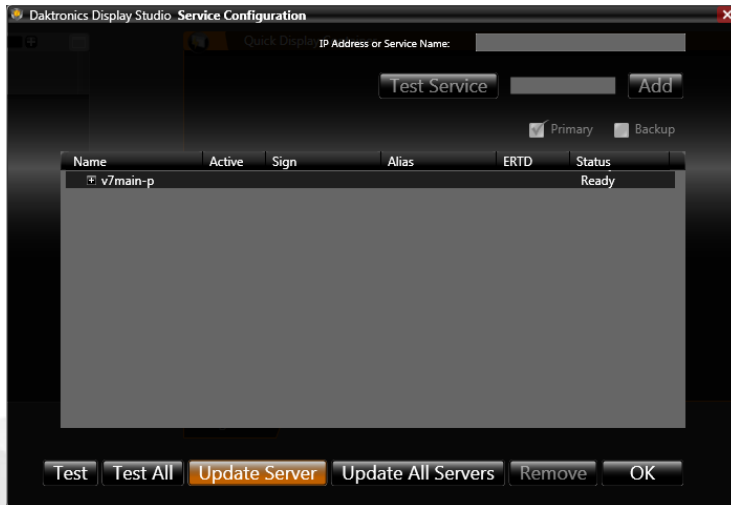
3. Enter the desired new name of the workspace page, and press **[Enter]**.



## 7 Updating your Show Control Server

The **Update Server** tool in the Service Configuration window provides a quick way to update Display Studio with any changes to your DMP-7000 configuration. Anytime changes are made to your sign configuration in the Venus 7000 Shell, complete the below steps to update your Show Control Server.

1. From within Display Studio, click the **Display Studio Hub** to open the Display Studio Main Menu.
2. On the menu, select **Properties** and click **Service Configuration**.
3. Select the server you wish to update, and click **Update Server**.



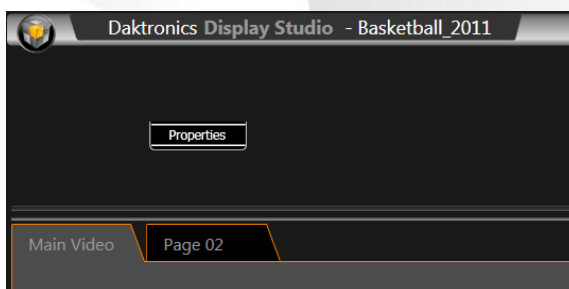
## 7 8 Configuring your Monitor Wall


The last step of getting ready to put together your workspace in Display Studio is configuring your monitor wall. The monitor wall is a very useful tool, as it allows you to see what is playing on any of your DMP-7000 or DMP-8000 displays without actually needing to see the display. This is particularly handy for venues where the Show Control user station is located in an area without a direct line of sight to all displays.



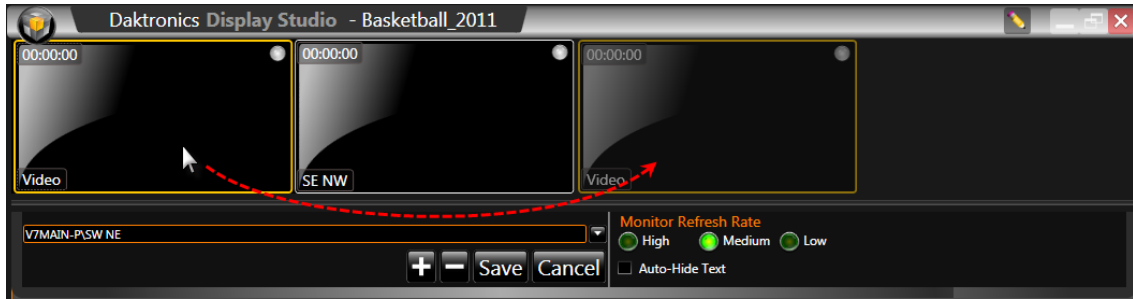
**Note:** Keep in mind that the Monitor Wall does not show display content in real time – it merely shows a regularly updating snapshot of the display’s content during a particular moment in time. It is recommended that the Monitor Wall’s **Monitor Refresh Rate** be set to **Low** to ensure optimum system performance.

1. Right-click in the monitor wall (the black bar appearing at the top of the Display Studio window) and select **Properties** to open the **Monitor Wall Properties** pane.

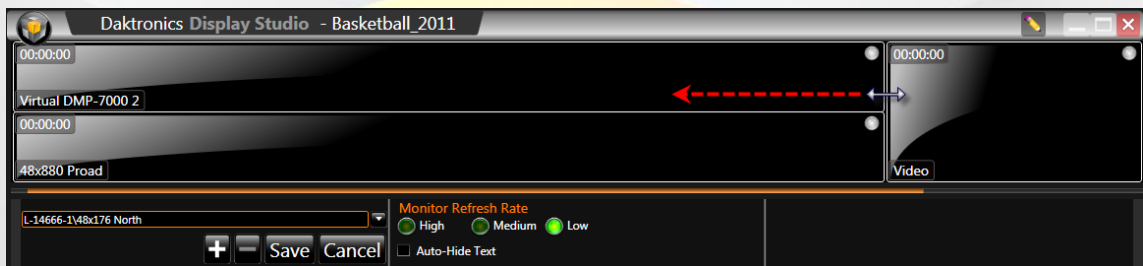


2. **To add a display to the monitor wall**, select the display from the drop-down list and click the  button. The display will appear on the monitor wall.
3. Display Studio allows you to add multiple displays to the monitor wall. To do this, simply repeat step 2 for each display that you wish to add.
4. **The monitor wall can be organized** by reordering, resizing, and stacking the displays. These tasks can be completed as follows:

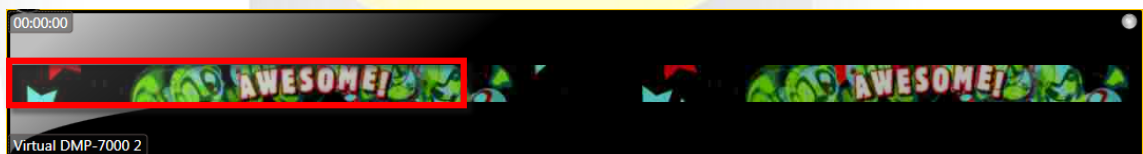
- a. Displays can be **reordered** by simply clicking and dragging them to their desired new location.



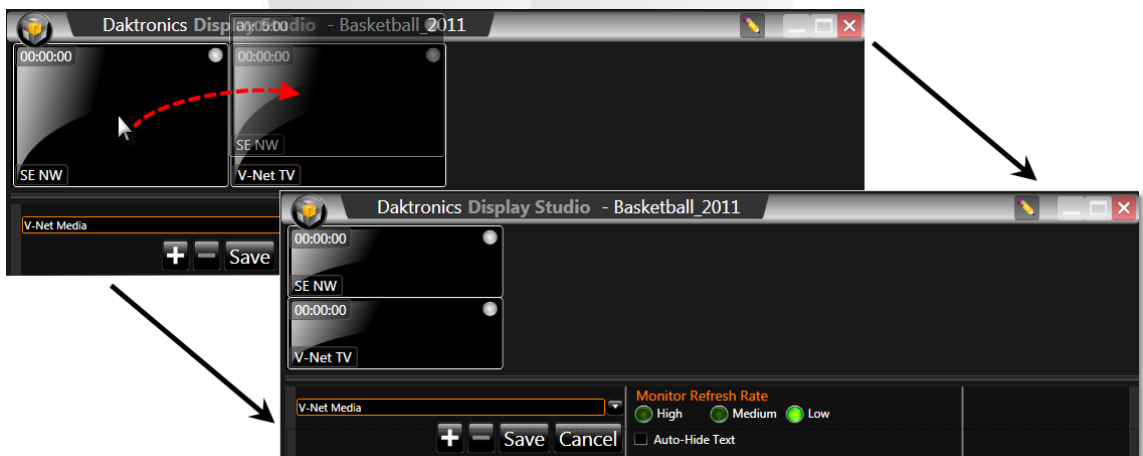
- b. Displays can be **resized** by clicking a display's border and using the resizing cursor to drag it to the desired size.




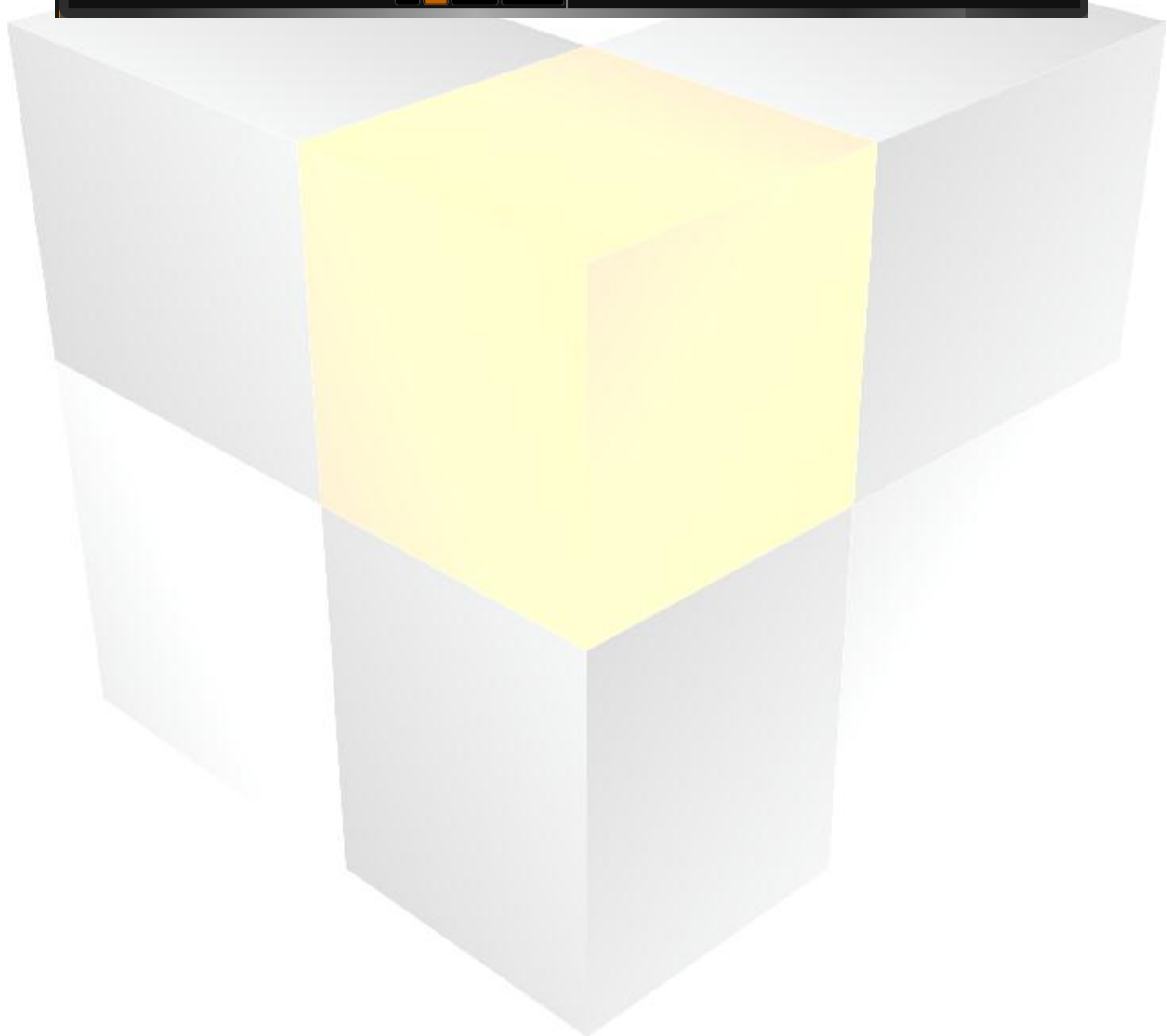
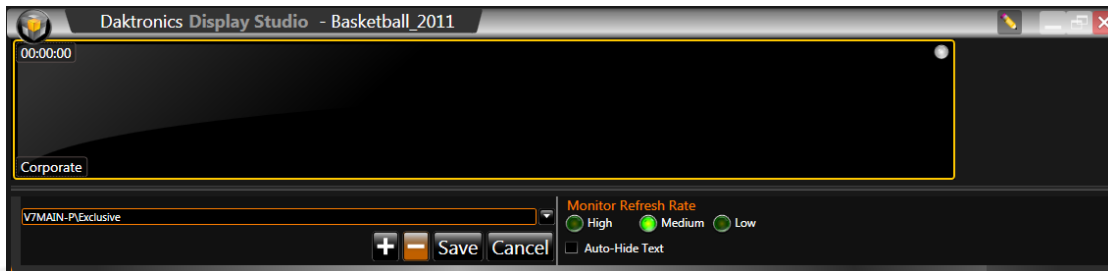
- c. The **zoom level** of the displays can be adjusted to give you a more complete view of the content being played. In the below image, the portion of the content in the red box is all that would be visible at 100% zoom level (the default setting). By reducing the zoom level, more of the content can be seen. Adjust the zoom level by selecting a display and using the **Zoom control** to change the view as desired.



- d. Displays can be **stacked** by clicking a display and dragging it over top of the display you wish to stack it with.



5. **To remove a display from the monitor wall**, select the display on the monitor wall and click the  button. The display will be removed from the monitor wall and returned to the drop-down list.



# Introduction to Containers

After your workspace and workspace pages, containers and container pages are the next levels we come to on the metaphorical pyramid of storage offered by Display Studio. There are two types of containers supported – Quick Display and Scripting containers – and depending on what type of digital media player you wish to control; one or both of these may be available for your display. Regardless of which type of container you are using, however, there are a few pointers that you should know about using them.

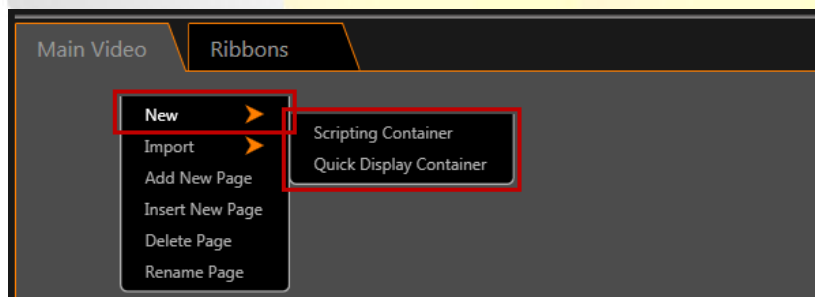
## Section Contents

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- Create a container
  - Create container pages
  - Rename containers and container pages
  - Setting button sizes
- 

### Create a container

1. Right-click within the workspace page where you want to create a container to open its context menu.
2. On the context menu, select **New**, and then click **Scripting Container** or **Quick Display Container**.



3. After selecting the container type, you will be taken to the appropriate container creation window.



4. For more information on working with the specific container types, refer to [Quick Display containers and buttons](#) or [Scripting containers and buttons](#).

## Create container pages

Display Studio was designed to provide control system operators with access to as much control functionality as they *need* for their displays, while at the same time permitting them to set up their control interface to only require looking at what they *want* to look at at any given time. Container pages allow you to divide up the buttons you want to create into separate groups, preventing the workspace from getting too cluttered.

**Example:** Suppose you have a group of buttons that you only use during pre-game, a separate group of buttons that you only use during the game, and a separate group of buttons that you only use after the game. You might not want to put all of these buttons together, because it would just clutter up your workspace and give you unneeded buttons to sort through while your show is in progress. If you put the buttons on three different container pages, however, you can still only use the space of one container, but only have to look at the page of buttons you're using at a given moment.

1. Right-click the container to which you want to add a page to open its context menu.
2. Select **New Page**.



3. The new page will be added, accessible via a tab on the bottom of the container.

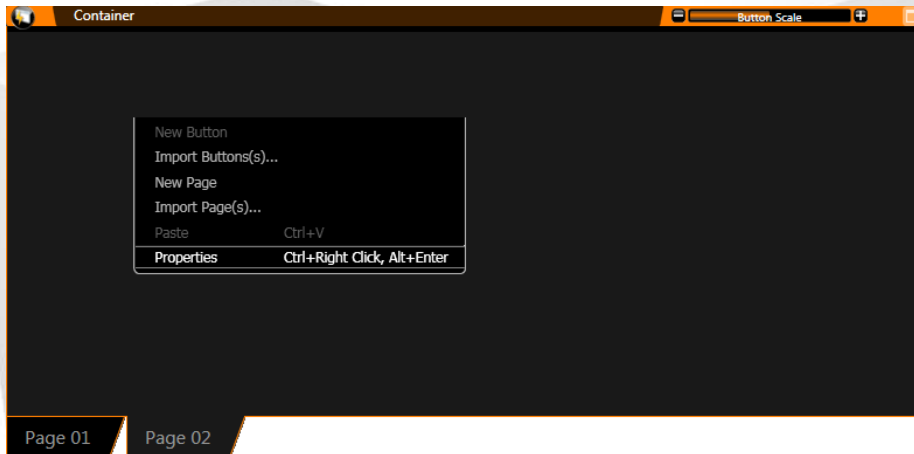


## Rename containers and container pages

To assist with keeping your workspace organized and easy to use, Display Studio permits the renaming of both containers and container pages. Complete the steps in this section.

### Renaming containers

1. Right-click the container you wish to rename to open its context menu.
2. Select **Properties** to open the container's **Properties** page.



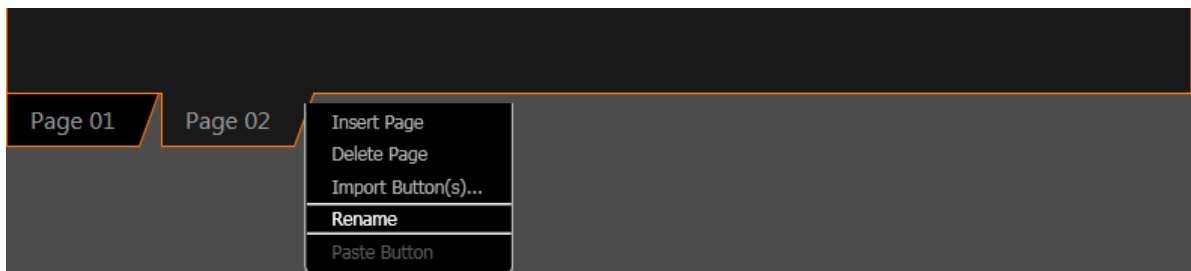
3. Enter the desired name for the container in the **Container Name** textbox.



4. Click **Save** to save the new name, or **Cancel** to discard changes.

### Renaming container pages

1. Right-click the page tab of the container page you wish to rename to open its context menu.
2. Select **Rename**. The container page name becomes editable.



3. Enter the desired new name of the container page, and press **[Enter]**.

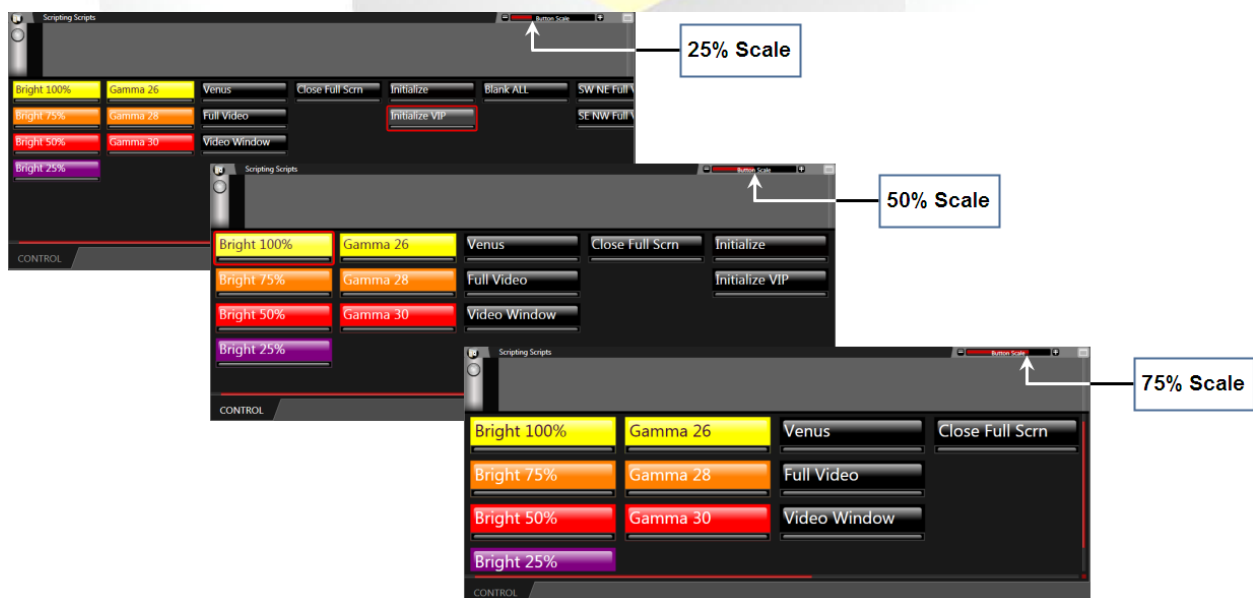


## Setting button sizes

As you create buttons, you may decide that you would like to make the buttons larger or smaller. Display Studio allows buttons within a container to be scaled larger or smaller so that operators can achieve the exact look they want.

To make buttons within a container larger or smaller, simply use the **Button Scale** tool located at the top of the container. Click the **+** button to make the buttons larger (and easier to read) or the **-** button to make the buttons smaller (and allow more buttons to fit in a smaller area of workspace).

The below graphic illustrates the same scripting container at three different button size settings. Note the differences in the size of the buttons, and the number of buttons that can be visible in the same size of container.



# Quick Display Containers and Buttons

If you're looking for clip server-type control over your signs, look no further. Quick display containers and buttons are designed to give you quick and easy, single-click access to your library of media files for a sign. Just click a clip's button and it will be (depending on your settings) immediately played on the sign, or immediately added to the sign's queue.

## Section Contents

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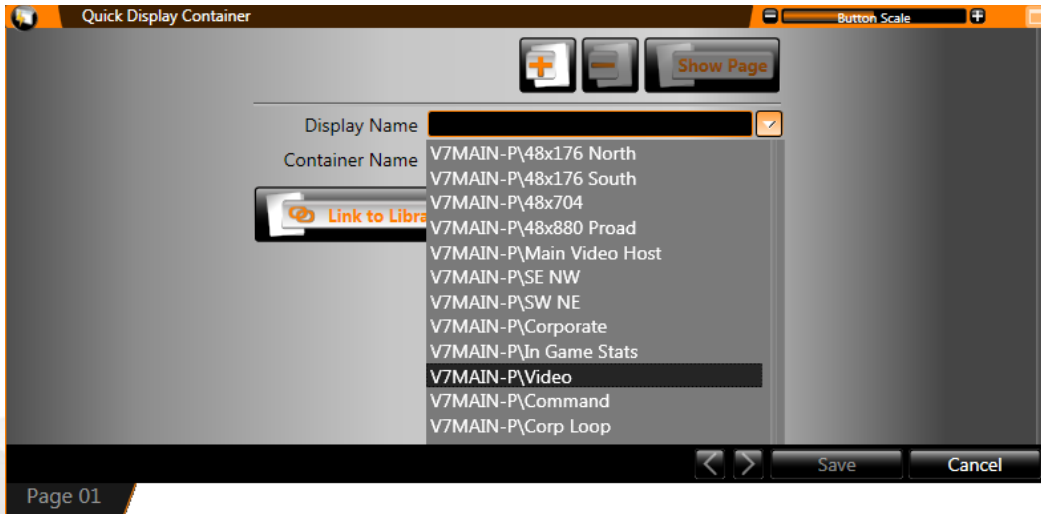
- [Create a quick display container](#)
  - [Manage quick display container properties](#)
  - [Create quick display buttons](#)
  - [Manage quick display buttons](#)
  - [Using the quick display queue](#)
- 

## Create a quick display container

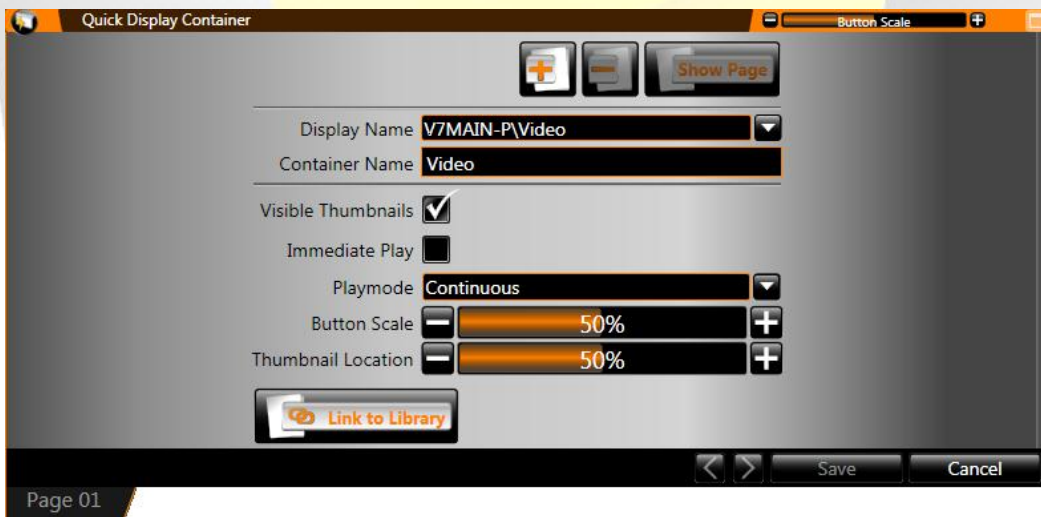
1. Right-click from within the workspace page where you wish to create a container to open its context menu.
2. Select **New Quick Display Container**. The **Quick Display Container Properties** screen appears.



3. In the **Quick Display Container Properties** screen, select the display with which you want the container to be associated from the drop-down list.



4. After you have selected the display, the display name will be inserted into the **Container Name** text box. If you wish to change the name of the container, enter the new name into the text box.



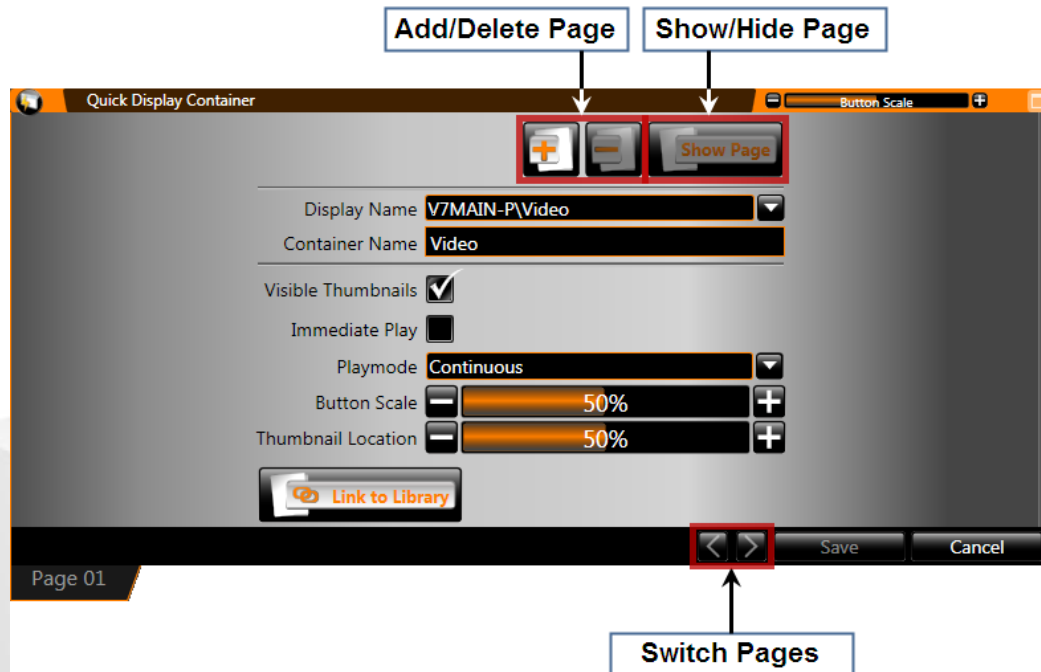
5. Click **Save** to save the container and close the **Quick Display Properties**, or proceed to **Manage Quick Display Container Properties**.

## Manage quick display container properties

Various options are available to customize the way a quick display container stores quick display buttons and to configure the default behavior of quick display buttons. Use the steps below to assist you in setting up your quick display container how you would like.

1. From within the **Quick Display Container Properties** screen, manage the container using the below options.

**Note:** If you're not already in the quick display container properties screen, right-click from within the quick display container to open its context menu, and then click **Properties**.



**Add/Delete Page:** Click the appropriate button to add or delete a container page

**Show/Hide Page:** Click to designate whether a container page should be visible or hidden

**Display Name:** Name of the display associated with the container

**Container Name:** Name of the container. By default, the display name will be inserted as the container name.

**Visible Thumbnails:** Checking this box makes the thumbnails for each button visible in the container.

**Immediate Play Checkbox:** Checking this box makes buttons in this container, by default, immediately play on the display when clicked, instead of being added to the end of the queue.

**Playmode:** Select the default playmode for buttons in this container – **Continuous**, **Number of Times**, **Selected Frames**, or **Single Step**.

**Button Scale:** Click the appropriate button to increase or decrease the default size of the buttons within the container.

**Thumbnail Location:** Click the appropriate button to set the default location within a media file which will determine the thumbnail preview of the button.

**Link To Library:** Click to link the container to a display library. Selecting this option will automatically create **Quick Display Buttons** for each media file in that library.

**Switch Pages:** Click to switch between different container pages. Different pages may also be accessed by clicking the page's **Container Page Tab**.



**Tip:** Note that the selections you make for the above options will only be applied to the active container *page*. Different container pages can be set up differently.

2. When finished, click **Save** to close the scripting container properties, or click **Cancel**.

## Create quick display buttons

To create quick display buttons, there are two methods available: automatic and manual. The differences between these methods are as follows:

### Automatic

- Quick display buttons are created by linking a container page to a display's media file library, which automatically creates a button for each media file in that library.
- Buttons are created according to the default properties of the container, however after a button is added, its individual properties can be managed as needed.
- As media files are subsequently added to or removed from the library, the quick display container buttons will be updated accordingly.
- Buttons cannot be manually added to a linked container.

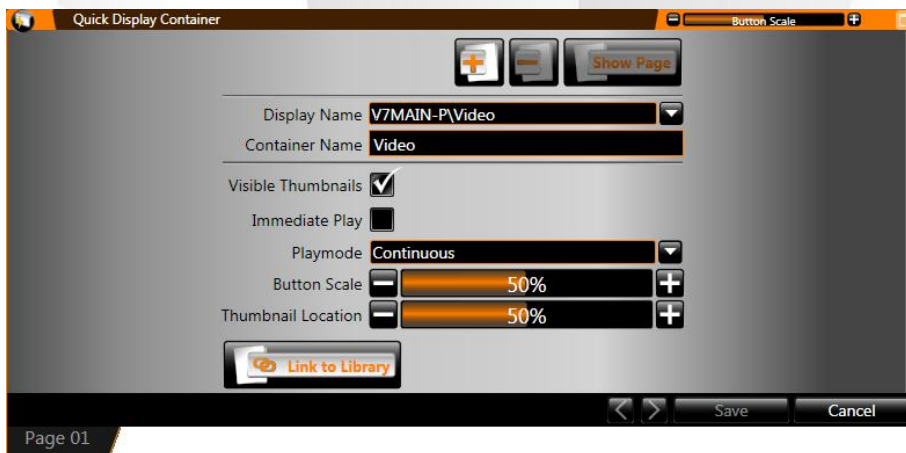
### Manual

- The user creates quick display buttons individually.
- Buttons can be created that play one or more media files from one or more of a display's libraries.
- The user gets complete control over what and how buttons are created.

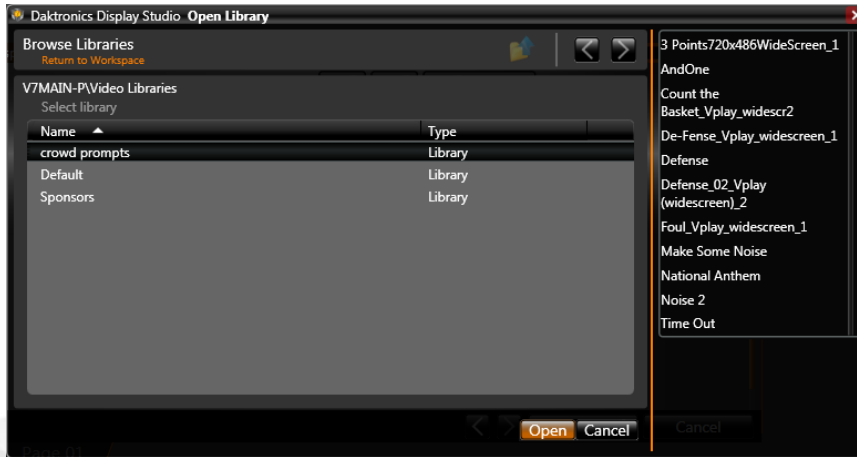
### Automatic method: linking a container to a library

A quick display container can only be linked to a display library when the container is empty. The best time to do this is when creating a new quick display container.

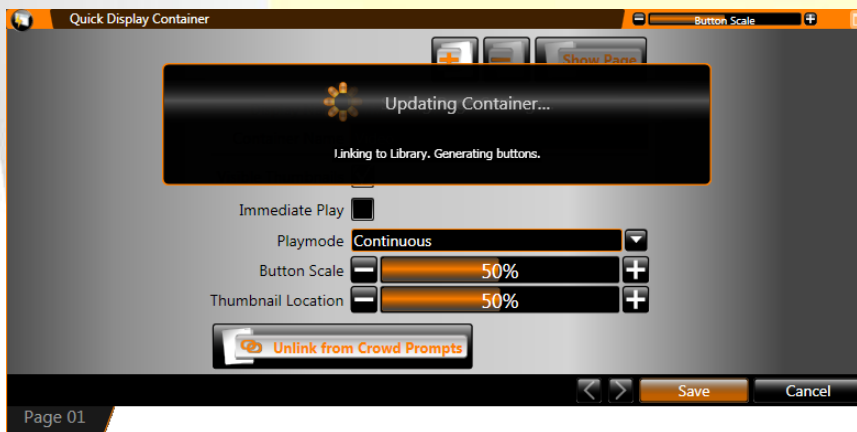
1. Begin at the **Quick Display Container Properties**. To access the **Quick Display Container Properties**, either:
  - a. **Create a quick display container**, or
  - b. Right-click from within a quick display container, and click **Properties**.
2. In the **Quick Display Container Properties** screen, click the **Link To Library** button to open the **Library Browser** window.



3. In the **Library Browser** window, select the name of the library you wish to link to the container and then click **Open**. The **Link To Library** button will now read **Unlink From Library** and the library name will appear next to the button.



4. Click **Save**. The **Quick Display Container Properties** screen will close and Display Studio will automatically create buttons for all files in the library.



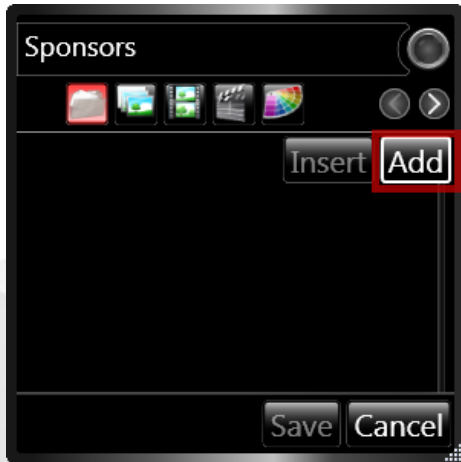
### Manual method: creating quick display buttons individually

Note that quick display buttons cannot be created individually if the quick display container is linked to a display library.

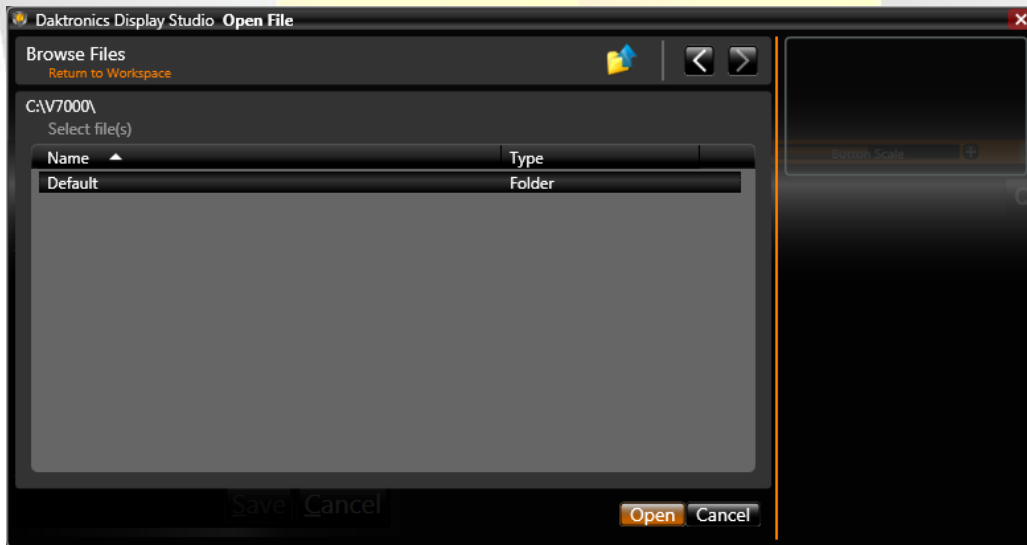
1. Right-click from within the quick display container and select **New Button** to open the **Button Creation Window**.



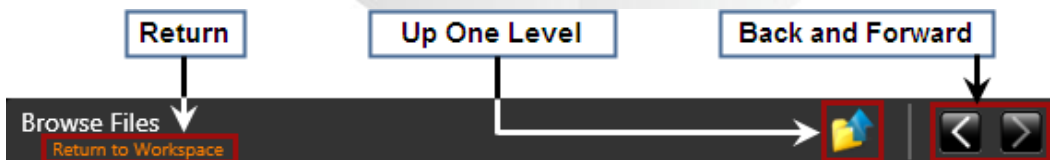
2. In the **Button Creation Window**, type the name of the quick display button in the text box.
3. **Select File(s)**. Click **Add** to open the **File Browser** window. The file browser window will assist you in selecting the file(s) that the button will activate.



4. Highlight the desired folder from the list of folders in the presentation pane. Click **Open**.



5. When using the **File Browser**, the navigation tools can assist with locating the correct file.



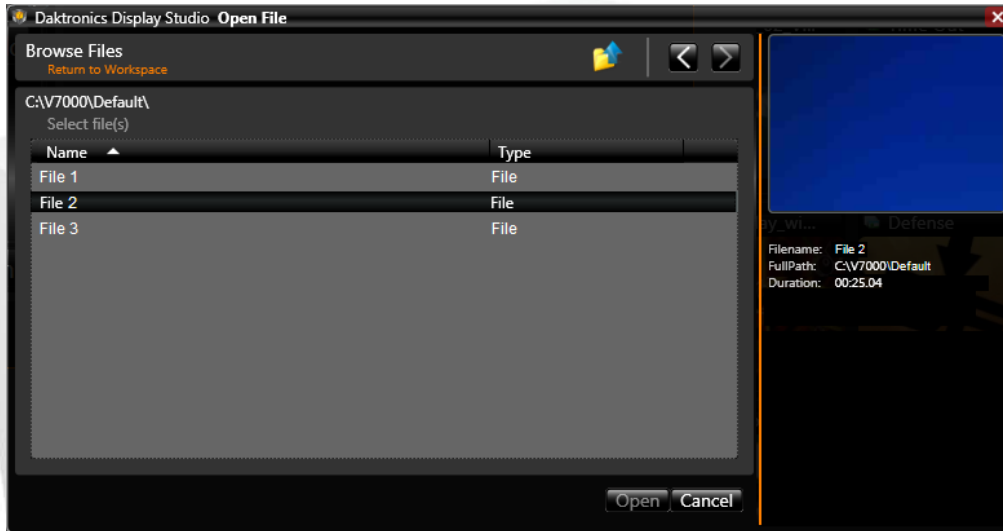
**Return:** Click to close the File Browser and return to the Workspace.

**Up One Level:** Click to move up one level in the selected sign's (or signs') libraries' folder hierarchy. Example: If the File Browser is in the Crowd Prompts\Touchdown folder (where Crowd Prompts is the selected library), click **Up One Level** to return to the Crowd Prompts root folder.

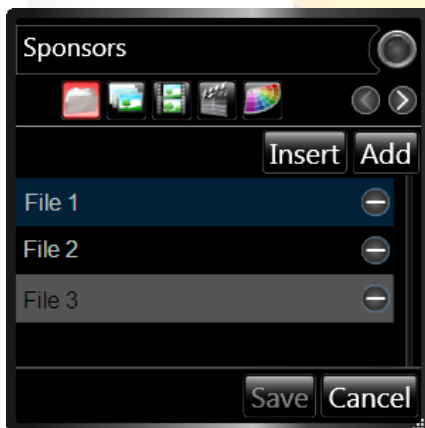
**Back and Forward:** Click the arrow buttons to move between folders to which you have navigated in the order you have navigated to them.

6. Select the desired file(s) you wish to associate with the button. Multiple files may be selected by holding down **CTRL** while clicking the files.




**Note:** Your sign's digital media player determines the types of files which may be played on your sign. Please consult your player's documentation for a list of such file types.



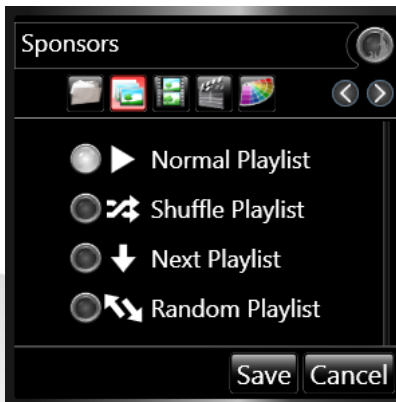
7. After the desired file(s) have been selected, click **Open** to return to the **Button Creation Window**. The selected file(s) will appear listed.



**Tip:** To manage the order of your playlist, files can be clicked and dragged to their desired positions, or use the **Insert** button to insert a file above the selected file.

8. Proceed to the next step by clicking the  below the button name. The   buttons to the right may also be used to move between steps.
9. **Set Playlist Type.** If you selected multiple files in the previous step, the next step is to designate what type of playlist the button will activate. This will determine the manner in which the media files in a

playlist will be added to the Display Queue. Choose the playlist type by clicking the radio button next to the appropriate choice.



**Normal Playlist:** Clicking the button will add all media files in the playlist to the Queue in the order they appear on the playlist.

*Common Use:* For player introductions, load the media files containing the players' photos into a Normal Playlist, and it will play each file in order.

**Shuffle Playlist:** Clicking the button will add all media files in the playlist to the Queue in a shuffled order.

*Common Use:* When playing a set of ads for multiple advertisers, place the ads in a Shuffle Playlist so that the same advertiser does not get played first, or last, every time.



**Next Playlist:** Clicking the button will add one media file from the playlist at a time to the Queue. Clicking the button again will add the next file from the playlist to the Queue.

*Common Use:* When there are multiple media files for a single sponsor, place them all into a Next Playlist. Each time the button is clicked, it will cycle through the list one file at a time so that the same ad does not play consecutively.

**Random Playlist:** Clicking the button will add one random media file from the playlist at a time to the Queue. **Note:** *Although random, this playlist will ensure that all media files are played an equal number of times and none will be played twice in a row.*

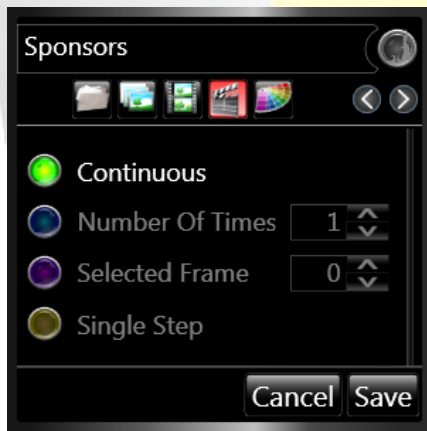
*Common Use:* When a contest is held at an event in which the media file determines the winner(s) of the contest (i.e. a video of mascots in a race), place all of the different possible outcomes in a Random Playlist. Each time the contest is played, a random file is played – ensuring a random outcome.

## 7 15

10. **Select Thumbnail.** Using the  and  buttons or by clicking and dragging the selection bar, locate an appropriate image from the media file to serve as the thumbnail preview for the button. **Note:** If multiple files were selected for the button, the first file will provide the thumbnail preview.



11. **Playmode Selection.** Click the radio button next to the playmode you wish to select for the button. The selected playmode will govern how the file(s) associated with the button will be played.



**Continuous:** Plays the file on the display until the operator stops the file, advances the Queue, or starts another file.



**Number Of Times:** Plays the file on the display the specified number of times. After the file plays the specified number of times, the display blanks, plays the default file, or plays the next file in the Queue.

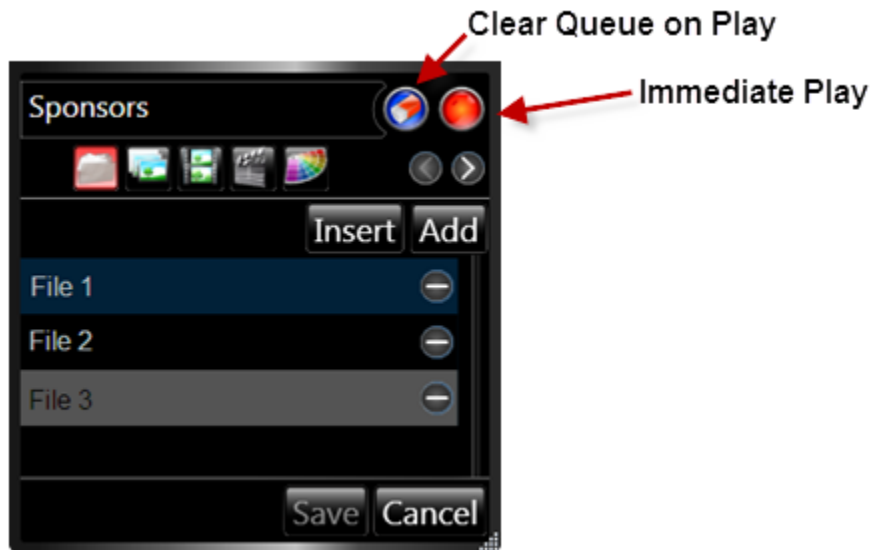
**7 Selected Frame:** Plays the selected frame number in the file.



**7 Single Step:** Plays the file frame-by-frame in sequential order with the user controlling frame advancement. For example, the user could play the words of the National Anthem frame by frame as the audience sings.

12. **Select Color.** Color-coding is an effective way to categorize buttons within a container. Color Options allow you to assign color schemes to buttons, which can be used as another way to group similar buttons and distinguish different buttons.



13. To save a category, type the name of the category in the **Edit Category** text box, and click the  button to add it to the list. Categories which have already been created can be accessed from the Category drop-down menu. Click the  button to open the drop-down menu.





14. **Immediate Play.** If you want the file(s) associated with the button to play immediately (replacing the currently playing file) when the button is pressed, enable **Immediate Play** by clicking the  next to the button name text box. When enabled, the button will change to .
- Loop On** – If the currently playing playlist has **Loop On** feature activated, clicking a Quick Display button with **Immediate Play** activated will result:
    - The currently playing playlist file will be replaced by the Quick Display file, thus adding the Quick Display file to the current playlist.
    - The replaced playlist file will be added to the end of the playlist.
  - Loop Off** – If the currently playing playlist has **Loop Off** feature activated, clicking a Quick Display button with **Immediate Play** activated will result:
    - The currently playing playlist file will be (1) replaced by the Quick Display file and (2) removed from the current playlist.
    - When the Quick Display file completes play it will be removed. \*

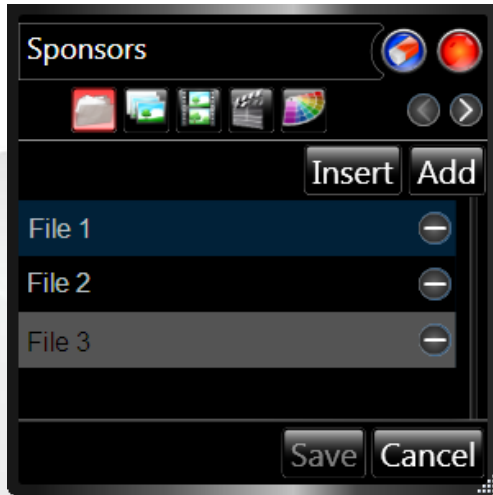
**Note:** \*Removal (in the scenario above) assumes that the quick button was configured to play only one time.



- If configured to play multiple times or continuously, the Quick Display file will remain in the playlist until the designated number of play times has been reached and then removed.
- If configured to play continuously, the quick display button file will continue playing as part of the playlist until the playlist itself is removed.

**15 8**

15. **Clear Queue on Play – Clear Queue Combined with Immediate Play.** If, when the button is executed, you want the display's playlist queue to be cleared and the first file associated with the quick display button to play immediately, enable **Clear Queue on Play** by clicking the  next to the button name text box. When enabled, the button will change to .

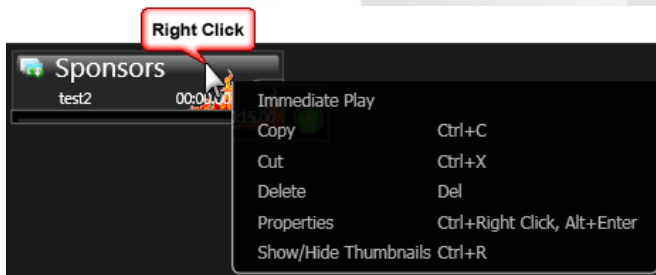


16. **Normal** – Without **Immediate Play** or **Clear Queue on Play** activated, clicking a quick display button will add its top file into a playlist queue. The inserted quick display file will begin playing right after the currently playing file finished. The inserted quick display file will remain in the playlist queue until it has played its designated number of times and then be removed.

17. When finished, click **Save** to save the button to the quick display container, or click **Cancel** to close the button creation window and discard any changes which were made.

## Manage quick display buttons

A number of options are available for managing quick display buttons which have been created. To manage a quick display button, right-click the button you wish to manage to open its context menu.



**Immediate Play:** Click to immediately play the file(s) associated with the button, even if Immediate Play has not been enabled for the button. Selecting this option will add the file(s) to the top of the queue and they will begin playing.

**Copy:** Click to create a copy of the selected button which may be **pasted** into another quick display container.

**Cut:** Click to remove the selected button from its container so that it may be **pasted** into a different quick display container.



**Note:** Quick Display buttons can also be clicked and dragged to another quick display container. To **move** a button to another container, simply click and drag it to the desired new location. To **copy** a button to another container, while pressing **[Ctrl]**, click and drag the button to the desired location.

A button can be copied or moved to a new container in one step by clicking and dragging the button to an empty area of your workspace page.

**Delete:** Click to delete the selected button.

**Properties:** Click to open the Button Creation Window to edit the button.

**Note:** Multiple buttons' Button Creation Windows may be opened at one time to allow simultaneous editing.

**Show / Hide Thumbnails:** Click to toggle showing and hiding the button's thumbnail preview.

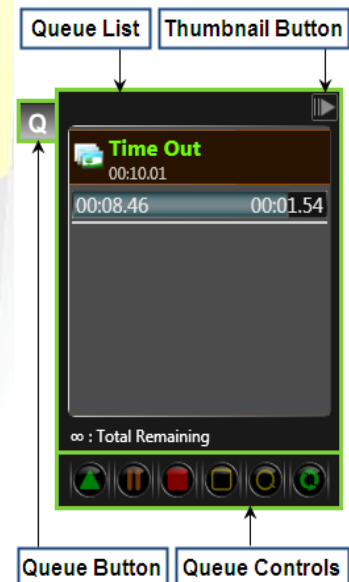
## Using the Display Queue

The Display Queue, which appears on the right side of a Quick Display Container, serves a role similar to that of the queue for a media player such as the Windows Media Player® or Apple QuickTime® media players. The main components of the Display Queue include the Queue List, Thumbnail Button, and the Queue Controls.

**Queue List:** Contains the list of any content files which have been queued to play on the display, in the order they are to appear.

**Thumbnail Button:** Click this button to toggle showing and hiding thumbnail images in the Queue List.

**Queue Button:** Click this button to toggle showing and hiding the Display Queue.



### Queue Controls

The Queue Controls provide quick access to the most commonly-used functions for managing the Display Queue. Simply click the buttons to perform the below operations.



**Next** Plays the next item in the queue



**Pause** Pauses playback of the queue

7



**Stop**

Stops playback of the queue and plays the default file, if configured. If not configured, display blanks. Queue is cleared.



**Blank Sign**

Stops playback of the queue and blanks the display. Queue is cleared.



**Clear Queue**

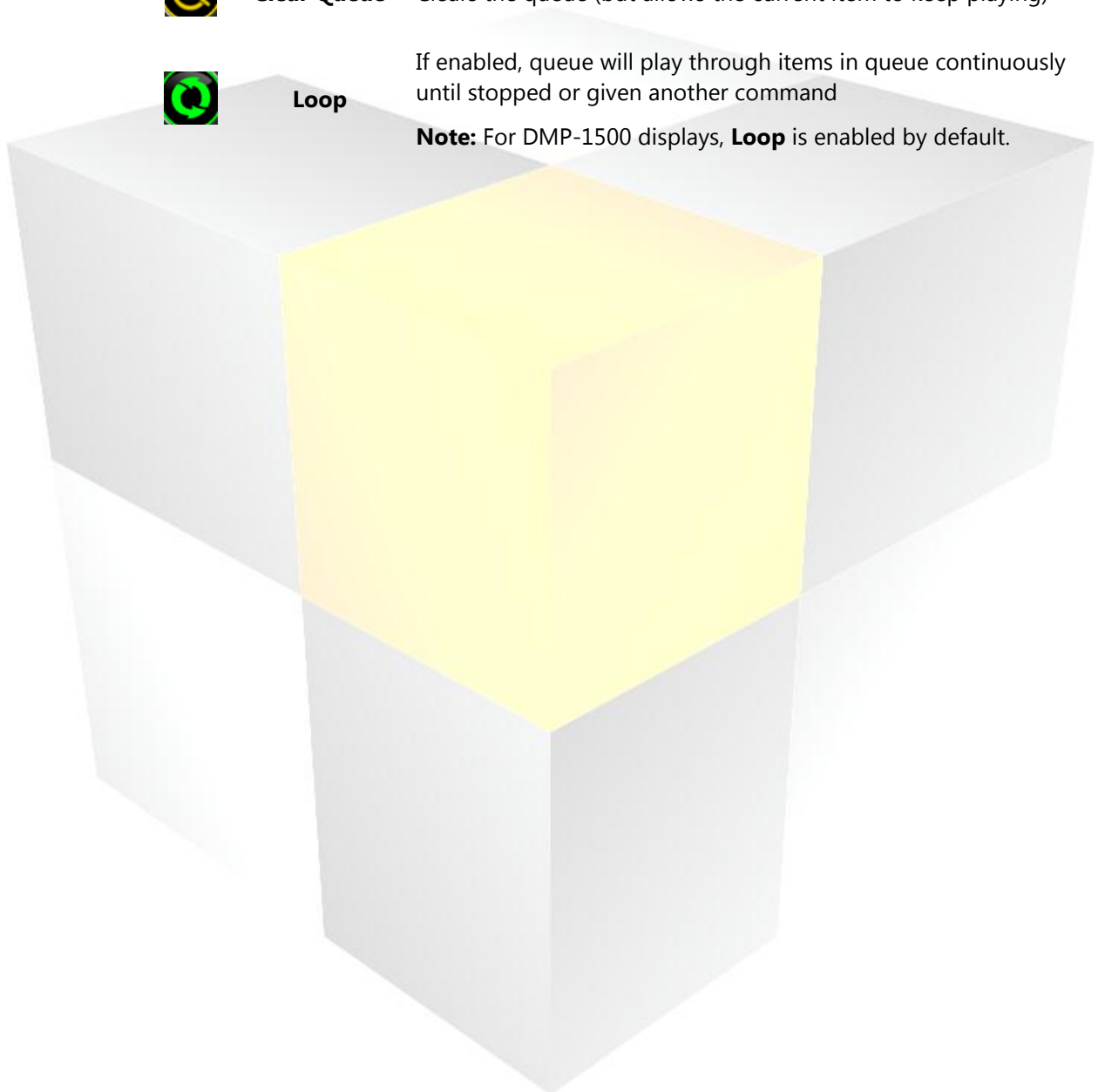
Clears the queue (but allows the current item to keep playing)



**Loop**

If enabled, queue will play through items in queue continuously until stopped or given another command

**Note:** For DMP-1500 displays, **Loop** is enabled by default.



## 78 Scripting Containers and Buttons

If you're looking for the tools and flexibility to exercise greater control over your displays, scripting containers are for you. Scripting containers and buttons allow you to control multiple displays at the same time, send configuration commands to displays, incorporate dynamic data into your content, and much much more. And just like how all Display Studio Hubs work, each of these actions can be performed with a click of the button.

### Section Contents

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[Create a scripting container](#)  
[Manage scripting container properties](#)  
[Create scripting buttons](#)  
[Manage scripting buttons](#)  
[Custom scripting](#)

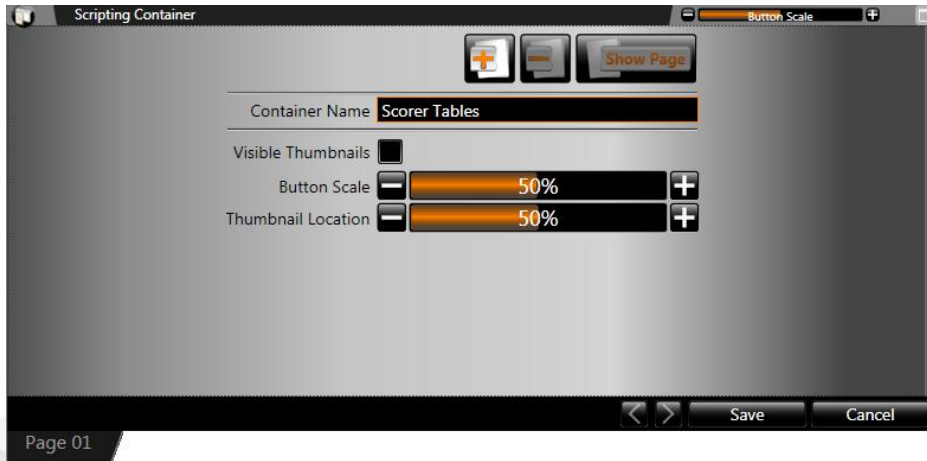
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### Create a scripting container

1. Right-click from within the workspace page where you wish to create a container to open its context menu.
2. Select **New > Scripting Container**. The **Scripting Container Properties** screen appears.



3. In the **Scripting Container Properties** screen, type the name of the scripting container in the text box.



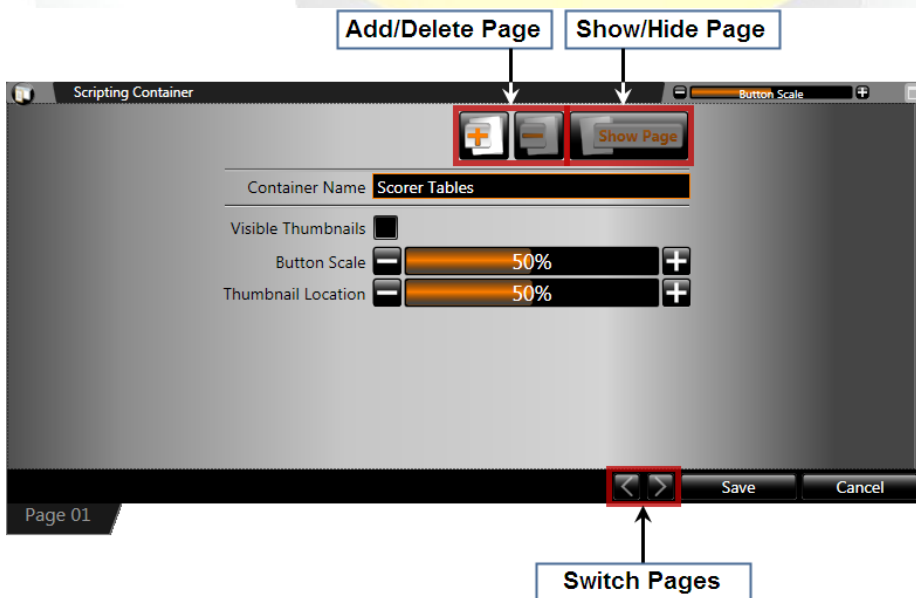
4. Click **Save** to save the container and close the **Scripting Container Properties**. The scripting container will appear on the workspace page.

## Manage scripting container properties

Various options are available to customize the way a scripting container stores scripting buttons and to configure the default behavior of scripting buttons. Use the steps below to assist you in setting up your scripting container how you would like.

1. From within the **Scripting Container Properties** screen, manage the container using the below options.

**Note:** If you're not already in the scripting container properties screen, right-click from within the scripting container to open its context menu, and then click **Properties**.



**Add/Delete Page:** Click the appropriate button to add or delete a container page.

**Show/Hide Page:** Click to open the **Show/Hide Page** drop-down menu. Click to place a checkmark or remove a checkmark in front of container page(s) you wish to show or hide.

**Container Name:** The name of the scripting container may be modified by editing the text in the text box.

**Visible Thumbnails:** When enabled, buttons will be created, by default, with their thumbnail images visible

**Button Scale:** Click the appropriate button to increase or decrease the size of the buttons within the container.

**Thumbnail Location:** Click the appropriate button to select the default location for the thumbnail images of new buttons

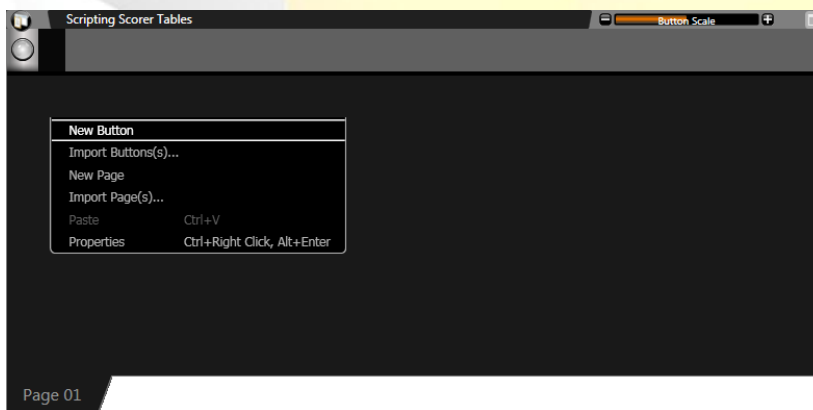
**Switch Pages:** Click to switch between different container pages. Different pages may also be accessed by clicking the page's **Container Page Tab**.

2. When finished, click **Save** to close the Scripting Container Properties, or click **Cancel**.

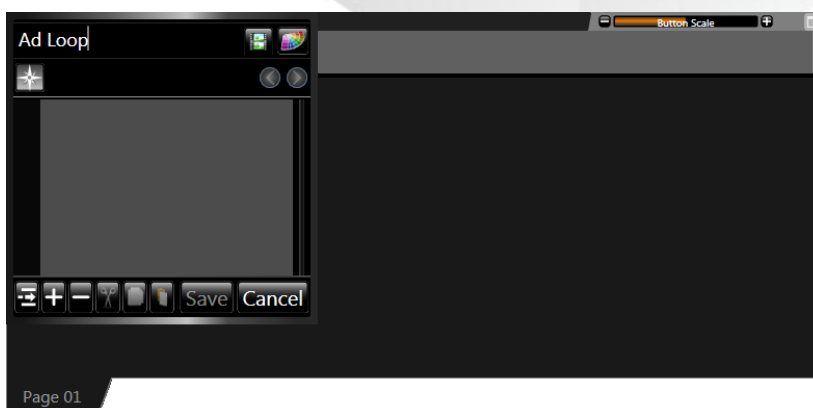
## Create scripting buttons



Scripting buttons provide you with the ability to execute a scripting command, or a list of commands, with a single click of the mouse. These scripting commands can complete many different types of tasks – from running display content to performing display tests to managing display settings. Most significantly, scripting commands allow the user to control multiple displays at the same time.

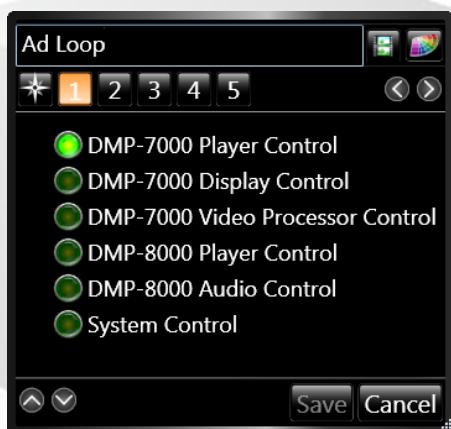
1. Right-click from within the scripting container and select **New Button** to open the **Button Creation Window**.



2. In the **Button Creation Window**, type the name of the scripting button in the text box.



- Click the **Add Line** button  to add a command to the button.
- Select Script Type.** The first step of creating a command, identified by the  below the button name, is selecting the type of script command. The following script types are available.



**7**

**DMP-7000 Player Control:** These types of scripts can affect what is shown on a DMP-7000 display and how media items are shown on a display.

**7**

**DMP-7000 Display Control:** These types of scripts affect the settings and other configuration options of a display.

**7**

**Video Processor Control:** These types of scripts control the playback of media items from input sources connected via a Video Processor.

**8**

**DMP-8000 Player Control:** These types of scripts can affect what is shown on a DMP-8000 display and how media items are shown on a display.

**8**

**DMP-8000 Audio Control:** These types of scripts affect audio playback from a DMP-8000.



**7 8**

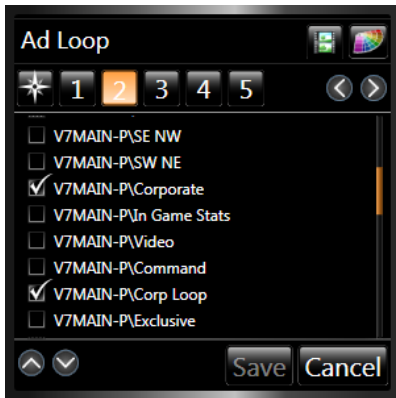
**System Control:** These types of scripts control the way Display Studio executes script commands.



**Note:** Creating a Scripting Button requires the completion of up to six steps. The steps which are required are determined by the type of button being created. For illustrative purposes, the following steps will demonstrate how to create a Play Script which would play a file on one or more DMP-7000 signs.

For information on how to create other commonly used Scripting Buttons, refer to [Common scripting buttons](#).

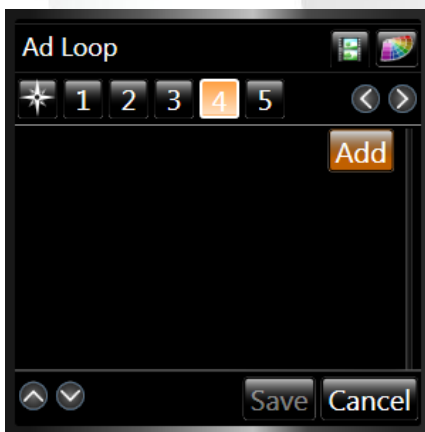
- Select the **Player Control** script type by clicking its corresponding radio button.
- Proceed to the next step by clicking the  below the button name. The  buttons to the right may also be used to move between steps.
- Select Sign(s).** Place a checkmark in the checkbox of the sign(s) you wish to control with this script. To control multiple signs with the same script command, place a checkmark in the checkbox of each desired sign. Proceed to the next step.



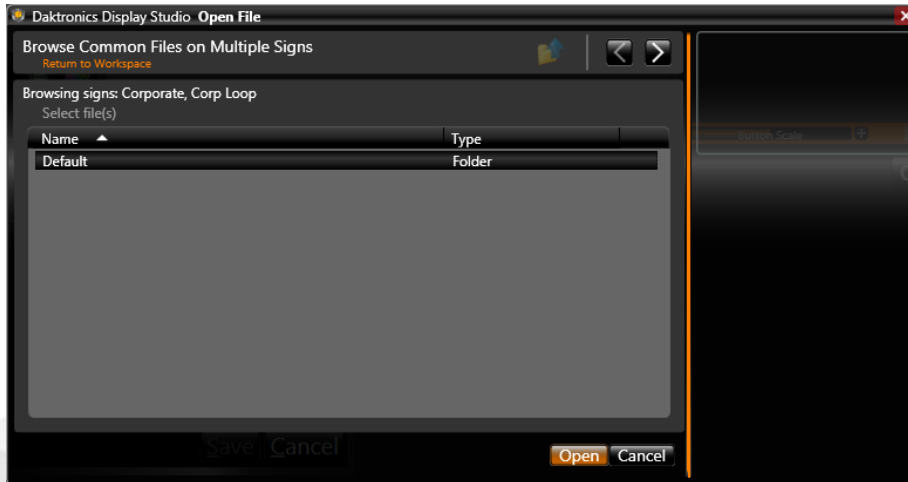
8. **Select Player Script.** Click the radio button next to the script you wish to create. Use the scroll bar on the right to view all available choices. Continuing with this walkthrough, select the **Play** radio button.



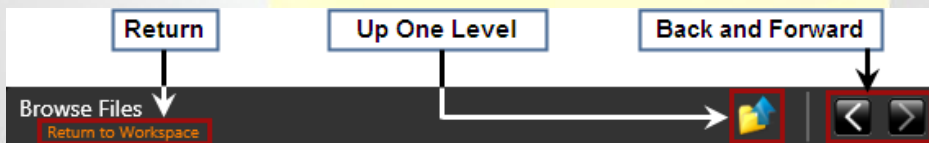
9. **Select File(s).** In this step, you will choose the file that will play when the scripting button is clicked. Click **Add** to open the **File Browser** window.



10. Choose the library which contains the desired file. Click **Open**.



- When using the **File Browser**, the navigation tools can assist with locating the correct file.



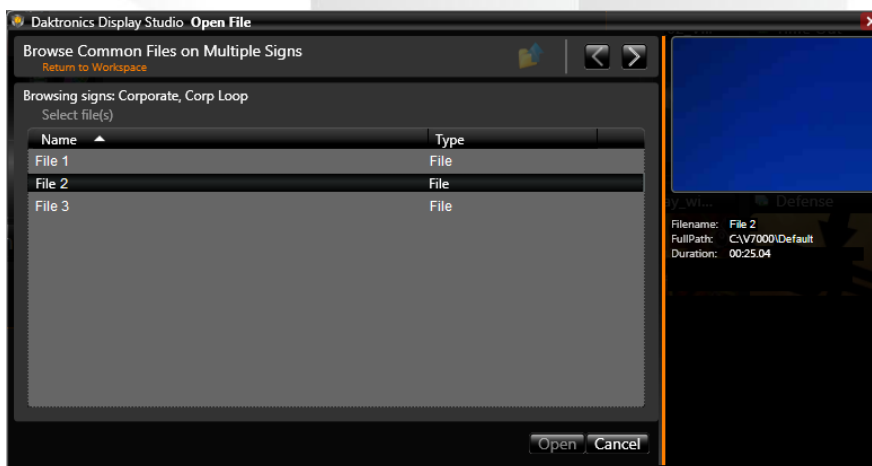
**Return:** Click to close the File Browser and return to the Workspace.

**Up One Level:** Click to move up one level in the selected sign's (or signs') libraries' folder hierarchy. Example: If the File Browser is in the Crowd Prompts\Touchdown folder (where Crowd Prompts is the selected library), click **Up One Level** to return to the Crowd Prompts folder.

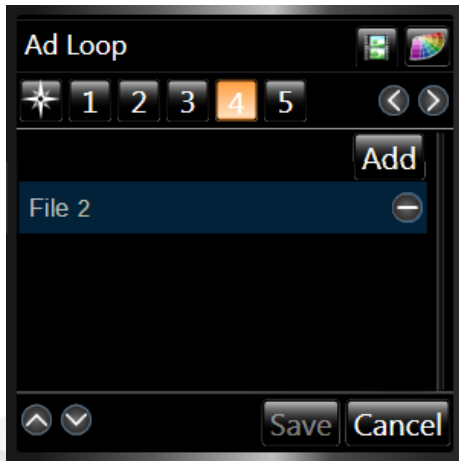
**Back and Forward:** Click the arrow buttons to move between folders to which you have navigated in the order you have navigated to them.

- After you have located the desired file, click it to view details about the file and a preview of its content. Click **Open** to choose the file and close the File Browser.

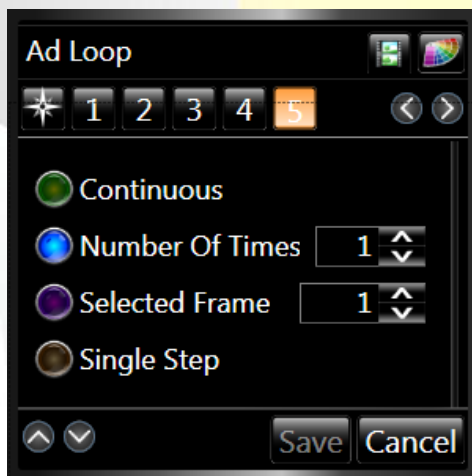
**Note:** Your sign's digital media player determines the types of files which may be played on your sign. Please consult your player's documentation for a list of such file types.



The chosen file now appears in the Step 4 presentation pane.



13. **Playmode Selection.** A script's playmode allows you to designate the manner in which a file is played, such as if it will play continuously, only play a certain number of times, or only a particular portion of the file will play. The following playmodes are available.




**Continuous:** Plays the file on the display until the operator stops it or starts another file.

**Number Of Times:** Plays the file on the display the specified number of times. After the file plays the specified number of times, the display blanks, plays the default file, or plays the next file in the Queue.

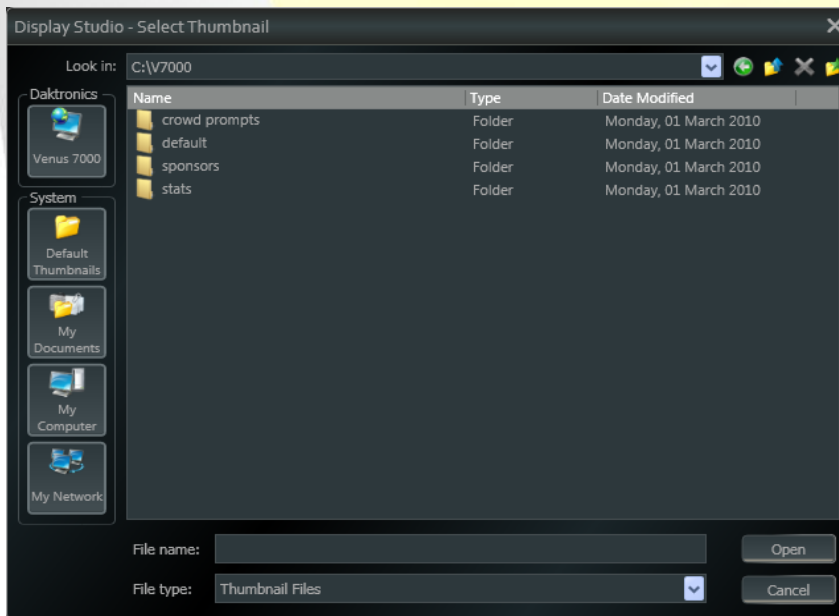
**Selected Frame:** Plays and holds the selected frame number in the file until a new command is executed.


**Single Step:** Plays the file frame-by-frame in sequential order with the user controlling frame advancement. For example, the user could play the words of the National Anthem frame by frame as the audience sings.

14. Select the **Number of Times** radio button and ensure that the number **1** is entered in the textbox.
15. **Select Thumbnail.** To designate a thumbnail image for the button, click the  button to show the selected thumbnail preview. To choose a different thumbnail image, click the **Browse** button to open the **File Browser**.






- Use the File Browser to locate the desired thumbnail image. You may select any image file to be a thumbnail.

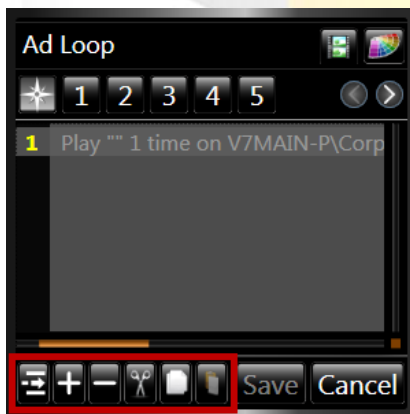








- After you have selected the desired thumbnail image, click **Open** to open that thumbnail and close the File Browser.
- Select Color.** Color-coding is an effective way to categorize buttons within a container. Click the  button to open the **Color Options**. Color Options allow you to assign color schemes to buttons, which can be used as another way to group similar buttons and distinguish different buttons.




19. To save a category, type the name of the category in the **Edit Category** text box, and click the  button to add it to the list. Categories which have already been created can be accessed from the Category drop-down menu. Click the  button to open the drop-down menu.
20. After all steps have been completed, click **Save** to save your button and return to your workspace. If you would like to continue making changes to the button, or add additional lines of script, click the **Select Script Line** button  to return to the list of scripts.
21. Multiple lines of script may be created for a single button. After clicking the **Select Script Line** button, use the button creation window's tools to edit lines and create additional scripts.

**Note:** In the following descriptions, *selected line* refers to the line of script that you click before clicking the tool button.

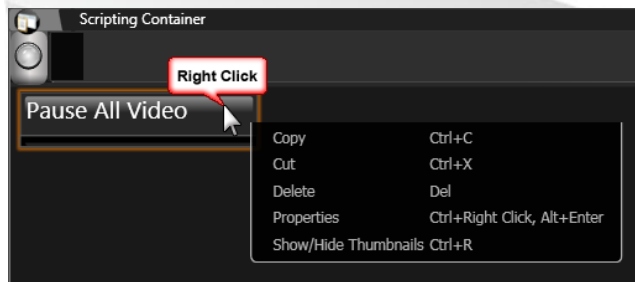


- |   |                    |  |
|---|--------------------|--|
|  | <b>Insert Line</b> | Click to insert a line before the selected line.   |
|  | <b>Add Line</b>    | Click to add a line after all existing lines.  |
|  | <b>Remove Line</b> | Click to delete the selected line.   |
|  | <b>Cut</b>         | Click to remove the selected line from its current location in order to <b>Paste</b> it in a different location. |
|  | <b>Copy</b>        | Click to make a copy of the selected line in order to <b>Paste</b> it in a different location.                   |
|  | <b>Paste</b>       | Click to paste a <b>cut</b> or <b>copied</b> line to a new location.   |

22. When editing scripts, use the  buttons at the bottom of the button creation window at any time to review the scripts which have been created.
23. After all button settings have been set, click **Save** to save the button, or click **Cancel** to close the button creation window without saving. The newly saved button appears in the scripting container.


## Manage scripting buttons

A number of options are available for managing scripting buttons which have been created. To manage a scripting button, right-click the button you wish to manage to open its context menu.



**Copy:** Click to create a copy of the selected button (and its scripts) which may be **pasted** into a scripting container.

**Cut:** Click to remove the selected button (and its scripts) from its container so that it may be **pasted** into a different scripting container.



**Note:** Scripting buttons can also be clicked and dragged to another scripting container. To **move** a button to another container, simply click and drag it to the desired new location. To **copy** a button to another container, while pressing **[Ctrl]**, click and drag the button to the desired location.

A button can be copied or moved to a new container in one step by clicking and dragging the button to an empty area of your workspace page.

**Delete:** Click to delete the selected button.

**Properties:** Click to open the **Button Creation Window** to edit the button.

**Note:** Multiple buttons' Button Creation Windows may be opened at one time to allow simultaneous editing.

**Show / Hide Thumbnails:** Click to toggle showing and hiding the button's thumbnail preview.

## Custom scripting

Custom Scripting allows you to create and use scripting commands to control how the digital media player(s) handle presentations and deliver content to a sign.



**Caution:** Advanced scripting is not enabled in Display Studio by default. As it involves more than simply selecting from choices on a list, it is intended for advanced users only. Entering incorrect data into a custom script can produce unexpected and undesirable results.

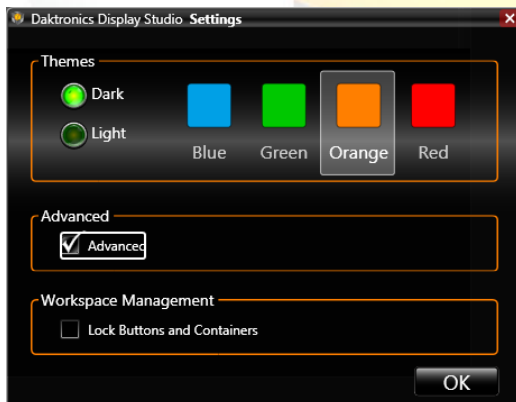
To proceed to use advanced scripting, you must first enable it in **Display Studio Settings**.

### **To enable Advanced Scripting:**

1. Click the **Display Studio Hub** to open the Main Menu, then select the **Properties** submenu. Click **Settings...** to open the **Display Studio Properties** dialog box.




2. In the **Advanced** section of the dialog box, place a check in the checkbox located next to **Enable Advanced Features**.

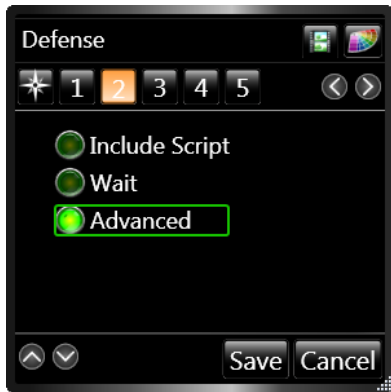


3. Click **OK** to save your changes.

### **To create a Custom Script Command:**

For help with getting started creating a Scripting Button, refer to [Create a scripting button](#).

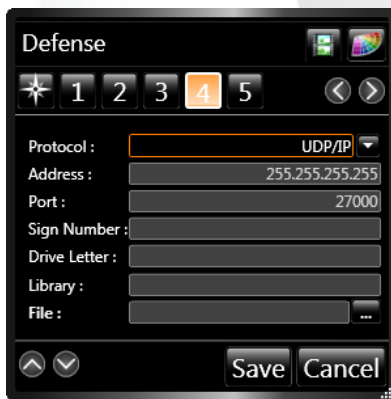
1. In the **Scripting Button Creation Window**, click the **Add Line** button  to add a command to the button.
2. In the **Select Script Type** screen, select the **System Control** radio button. Proceed to the next step.
3. In the **Select System Script** screen, select the **Advanced** radio button. Proceed to the next step.



4. **Select Custom ERTD Script.** Click the radio button next to the custom script you wish to create. Use the scroll bar on the right to view all available choices. Proceed to the next step.



5. **Set Custom ERTD.** Enter the applicable information for the custom ERTD script.

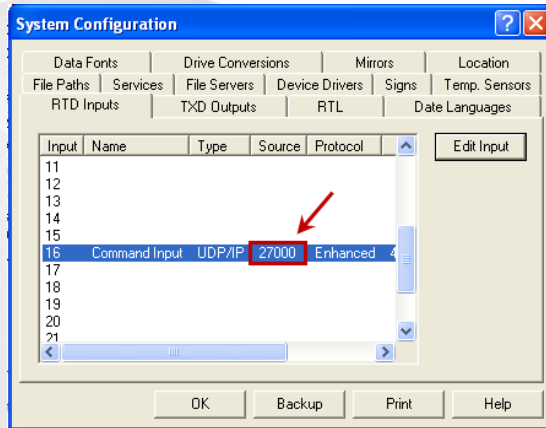


6. The following are common steps which are required to create a custom script:
  - a. **Protocol:** In most cases, **UDP/IP** should be selected. In instances where it is necessary to transmit a script to a different subnet, however, **TCP/IP** and **IP Multicast** are available options.
  - b. **Address:** In most cases, the default value of **255.255.255.255** should be used. When sending a script to a different subnet, however, a different IP address may be entered.
  - c. **Port:** Changes to this number are usually not necessary. By default, the **Port** number for scripting is set to 27000. Follow the below steps if you wish to confirm the correct port number for your sign(s).

## 7

### Determining the port for DMP-7000 Sign(s)

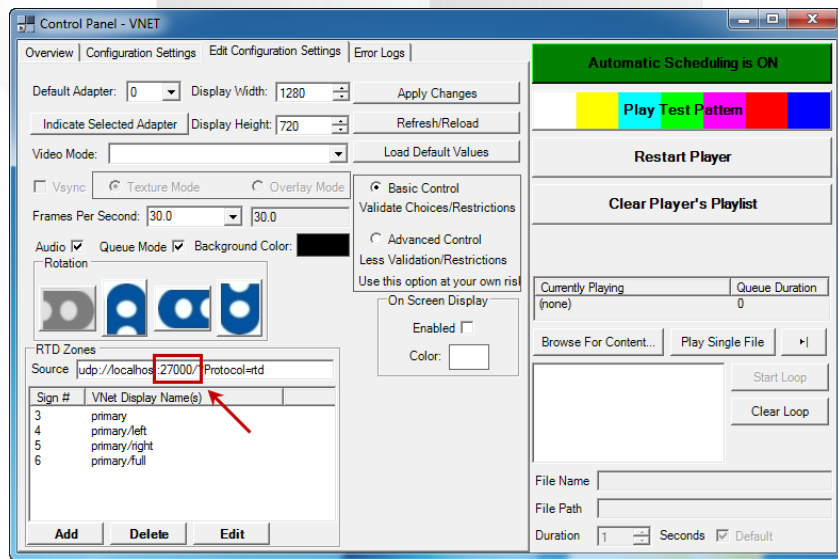
- i. Launch the **Venus 7000 Shell**.
- ii. Click **Configure**.
- iii. Select the **RTD Inputs** tab.
- iv. Locate the configured RTD input for Commands, and its corresponding port number (Source). By default, Commands are generally set up on Input #16.



## 8

### Determining the port for DMP-8000 Sign(s)

- i. Right-click on the V-Net icon in the Windows notification area and select **Control Panel** to open the **V-Net Control Panel**.
- ii. Select the **Edit Configuration Settings** tab.
- iii. In the **RTD Zones** group, locate the configured port number in the **Source** box.

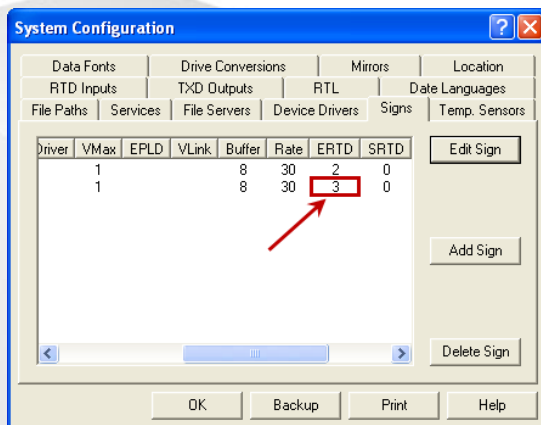


- d. Enter the ERTD **Sign Number** which corresponds to the sign for which you are creating the script.

## 7

### Determining the sign number for DMP-7000 Sign(s)

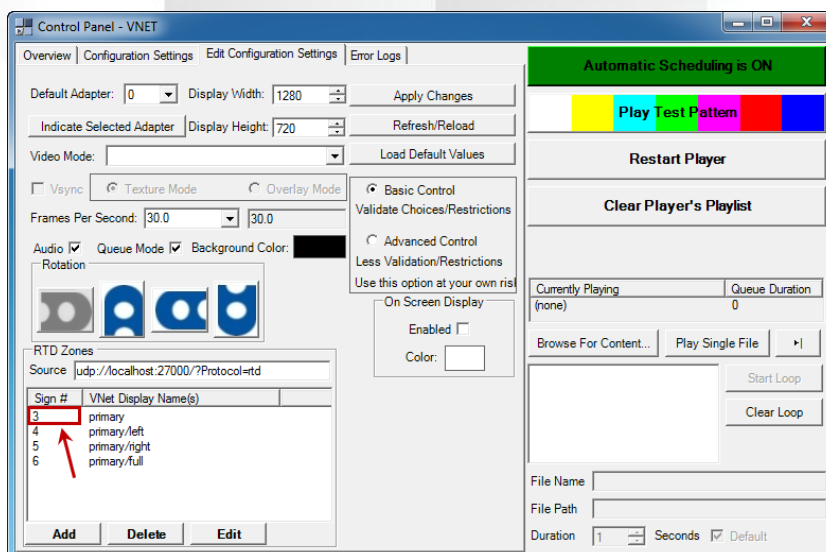
- i. Launch the **Venus 7000 Shell**.
- ii. Click **Configure**.
- iii. Select the **Signs** tab.
- iv. Locate the sign you wish to create a custom script for, and scroll right in the signs list to locate its sign number (listed in the ERTD column).




## 8

### Determining the sign number for DMP-8000 Sign(s)

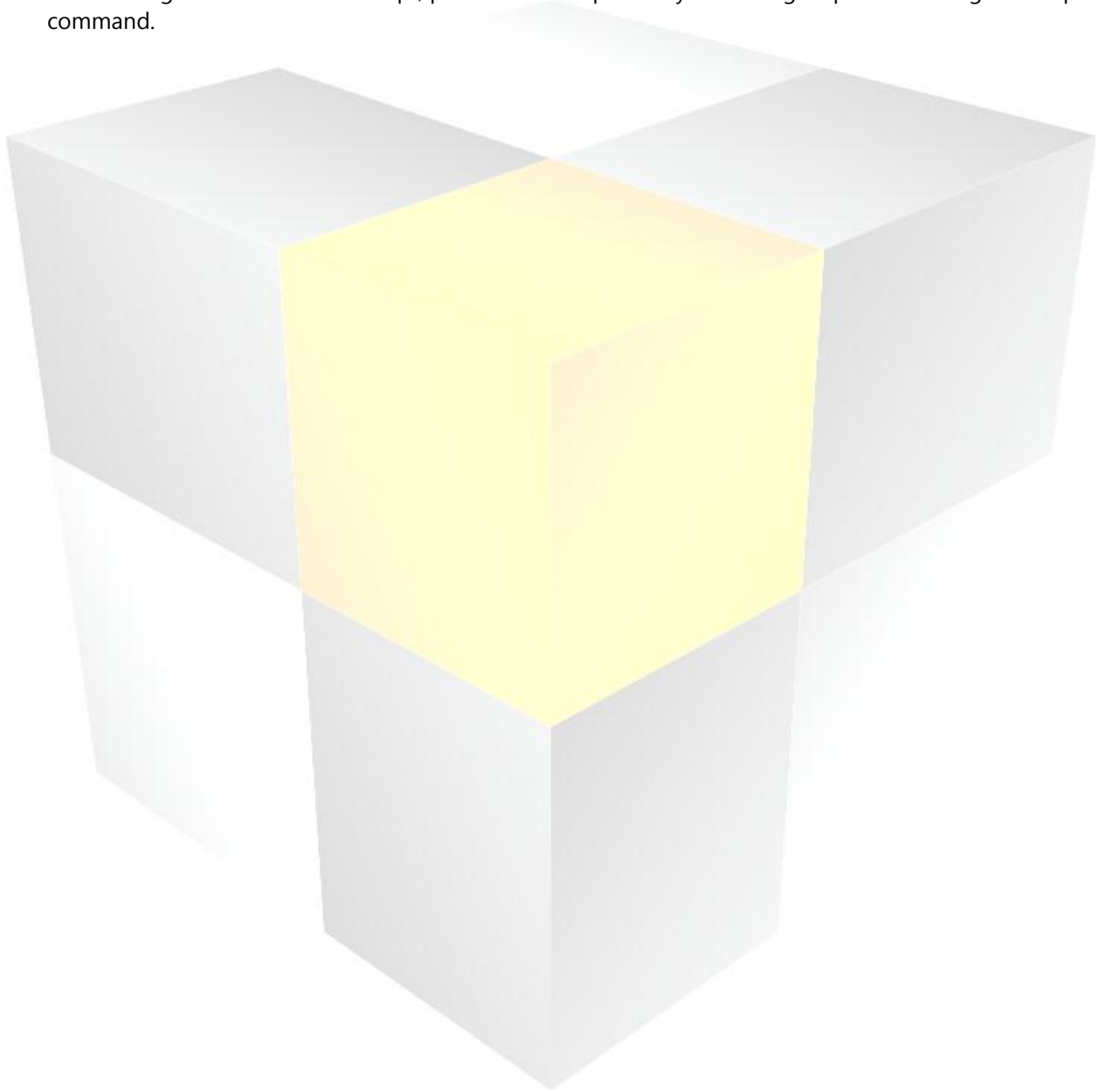
- i. Right-click on the V-Net icon in the Windows notification area and select **Control Panel** to open the **V-Net Control Panel**.
- ii. Select the **Edit Configuration Settings** tab.
- iii. In the RTD Zones group, locate the configured Sign # for the display you are creating a custom script for.



- e. Enter the letter of the **Drive** (e.g. "C" or "D" (without quotes)) in which the file you wish to play is stored.
- f. Click the  button on the **File** line to open the File Browser window. Locate the file you wish to play and click **Open**. The **Library** and **File** boxes will be filled in automatically.

**Note:** The **File** filename cannot exceed 32 characters.

7. After setting the custom ERTD script, proceed to complete any remaining steps for creating the script command.



## 7 8 Common scripting buttons

Because it is not always clear what script commands need to be created to complete a particular task, this section will provide you with some assistance. Here you will be taken through the steps involved in creating scripting buttons for many of the most common tasks needed to be performed on a display network.

Each subdivision of this section is devoted to a particular task, and will identify the type(s) of script(s) (and the steps which should be completed for each script) which should be created for the button to accomplish the specified action. Each task is then, when applicable, further subdivided to describe the respective steps to follow for DMP-7000 and DMP-8000 displays. For general assistance with creating a scripting button, see [Create scripting buttons](#).

In the following sections, “steps” refer to the steps involved in creating the script, identified by buttons **1** through **6** in the script creation window.



### Section Contents

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- [Control multiple displays](#)
- [Play a media file](#)
- [Queue a Playlist](#)
- [Blank one or more signs](#)
- [Show video from an external source](#)
- [Stats Request](#)
- [Include scripting from another button](#)
- [Set a display's dimming level](#)



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### Control multiple displays

An important benefit of using scripting buttons is the ability to control multiple displays with a single button click. This allows you to avoid the hassle of clicking multiple buttons to perform tasks which should be happening at the same time. The result is a more organized, timely, and coherent presentation.

### *Use multiple script commands*

One way to control multiple displays with a scripting button is by including multiple script commands in that button. When finished creating one script command, simply click the **Select Script Line** button 

to return to the list of scripts, and then click  to add a script command or  to insert a script command.

## **7** *Controlling multiple DMP-7000 displays*

In addition to using multiple script commands in a scripting button, when creating scripts for DMP-7000 signs, it is possible to create a single script command which controls multiple signs. As you create the script, when you reach the step which requires you to choose the sign you wish to control, simply check the box for each display you wish to control – you are not restricted to only selecting one display.

### **Notes:**



- If you want to play a media file on multiple displays, ensure that the media file is located in the library of each display, and that each of the displays has the same folder structure (i.e. the path to the file, including folders and subfolders, is the same for each display).
- This method, of course, can only be used when you want multiple displays to do the same thing (i.e. execute the same type of script).

## **Play a media file**

Create a scripting button with a **Play** script to play a specified media file on a specified sign in a specified manner.

### **Create a Play script:**

#### **7** For DMP-7000 Displays:

**Step 1:** Choose **DMP-7000 Player Control** Script.

**Step 2:** Select the **Sign** on which you want the file to be played.

Place a check in front of the sign on which you want the file to be played.

**Step 3:** Choose **Play**.

**Step 4:** Select the **Media File**.

Click the **Add** button to open the File Browser. Locate the media file you wish for the button to play.

**Step 5:** Select the desired **Playmode**.

The playmode designates the manner in which you want the media file to be played.

*Continuous:* The file will be played continuously until the operator stops it or another file is started.

*Number of Times:* The file will be played the specified number of times, and then the display will either blank, play the default file, or play the next file in the display queue. After selecting the radio button, specify the number of times you want the file to play.

*Selected Frame:* The specified frame of the file will be played and held until a new command is executed. After selecting the radio button, specify the frame number you want played.

*Single Step:* The file will be played one frame at a time in sequential order. To trigger the next frame, create a scripting button which contains a Single Step script.

## 8

### For DMP-8000 Displays:

**Step 1:** Choose **DMP-8000 Player Control** Script.

**Step 2:** Select the **Sign** on which you want the file to be played.

Place a check in front of the sign on which you want the file to be played.

**Step 3:** Choose **Play File**.

**Step 4:** Select the **Media File**.

Click the **Add** button to open the File Browser. Locate the media file you wish for the button to play.



**Step 5:** Select the desired **Playmode**.

The playmode designates the manner in which you want the media file to be played.

*Continuous:* The file will be played continuously until the operator stops it or another file is started.

*Number of Times:* The file will be played the specified number of times, and then the display will either blank, play the default file, or play the next file in the display queue. After selecting the radio button, specify the number of times you want the file to play.

### **To play a media file on other signs at the same time:**

1. After creating the Play script, click  to return to the **Select Script Line** screen.
2. Click  to add a new script command.
3. Repeat the above steps for creating a Play script for each additional sign, making sure to select the appropriate sign in Step 2.

## 7

### Queue a Playlist

Create a scripting button with a **Create Playlist** script to play a specified set of media files on one or more DMP-7000 signs in a specified manner. When this button is executed, the sign's (or signs') display queue(s) will be cleared, the playlist's media files will be added to the queue(s), and the first file will start to play.

### **Create a Create Playlist script:**

**Step 1:** Choose **DMP-7000 Player Control** Script.

**Step 2:** Select the **Sign(s)** on which you want the files to be played.

Place a check in front of the sign(s) on which you want the files to be played.

**Step 3:** Choose **Create Playlist**.

**Step 4:** Select the **Media Files**.

Click the **Add** button to open the File Browser. Locate the media file you wish for the button to play. The **Insert** button can also be used to insert files into the playlist.

**Step 5:** Select the desired **Playmode**.

The playmode designates the manner in which you want the media files to be played.

*Continuous:* The file will be played continuously until the operator stops it or another file is started.

*Number of Times:* The file will be played the specified number of times, and then the display will either blank, play the default file, or play the next file in the display queue. After selecting the radio button, specify the number of times you want the file to play.

*Selected Frame:* The specified frame of the file will be played and held until a new command is executed. After selecting the radio button, specify the frame number you want played.

*Single Step:* The file will be played one frame at a time in sequential order. To trigger the next frame, create a scripting button which contains a Single Step script.

## Blank one or more signs

A scripting button with a **Blank Sign** script will, when clicked, make the specified sign(s) go blank and clear their respective display queues.

### Create a Blank Sign script:

**7**

**For DMP-7000 Displays:**

**Step 1:** Choose **DMP-7000 Player Control Script**.

**Step 2:** Select the **Sign(s)** you would want to be blanked.

Place a check in front of the sign(s) you want this script to control.

**Step 3:** Choose **Blank Sign**.

**8**

**For DMP-8000 Displays:**

**Step 1:** Choose **DMP-8000 Player Control Script**.

**Step 2:** Select the **Sign(s)** you would want to be blanked.

Place a check in front of the sign(s) you want this script to control.

**Step 3:** Choose **Blank Display**.

**7**

## Show video from an external source

To play video on a sign, create two scripting buttons – one to initialize the video processor and another to key the video.

After the buttons are created, first click the **Initialize VIP** button to set up the video settings. Then, when you wish to show the video, click the **Key Video** button to play the selected key color file with the video incorporated.



**Note:** The Initialize VIP button *should* only need to be executed once – the configurations performed by the button *should* be saved and in effect for all future use of the configured video feed. *However*, if you begin to experience issues with showing the configured video feed, execute the Initialize VIP button again to re-configure the video processor settings.

## Initialize VIP Button

The Initialize VIP Button must contain five scripts: **Set Input**, **Set Source**, **Set Key Levels**, **Set Viewable Area**, and **Set Window Area**.

### Create a Set Input script:



**Step 1:** Choose **DMP-7000 Video Processor** Control Script.

**Step 2:** Select the **Sign** on which you want to show video.

**Step 3:** Select **Set Input**.

**Step 4:** Select the **Input** on which the video is present.

**Step 5:** Select the **Video Processor Number** and **Channel Number**.

Click  to return to the **Select Script Line** screen, and then click  to add a new script command.

### Create a Set Source script:



**Step 1:** Choose **DMP-7000 Video Processor** Control Script.

**Step 2:** Select the **Sign** on which you want to show the video.

**Step 3:** Select **Set Source**.

**Step 4:** Select **Overlay**.

**Step 5:** Select the **Video Processor Number** and **Channel Number**.

Click  to return to the **Select Script Line** screen, and then click  to add a new script command.

### Create a Set Key Levels script:



**Step 1:** Select **DMP-7000 Video Processor** Control Script.

**Step 2:** Select the **Sign** on which you want to show the video.

**Step 3:** Select **Set Key Levels**.

**Step 4:** Set the proper values for the **Color** you wish to key out (Recommended key color value is RGB 0, 247, 0).

**Step 5:** Select the **Video Processor** number and channel number.

Click  to return to the **Select Script Line** screen, and then click  to add a new script command.

### **Create a Set Viewable Area script:**



**Step 1:** Select **DMP-7000 Video Processor** Control Script.

**Step 2:** Select the **Sign** on which you want to show the video.

**Step 3:** Select **Set Viewable Area**

**Step 4:** Set the proper values for the **Size** of the viewable area of the video you are importing

**Step 5:** Select the **Video Processor Number** and **Channel Number**

Click  to return to the **Select Script Line** screen, and then click  to add a new script command.

### **Create a Set Window Area script:**

**Step 1:** Select **DMP-7000 Video Processor** Control Script.

**Step 2:** Select the **Sign** on which you want to show the video.

**Step 3:** Select **Set Window Area**.

**Step 4:** Set the proper values for the **Size** of the area in which you want to play the video.

**Step 5:** Select the **Video Processor Number** and **Channel Number**.

### **Key Video Button**

The Key Video button must contain one script: **Play**.

### **Create a Play script:**

**Step 1:** Choose **DMP-7000 Player Control** Script.

**Step 2:** Select the **Sign** on which you want the file to be played

Place a checkmark in the checkbox of the sign on which you want the file to be played.

**Step 3:** Choose **Play**.

**Step 4:** Select the **Media File**.

Click the **Add** button to open the File Browser. Locate the appropriate key color media file.



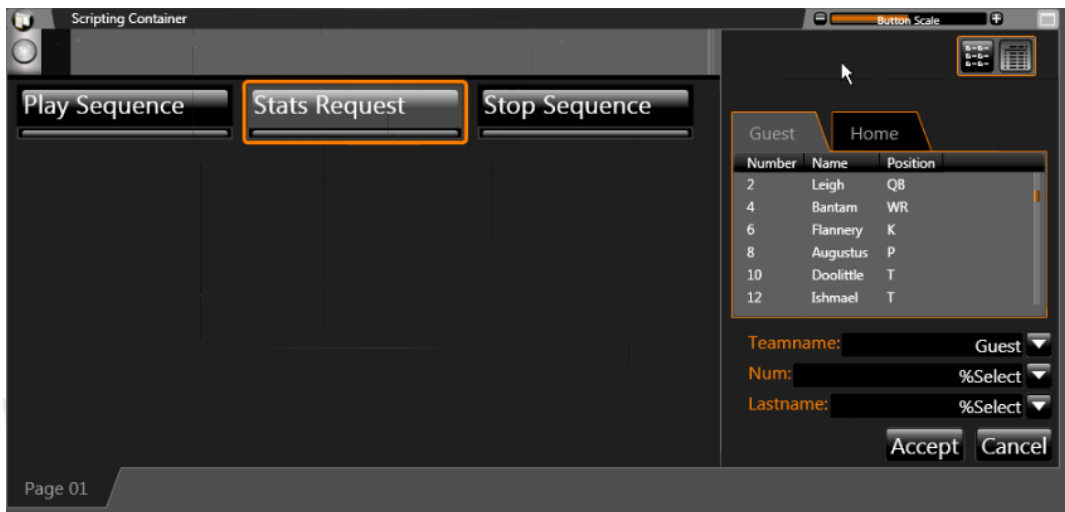
**Note:** Ensure that the key color in the media file matches the key color designated in the **Set Key Levels** script. Recommended key color value is RGB 0, 247, 0.

**Step 5:** Select **Continuous**.

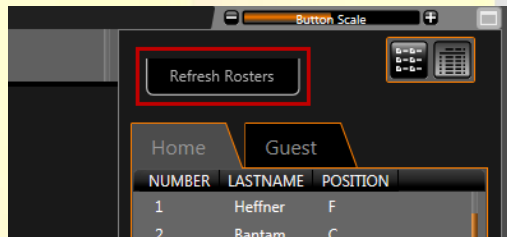
### **Stats Request**

Create a scripting button with a **Stats Request** script to play a content file which incorporates statistical data (e.g. during a baseball game, a content file which includes statistics about the current batter; or during a football game, a content file which includes team statistics or the game summary).

Note that after a Stats Request button is clicked, you may be asked to specify additional information for the request, such as when the request is for an individual player's statistics.



**Note:** To refresh Display Studio's roster information, simply right-click in the top of the Stats Request fly-out and select **Refresh Rosters**.



### Create a Stats Request script:

**7**

For DMP-7000 Displays:

**Step 1:** Choose **DMP-7000 Player Control** Script.

**Step 2:** Select the **Sign** on which you want the file to be played.

**Step 3:** Select **Stats Request**.

**Step 4:** Configure the stats request.

- Select the appropriate **Request Port** from the drop-down menu.
- Select the appropriate **Data Source** from the drop-down menu.
- Select the **Request Type** from the drop-down menu which includes the data you require for the content file.
- In the drop-down menus which appear, leave the default choice selected (**%select**).

**Step 5:** Select the desired **Playmode**.

The playmode designates the manner in which you want the media file to be played.

*Continuous:* The file will be played continuously until the operator stops it or another file is started.

*Number of Times:* The file will be played the specified number of times, and then the display will either blank, play the default file, or play the next file in the display queue. After selecting the radio button, specify the number of times you want the file to play.

*Selected Frame:* The specified frame of the file will be played and held until a new command is executed. After selecting the radio button, specify the frame number you want played.

*Single Step:* The file will be played one frame at a time in sequential order. To trigger the next frame, create a scripting button which contains a Single Step script.

**Step 6: Select the Media File.**

Click the **Add** button to open the File Browser. Locate the media file you wish for the button to play.

**8**


**For DMP-8000 Displays:**

**Step 1:** Choose **System Control** Script.

**Step 2:** Select **Advanced** System Script.

**Step 3:** Choose **Stats Request**.

**Step 4:** Set the **Custom ERTD**.

- a. Enter the **Port #** which is configured for the appropriate display.
- b. Enter the **Sign Number** for the appropriate display.
- c. Enter the **Drive** letter which contains the content file you wish to play.
- d. Next to **File**, click  to open the File Browser. Locate the media file you wish for the button to play.

**Step 5:** Configure the **Stats Request**.

- a. Select the appropriate **Data Source** from the drop-down menu.
- b. Select the **Request Type** from the drop-down menu which includes the data you require for the content file.
- c. In the drop-down menus which appear, leave the default choice selected (**%select**).

**Step 5:** Select the desired **Playmode**.

The playmode designates the manner in which you want the media file to be played.

*Continuous:* The file will be played continuously until the operator stops it or another file is started.

*Number of Times:* The file will be played the specified number of times, and then the display will either blank, play the default file, or play the next file in the display queue. After selecting the radio button, specify the number of times you want the file to play.

*Selected Frame:* The specified frame of the file will be played and held until a new command is executed. After selecting the radio button, specify the frame number you want played.

*Single Step:* The file will be played one frame at a time in sequential order. To trigger the next frame, create a scripting button which contains a Single Step script.

## Include scripting from another button

The Include Script script permits the user to cross-reference the scripts created for an existing scripting button as part of a new scripting button, allowing those scripts to be executed by the new button without duplicating all of the commands.

### **Create an Include Script script:**

**Step 1:** Choose **System Control** Script.

**Step 2:** Select **Include Script**.

**Step 3:** Select the **Script** you wish to include in the button.

Click the **Add** button to open the Script Browser. Locate the appropriate script command.

## Set a Display's Dimming Level

Create a scripting button with a **Set Dimming** script to set a display's dimming mode so that its brightness is appropriately adjusted for ambient light conditions.

### **Create a Set Dimming script:**

**7**

**For DMP-7000 Displays:**

**Step 1:** Choose **DMP-7000 Display Control** Script.

**Step 2:** Select the **Sign(s)** on which you want the dimming mode to be set.

Place a checkmark in the checkbox(es) of the appropriate sign(s).

**Step 3:** Choose **Set Dimming**.

**Step 4:** **Set Dimming** settings as follows:

Select the radio button for **Manual** mode, and use the slider bar to set a value from 0 (full dimming, for low ambient light conditions) to 255 (no dimming, for high ambient light conditions).

**8**

**For DMP-8000 Displays:**

**Step 1:** Choose **System Control** Script.

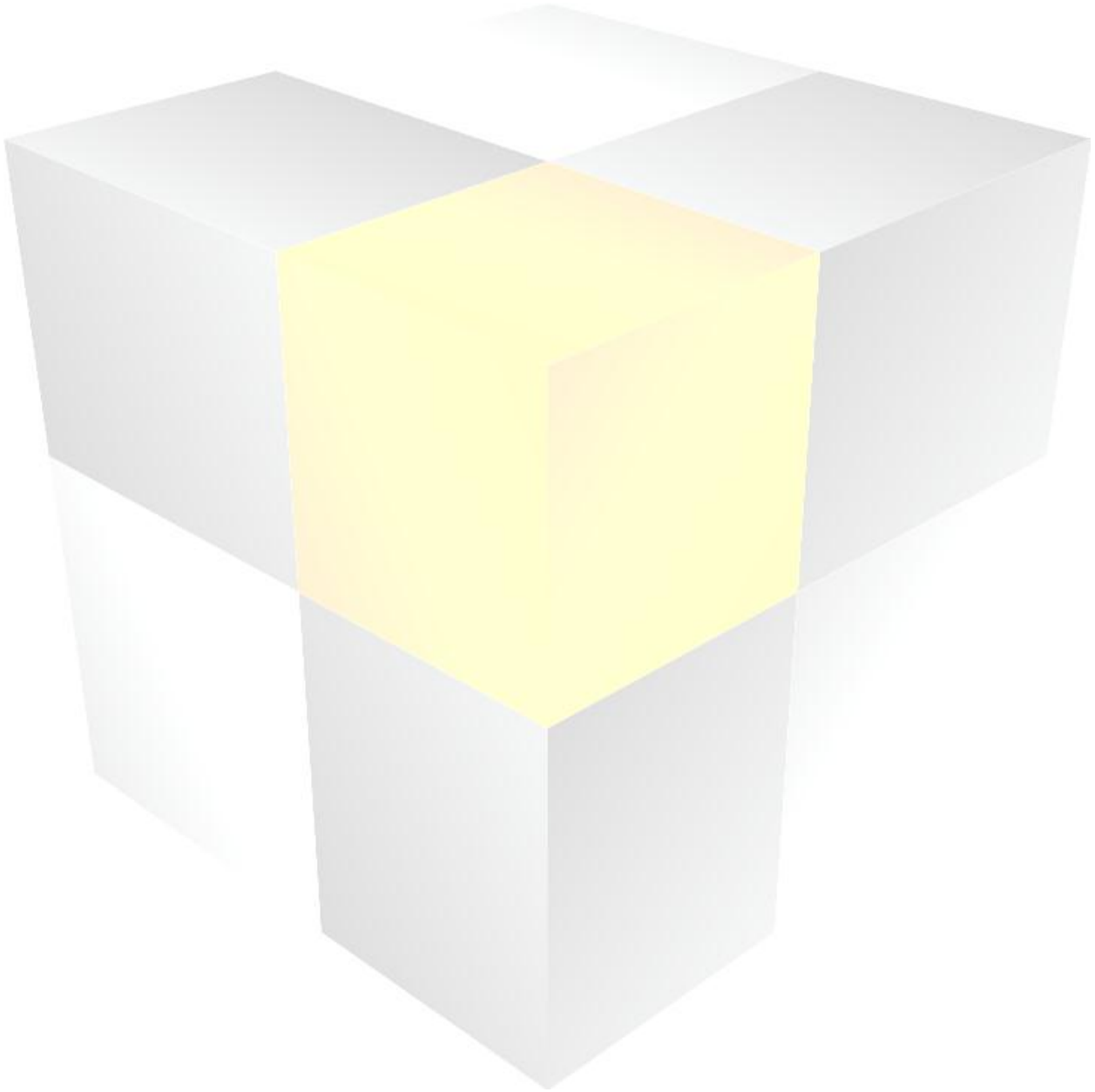
**Step 2:** Select **Advanced System** Script.

**Step 3:** Choose **Set Dimming**.

**Step 4:** **Set the Custom ERTD.**

- a. Enter the **Port #** which is configured for the appropriate display.
- b. Enter the **Sign Number** for the appropriate display.

**Step 5:** In the **Set Dimming** settings step, select the radio button for **Manual** dimming mode, and use the slider bar to set a value from 0 (full dimming, for low ambient light conditions) to 255 (no dimming, for high ambient light conditions).



## 8 Audio containers and buttons

Audio containers and buttons are designed to give you quick and easy, single-click access to your library of audio files for a DMP-8000 sign. Just click a file's button and it will be (depending on your settings) immediately played on the sign, or immediately added to the sign's queue.

You may notice that this section looks a lot like the [Quick Display Containers and Buttons](#) section, and you would be correct. To maintain a consistent interface, audio containers and buttons work in virtually an identical manner to quick display containers and buttons. Therefore, if you're already comfortable with one container/button type, you're already comfortable with both types!



**Note:** Audio Container/Button functionality is only available in Show Control Systems containing a DMP-8000 display with supporting firmware. If a system does not contain a supported DMP-8000, this functionality will not appear in the user interface.

### Section Contents

[Create an audio container](#)  
[Manage audio container properties](#)  
[Create audio buttons](#)  
[Manage audio buttons](#)  
[Using the display queue](#)

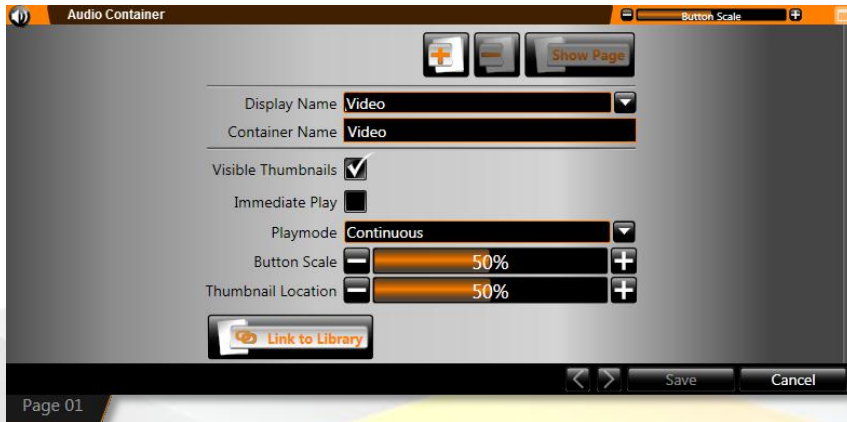
### Create an audio container

1. Right-click from within the workspace page where you wish to create a container to open its context menu.
2. Select **New > Audio Container**. The **Audio Container Properties** screen appears.



3. In the **Audio Container Properties** screen, select the display with which you want the container to be associated from the drop-down list.

- After you have selected the display, the display name will be inserted into the **Container Name** text box. If you wish to change the name of the container, enter the new name into the text box.



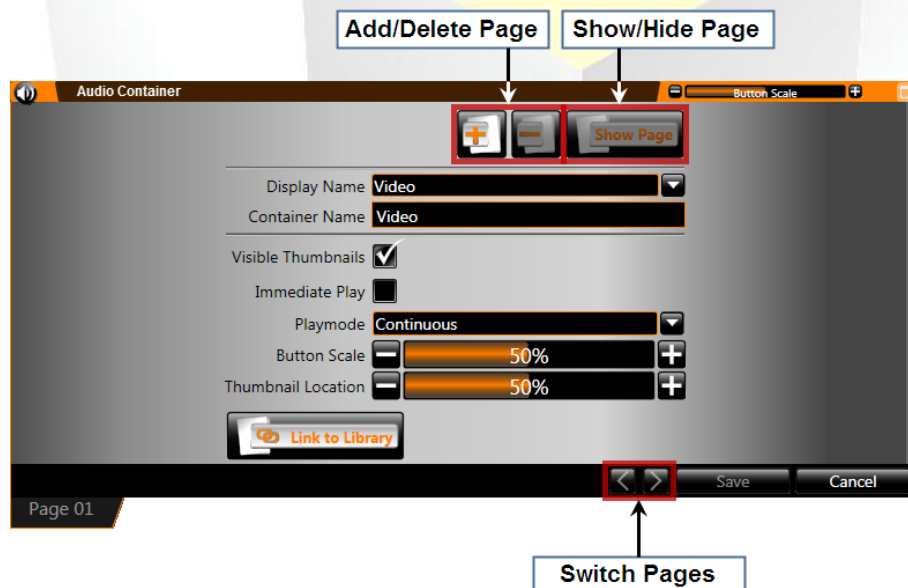
- Click **Save** to save the container and close the **Audio Properties**, or proceed to **Manage Audio Container Properties**.

## Manage audio container properties

Various options are available to customize the way an audio container stores quick display buttons and to configure the default behavior of audio buttons. Use the steps below to assist you in setting up your audio container how you would like.

- From within the **Audio Container Properties** screen, manage the container using the below options.

**Note:** If you're not already in the audio container properties screen, right-click from within the audio container to open its context menu, and then click **Properties**.



**Add/Delete Page:** Click the appropriate button to add or delete a container page

**Show/Hide Page:** Click to designate whether a container page should be visible or hidden

**Display Name:** Name of the display associated with the container

**Container Name:** Name of the container. By default, the display name will be inserted as the container name.

**Visible Thumbnails:** Checking this box makes the thumbnails for each button visible in the container.

**Immediate Play Checkbox:** Checking this box makes buttons in this container, by default, immediately play on the display when clicked, instead of being added to the end of the queue.

**Playmode:** Select the default playmode for buttons in this container – **Continuous** or **Number of Times**.

**Button Scale:** Click the appropriate button to increase or decrease the default size of the buttons within the container.

**Link To Library:** Click to link the container to a display library. Selecting this option will automatically create **Quick Display Buttons** for each media file in that library.

**Switch Pages:** Click to switch between different container pages. Different pages may also be accessed by clicking the page's **Container Page Tab**.



**Tip:** Note that the selections you make for the above options will only be applied to the active container *page*. Different container pages can be set up differently.

2. When finished, click **Save** to close the scripting container properties, or click **Cancel**.

## Create audio buttons

To create audio buttons, there are two methods available: automatic and manual. The differences between these methods are as follows:

### Automatic

- Audio buttons are created by linking a container page to a supported display's audio file library, which automatically creates a button for each file in that library.
- Buttons are created according to the default properties of the container, however after a button is added, its individual properties can be managed as needed.
- As files are subsequently added to or removed from the library, the container buttons will be updated accordingly.
- Buttons cannot be manually added to a linked container.

### Manual

- The user creates audio buttons individually.
- Buttons can be created that play one or more files from one or more of a display's libraries.
- The user gets complete control over what and how buttons are created.

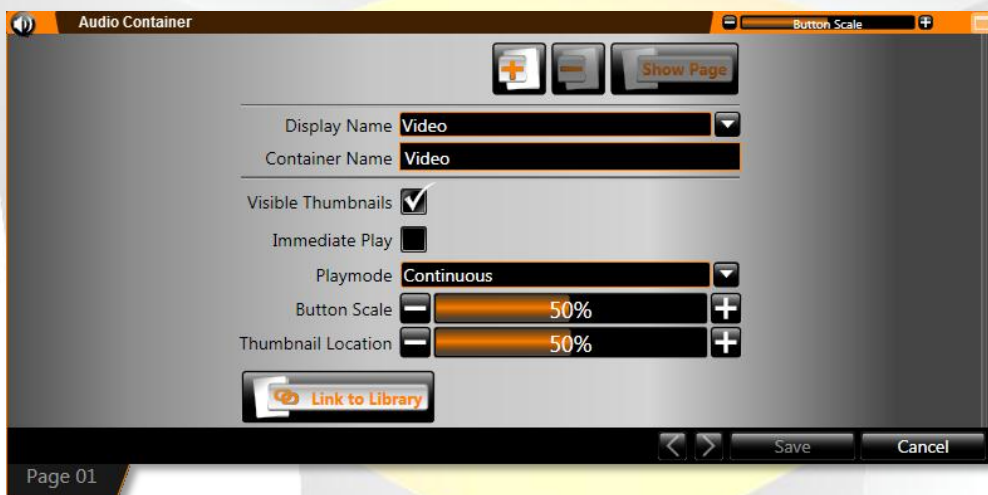
## Automatic method: linking a container to a library

An audio container can only be linked to a file library when the container is empty. The best time to do this is when creating a new audio container.

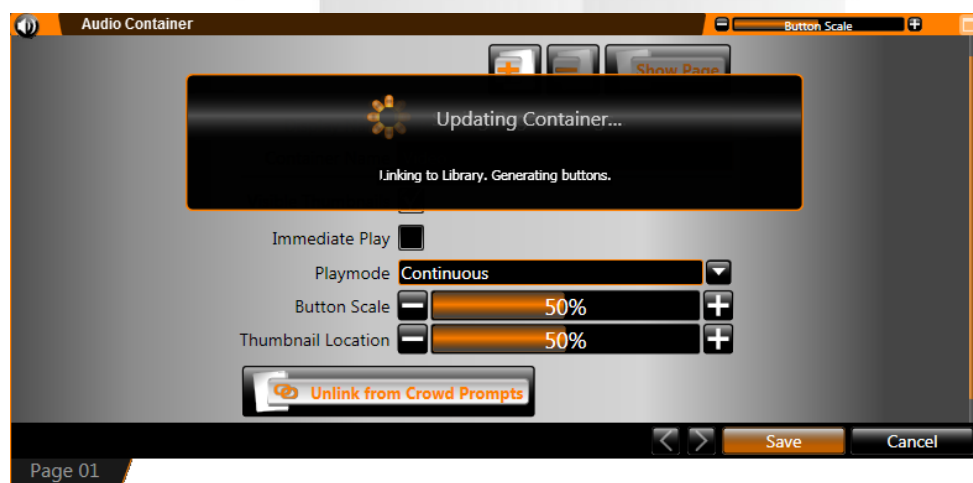


**Note:** Link to Library functionality is only available for DMP-8000s with firmware that supports the feature. If a DMP-8000 does not contain supporting firmware, this functionality will not appear in the user interface.

1. Begin at the **Quick Display Container Properties**. To access the **Quick Display Container Properties**, either:
  - a. **Create an audio container**, or
  - b. Right-click from within an audio container, and click **Properties**.
2. In the **Audio Container Properties** screen, click the **Link To Library** button to open the **Library Browser** window.



3. In the **Library Browser** window, select the name of the library you wish to link to the container and then click **Open**. The **Link To Library** button will now read **Unlink From Library** and the library name will appear next to the button.
4. Click **Save**. The **Audio Container Properties** screen will close and Display Studio will automatically create buttons for all files in the library.



## Manual method: creating audio buttons individually

Note that audio buttons cannot be created individually if the quick display container is linked to a display library.

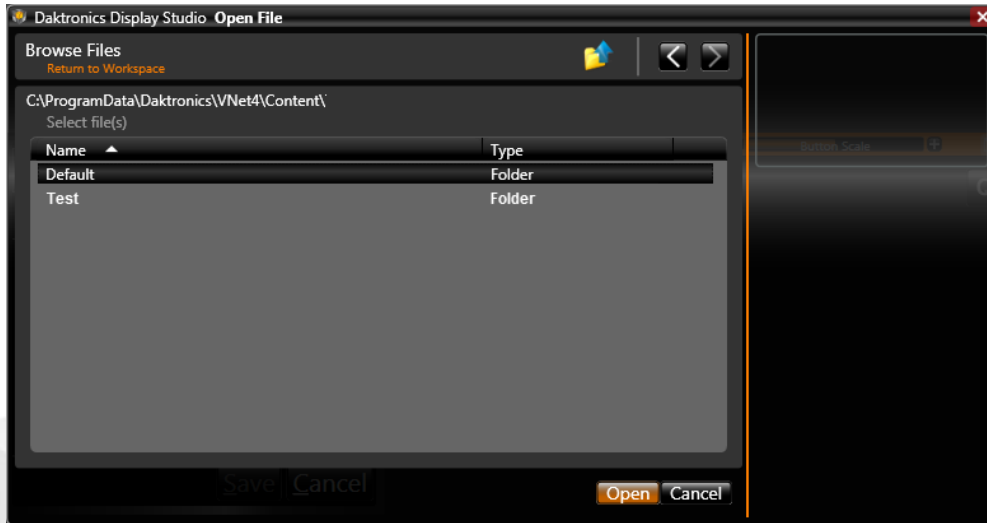
1. Right-click from within the audio container and select **New Button** to open the **Button Creation Window**.



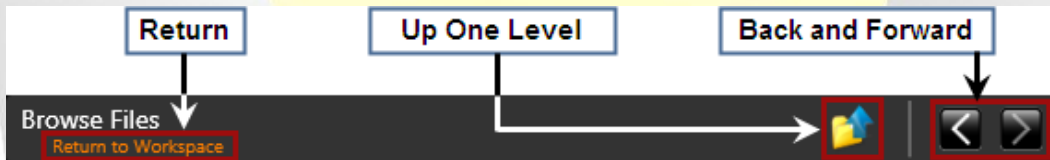
2. In the **Button Creation Window**, type the name of the audio button in the text box.
3. **Select File(s)**. Click **Add** to open the **File Browser** window. The file browser window will assist you in selecting the file(s) that the button will activate.



4. Highlight the desired folder from the list of folders in the presentation pane. Click **Open**.



- When using the **File Browser**, the navigation tools can assist with locating the correct file.



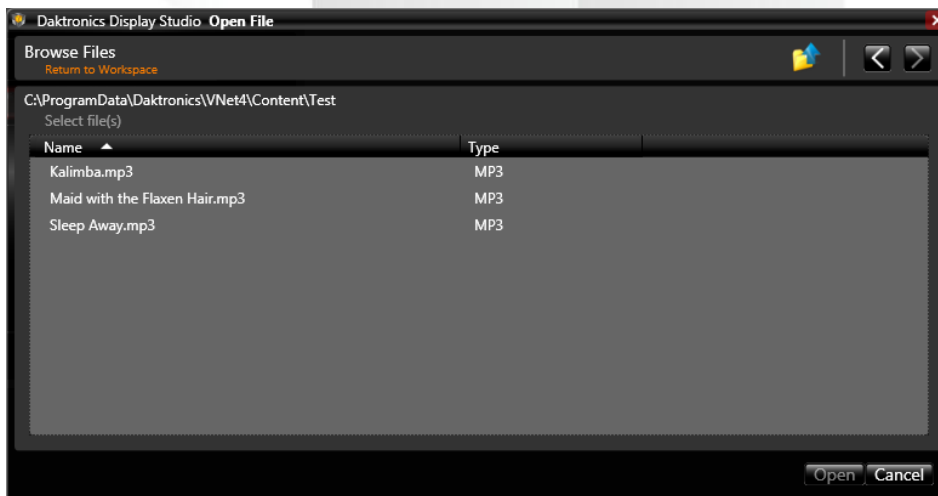
**Return:** Click to close the File Browser and return to the Workspace.

**Up One Level:** Click to move up one level in the selected sign's (or signs') libraries' folder hierarchy. Example: If the File Browser is in the Crowd Prompts\Touchdown folder (where Crowd Prompts is the selected library), click **Up One Level** to return to the Crowd Prompts root folder.

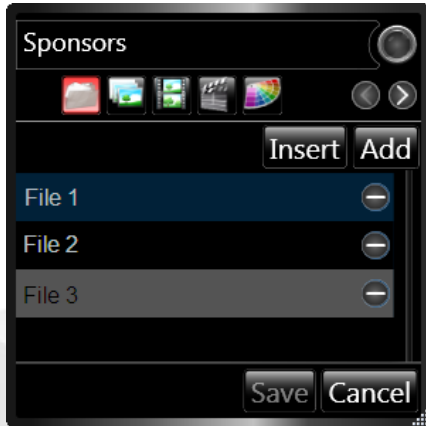
**Back and Forward:** Click the arrow buttons to move between folders to which you have navigated in the order you have navigated to them.


- Select the desired file(s) you wish to associate with the button. Multiple files may be selected by holding down **CTRL** while clicking the files.

**Note:** Supported audio file types currently include MP3 and WAV files.






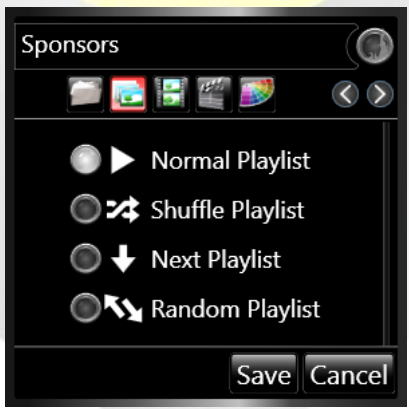
- After the desired file(s) have been selected, click **Open** to return to the **Button Creation Window**. The selected file(s) will appear listed.





**Tip:** To manage the order of your playlist, files can be clicked and dragged to their desired positions, or use the **Insert** button to insert a file above the selected file.

- Proceed to the next step by clicking the  below the button name. The   buttons to the right may also be used to move between steps.
- Set Playlist Type.** If you selected multiple files in the previous step, the next step is to designate what type of playlist the button will activate. This will determine the manner in which the media files in a playlist will be added to the Display Queue. Choose the playlist type by clicking the radio button next to the appropriate choice.



**Normal Playlist:** Clicking the button will add all media files in the playlist to the Queue in the order they appear on the playlist.

**Next Playlist:** Clicking the button will add one media file from the playlist at a time to the Queue. Clicking the button again will add the next file from the playlist to the Queue.

**Shuffle Playlist:** Clicking the button will add all media files in the playlist to the Queue in a shuffled order.

**Random Playlist:** Clicking the button will add one random media file from the playlist at a time to the Queue. **Note:** *Although random, this playlist will ensure that all media files are played an equal number of times and none will be played twice in a row.*

10. **Playmode Selection.** Click the radio button next to the playmode you wish to select for the button. The selected playmode will govern how the file(s) associated with the button will be played.







**Continuous:** Plays the file on the display until the operator stops playback, advances the Queue, or plays another file.

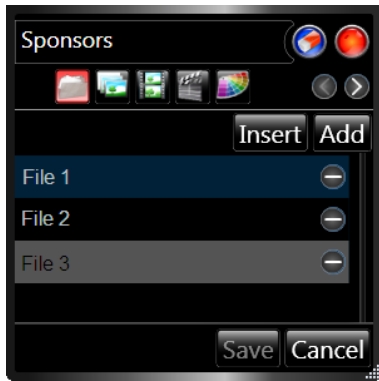
**Number Of Times:** Plays the file on the display the specified number of times. After the file plays the specified number of times, the next file in the Queue is played, or playback stops.



11. **Select Color.** Color-coding is an effective way to categorize buttons within a container. Color Options allow you to assign color schemes to buttons, which can be used as another way to group similar buttons and distinguish different buttons.



12. To save a category, type the name of the category in the **Edit Category** text box, and click the  button to add it to the list. Categories which have already been created can be accessed from the Category drop-down menu. Click the  button to open the drop-down menu.

13. **Clear Queue on Play.** If, when the button is executed, you want the display's Queue to be cleared and the file(s) associated with the button to play immediately, enable **Clear Queue on Play** by clicking the  next to the button name textbox. When enabled, the button will change to .



14. **Immediate Play.** If you want the file(s) associated with the button to play immediately when the button is pressed, enable **Immediate Play** by clicking the  next to the button name text box. When enabled, the button will change to .
15. When finished, click **Save** to save the button to the audio container, or click **Cancel** to close the button creation window and discard any changes which were made.

## Manage audio buttons

A number of options are available for managing audio buttons which have been created. To manage a audio button, right-click the button you wish to manage. A pop-up menu appears.



**Immediate Play:** Click to immediately play the file(s) associated with the button, even if Immediate Play has not been enabled for the button. Selecting this option will add the file(s) to the top of the queue and they will begin playing.

**Copy:** Click to create a copy of the selected button which may be **pasted** into another audio container.

**Cut:** Click to remove the selected button from its container so that it may be **pasted** into a different audio container.



**Note:** Audio buttons can also be clicked and dragged to another audio container. To **move** a button to another container, simply click and drag it to the desired new location. To **copy** a button to another container, while pressing **[Ctrl]**, click and drag the button to the desired location.

A button can be copied or moved to a new container in one step by clicking and dragging the button to an empty area of your workspace page.

**Delete:** Click to delete the selected button.

**Properties:** Click to open the Button Creation Window to edit the button.

**Note:** Multiple buttons' Button Creation Windows may be opened at one time to allow simultaneous editing.

**Show / Hide Thumbnails:** Click to toggle showing and hiding the button's thumbnail preview.

## Using the display queue

The display queue, which appears on the right side of an audio container, serves a role similar to that of the queue for a media player such as the Windows Media Player® or Apple Quicktime® media players. The main components of the Display Queue include the Queue List, Thumbnail Button, and the Queue Controls.

**Queue List:** Contains the list of any files which have been queued to play, in the order they are to be played.

**Thumbnail Button:** Click this button to toggle showing and hiding thumbnail images in the Queue List.

**Queue Button:** Click this button to toggle showing and hiding the Display Queue.

### Queue Controls

The Queue Controls provide quick access to the most commonly-used functions for managing the Display Queue. Simply click the buttons to perform the below operations.



**Next** Plays the next item in the queue



**Pause** Pauses playback of the queue



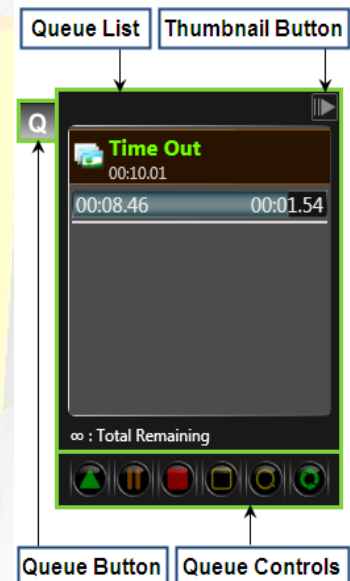
**Blank Sign** Stops playback of the queue and blanks the display. Queue is cleared.



**Clear Queue** Clears the queue (but allows the current item to keep playing)



**Loop** If enabled, queue will play through items in queue continuously until stopped or given another command



# Display Studio Dashboard

Display Studio's Dashboard, located on the bottom pane of the Display Studio window, contains a number of tools which you may find useful. These tools include the **Status Button** and **Display Studio Widgets**, which can assist with everything from managing how media items are played on your signs to helping manage communication among Show Control System components.



## Section Contents

[Status Button](#)  
[Display Studio Widgets](#)  
[Volume Control Widget](#)  
[Dimming Control Widget](#)  
[M3 File Manager](#)  
[DSTI Widget](#)

## Status Button

The Status Button provides a quick and easily-accessible means of checking the status of Show Control System communications and diagnosing communication problems.

The color of the Status Button is the quickest way to obtain an assessment of your system's health. There are three colors that the button can show:



**Green** indicates that all system components seem to be functioning and communicating properly.

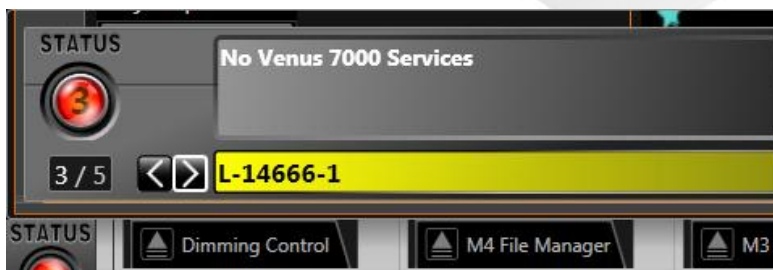




**Yellow** indicates that there are one or more concerns which need to be addressed.



**Red** indicates that there are potentially serious concerns which need to be addressed as soon as possible.

If the Status Button is yellow or red, it is highly recommended to investigate the concern further. To learn more about the concern(s), click the **Status Button** to open the Status Pane.




- The top message box includes the status/error message.
- The bottom message box indicates the system component which the message applies to.
- Click the  and  buttons to view other status messages.

For more help with Display Studio error messages, please refer to [Display Studio Status Errors](#) in the [Troubleshooting](#) section.


## Display Studio Widgets

Display Studio Widgets are tools which can be added on to Display Studio to give you additional functionality and, generally, make producing your digital presentations easier.

### Open a Widget

All widgets will initially appear minimized in your Dashboard pane. To open a widget, simply click the **Open Widget** Button .

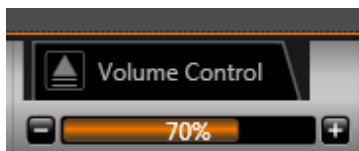




To minimize the widget, click the **Close Widget** Button .

## 8 Volume Control

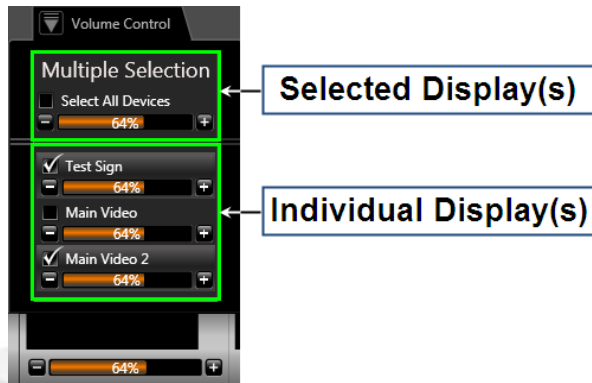
The Volume Control gives you easy access to adjusting the volume level for the audio which accompanies your displays' content. This widget may be used to adjust each of your displays individually, or it may be used to adjust multiple, or all, of your displays at once.

### Minimized View



The Volume Level bar indicates the volume level of the selected displays. Use the  and  buttons to adjust the volume level of the selected displays up or down.

## Expanded View



Use the controls to adjust the volume level for your displays. In the **Individual Display(s)** box, you may adjust the volume level of each display individually and/or place checkmarks in the checkboxes of the displays over which you want to have common control when the widget is minimized. In the **Selected Display(s)** box, the control will adjust any display(s) which have been selected.



**Note:** Selecting all displays at once will reset the displays to the average volume level among them. Selecting multiple displays individually will set the displays to the highest volume level among them (i.e. selecting a display set for 75% and a display set for 50% will change the second display to 75%).

## 7 15 Dimming Control

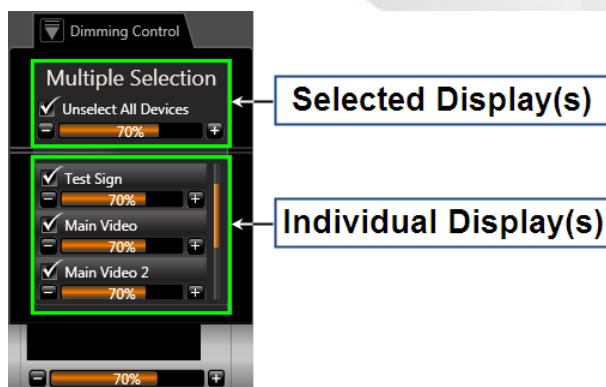
The Dimming Control gives you easy access to adjusting the dimming level of your displays. This widget may be used to adjust each of your displays individually, or it may be used to adjust multiple, or all, of your displays at once.

### Minimized View



The Dimming Level bar indicates the dimming level of the selected displays. Use the  and  buttons to adjust the dimming level of the selected displays up or down.

### Expanded View



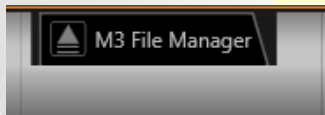
Use the controls to adjust the dimming level for your displays. In the **Individual Display(s)** box, you may adjust the dimming level of each display individually and/or place checkmarks in the checkboxes of the displays over which you want to have common control when the widget is minimized. In the **Selected Display(s)** box, the control will adjust any display(s) which have been selected.

**Note:** Selecting all displays at once will reset the displays to the average dimming level among them. Selecting multiple displays individually will set the displays to the highest dimming level among them (i.e. selecting a display set for 75% and a display set for 50% will change the second display to 75%).

## 15 M3 File Manager

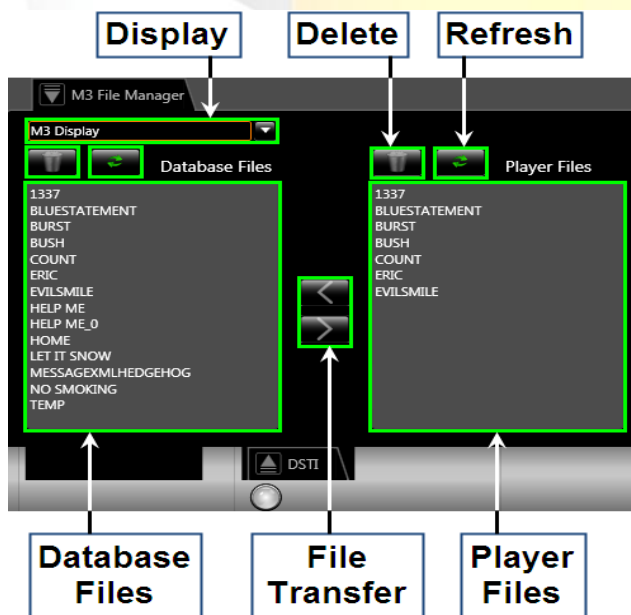
Before any media items can be played on an M3 display, copies of those files must be sent to the DMP-1500. The M3 File Manager offers an easy way to transfer copies of any files you wish to play on your display to your player.

### Minimized View



Click the **Open Widget** button to expand the File Manager.

### Expanded View





**Display:** Indicates the display currently selected

**Delete:** Click to delete the selected file from the user station or player


**Refresh:** Click to refresh the user station or player library

**Database Files:** Lists media files which are currently stored on the user station


**File Transfer:** Click  to copy the selected file(s) from the player to the user station or  to copy the selected file(s) from the user station to the player

**Player Files:** Lists media files which are currently stored on the selected display's player

### To copy files from your user station to your DMP-1500:

1. Click the **Open Widget** button to expand the M3 File Manager.
2. In the Database Files pane, select the file(s) you wish to copy to your player. To select multiple files, hold **[CTRL]** while selecting the files.
3. After all files are selected, click  to copy the file(s) to your player.

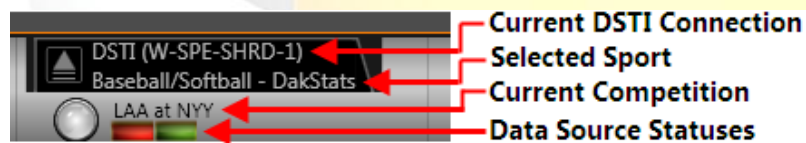
### To copy files from your DMP-1500 to your user station:

1. Click the **Open Widget** button to expand the M3 File Manager.
2. In the Player Files pane, select the file(s) you wish to copy to your user station. To select multiple files, hold **[CTRL]** while selecting the files.
3. After all files are selected, click  to copy the file(s) to your player.

## Daktronics Scoring and Timing Interface (DSTI) Widget

The DSTI Widget provides a means of monitoring the status of your DSTI system from within the Display Studio User Experience. Use the following descriptions to assist you with taking advantage of this feature.

### Minimized View



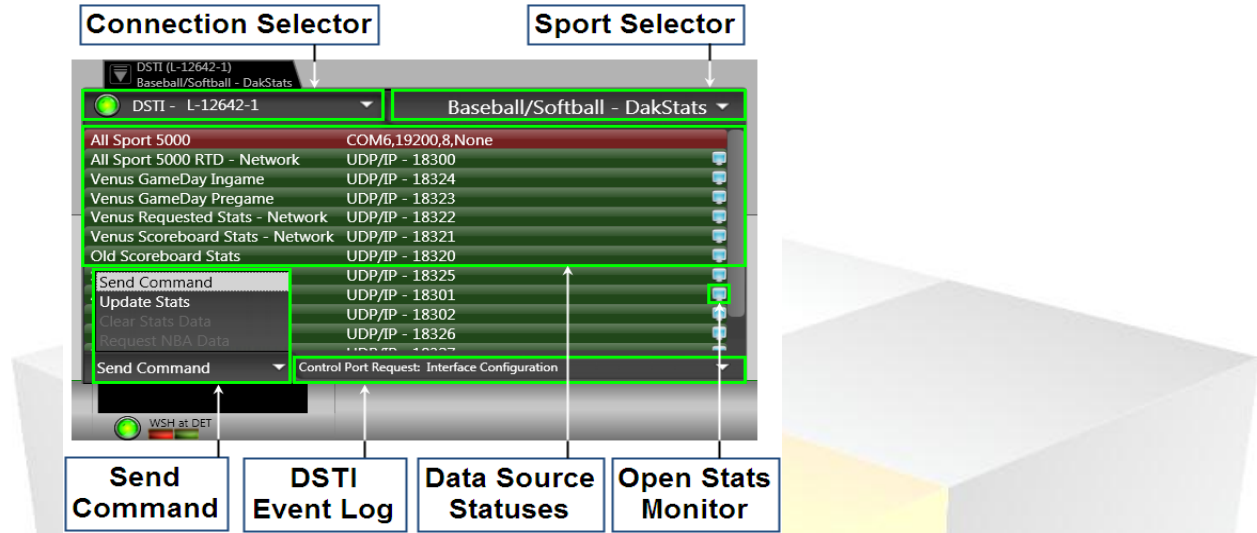
**Current DSTI Connection:** Indicates the DSTI Connection to which Display Studio is currently connected

**Selected Sport:** Indicates the sport currently selected for which statistics are being received

**Current Competition:** Indicates the particular sporting event for which statistics are currently being received

**Data Source Statuses:** Indicates the status of your system's connection(s) to DSTI. Each serial connection is represented by an individual box and all IP connections are collectively represented by one single box. For more information on the data source statuses, see [DSTI Status Colors](#).

## Expanded View



**Connection Selector:** Indicates the DSTI system from which you are receiving data. If your Show Control System is connected to multiple DSTIs, a drop-down menu will be available to allow you to select the DSTI system with which you wish to interact

**Sport Selector:** A drop-down menu for selecting the sport for which you want to receive data

**Send Command:** A drop-down menu for sending commands to the DSTI system.

- *Update Stats:* The system will update all data.
- *Clear Stats Data:* The system will clear all data currently stored.
- *Request NBA Data:* The system will submit a request to receive NBA statistical data.

**DSTI Event Log:** Provides the DSTI's event history since connecting to the system.

**Data Source Statuses:** The color of each data source listed indicates the status of your system's connection(s) to DSTI. For more information on the data source statuses, see [DSTI Status Colors](#).

**Open Data Monitor:** Click to open the Data Monitor for the corresponding data source.



**Tech Note:** If your system is not connected to DSTI, many of the options in the widget will not be available.

## DSTI Status Colors

The DSTI Widget represents the status of data source connections with the following colors:

<b>Green</b>	<b>Active</b>	Indicates that the connection is active. The connection indicator will pulse when data is being received.
<b>Red</b>	<b>Error</b>	Indicates there is a connection, but that there is an error.
<b>White</b>	<b>Not Connected</b>	Indicates that you are not connected to the data source.

# Display Studio Workspace Management

Whenever you make create or make changes to your workspaces, those changes are saved in your Nucleus database – the backbone of your Show Control System. It helps all of the pieces of your system know what's going on around them. As a result, it is important to ensure that all of those pieces, and particularly your user stations, are communicating with the database properly and that the database is always up to date. This section will provide helpful tips about how to ensure that your user stations are working with your Show Control System properly and how to make a backup of, and restore, your Display Studio workspaces.

## Section contents

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[Saving and opening your workspaces](#)

[Working from multiple user stations](#)

[Backing up and restoring your workspaces](#)

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## Saving and opening your workspaces

Here we will discuss how to save and open your workspaces – two important tasks to be aware of, unless you plan to restart your work from scratch every day.

### Saving your workspace

To save your workspace at any time, from within Display Studio, click the **Display Studio Hub** to open the **Main Menu**, and select **Save**.

Also note that Display Studio will automatically save your workspace each time you close the workspace or exit Display Studio.

### Saving your workspace with a different name

This function can be performed for multiple reasons, but you are most likely to use it for renaming your workspace or duplicating it to start creating a new workspace. Note that this will create a new workspace, so if you simply wish to rename your workspace, you will need to delete the workspace with the old name.

1. Click the **Display Studio Hub**, and then select **Save As...** to open the **Name** window.
2. Enter the name for the new workspace in the **Name** textbox.
3. If you wish for the new workspace to be opened immediately after saving, ensure that the **Load new workspace** box is checked.
4. Click **Save**.

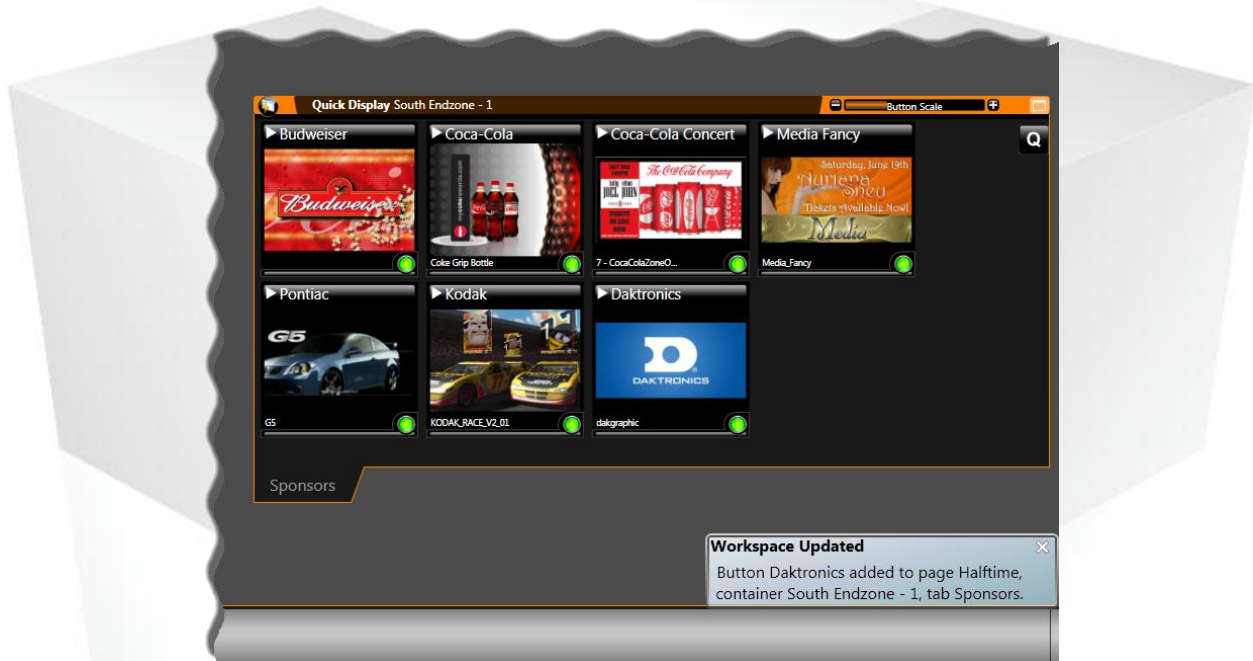
### Opening a workspace

To open a workspace, from within Display Studio, navigate to **Display Studio Hub > Open > Select desired workspace**. If you have a workspace opened, it will be saved and then closed, and the selected workspace will open.

## Working from multiple user stations

If your Show Control System is set up to include multiple operators working from multiple Show Control user stations simultaneously, Display Studio fully supports that type of interaction. Display Studio is designed to be operated and managed on multiple user stations simultaneously, with no interruptions to any user as changes occur.

Any time a change is made from another user station to a Display Studio workspace that you are currently working in, that change will be reflected on your user station virtually instantaneously, and a notification resembling the following example will appear to indicate that the change occurred.



**Note:** You will not be notified of changes that are made to any workspace that you do not currently have open.

## Backing up and restoring your workspaces

Backup and restoration of your Nucleus database (and consequently your workspaces) is handled by the **Nucleus Database Utility**. This tool allows you to leverage the backup data files to restore a database across different machines, perform manual backups and restorations, as well as support multiple different Show Control System configurations.

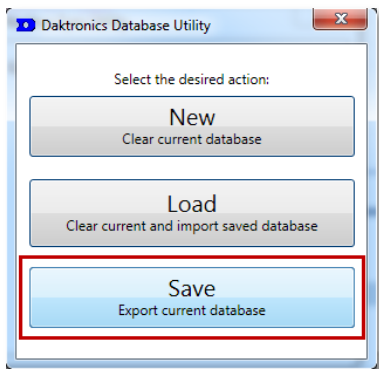
**To launch the Nucleus Database Utility**, navigate to **Start menu > All Programs > Daktronics > Utilities > Nucleus Database Utility**.



**Warning:** The Daktronics/Nucleus Database Utility is an advanced tool and should only be used by, or under the direction of, a Daktronics technician.

## Backup your workspaces

1. From the utility's home screen, click **Save** to open the **Save Backup File** window.

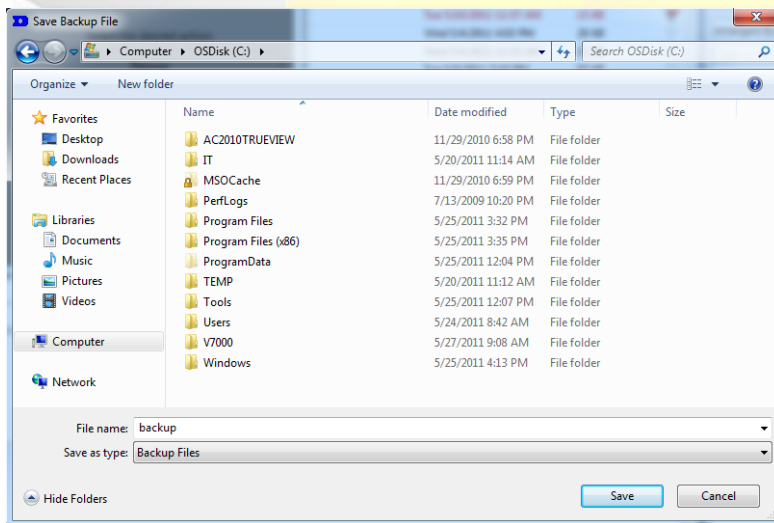


2. In the **Save Backup File** window, browse to the desired backup location and enter a name for the backup file in the **File Name** text box.



**Tip:** The **File name** text box default name is "backup". It is recommended that a unique name be inserted (e.g. Backup2010.11.19).

3. Click **Save** to continue.



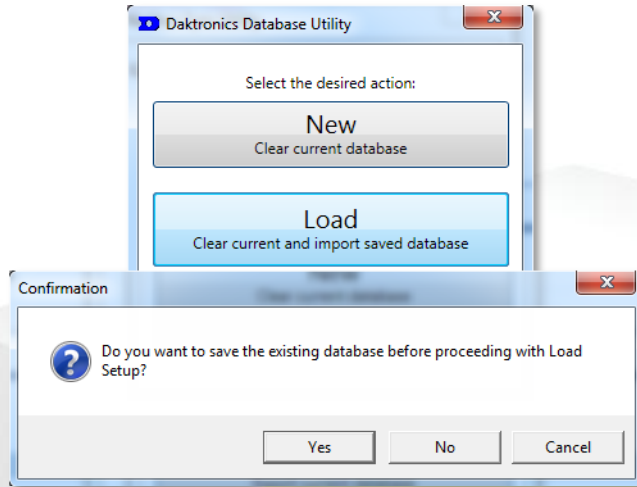
4. When the process is finished, a message will appear indicating that the save was completed successfully. Click **OK** to return to the utility home screen.

## Restore saved workspaces

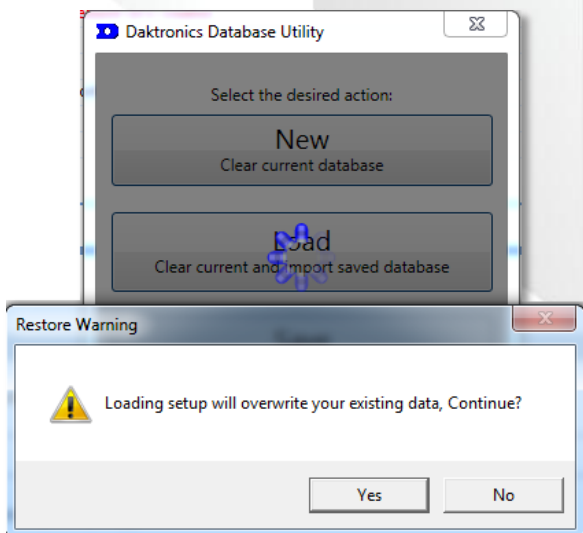


**Tip:** This procedure may be used to both restore backed up workspaces as well as import another existing set of workspaces.

1. From the utility's home screen, click the **Load** button. A **Confirmation** dialog box appears to provide an opportunity to save the current database.

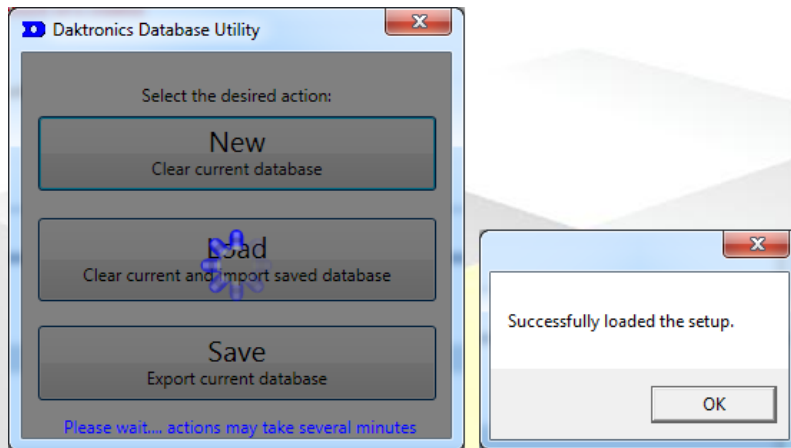


2. Choose from the following options:
  - a. To save the current database before importing a different database, click **Yes** to open the **Save Backup File** window. Proceed to step 3.
  - b. To import a database without saving, click **No**. Go to step 4.
  - c. To go back to the utility home screen, click **Cancel**.
3. In the **Save Backup File** window, browse to the desired backup location and enter a name for the backup file in the **File Name** text box. Click **Save** to continue.
4. The **Daktronics/Nucleus Database Utility** window will gray out and indicate that the chosen actions may take several minutes.
5. During the import process, the **Restore Warning** dialog box appears to request confirmation of the chosen action – to replace the existing data with the data being imported. Click **Yes** to continue, or **No** to abort the import process and return to the utility's home screen.



6. After clicking **Yes**, the **Choose Backup File** window appears. Locate and select the uniquely named backup file you wish to import. Click **Open**.

The **Daktronics Database Utility** window will gray out and indicate that the load process may take several minutes. When the process is finished, a message will appear indicating that the actions were completed successfully.



7. Click **OK** to return to the utility home screen.

# System Startup, Shutdown and Maintenance

This checklist will walk you through the typical startup and shutdown procedures for your Show Control System. These procedures apply generally to most installations; however some practices which are specific to your site may deviate from this document. If you have any questions about proper startup and shutdown procedures, contact Daktronics at 1-800-DAKTRONICS (1-800-325-8766) (U.S. & Canada) or +1-605-697-4000 (Outside U.S. & Canada).



**Caution:** Daktronics control systems are intended for display operations only. The following can adversely affect the operation of your control system equipment: checking personal email, browsing the Internet, downloading files, installing unauthorized applications, etc. Please refer to **Third-Party Software**. Additionally, Daktronics control system software should not be installed on a Windows domain as domain policies can adversely affect system performance.

## Section Contents

Startup tasks  
Shutdown tasks  
Routine Maintenance tasks  
Firewall Settings  
Uninterruptible Power Supplies (UPSs)  
Third-Party Software

## Startup

Daktronics recommends powering up and testing all display equipment approximately four hours before an event.


☑	Task
	Turn on power to the display including Data Distributors not located in the display. Verify UPS is on. Verify power to the rack is on. <b>Note:</b> Graphical garbage may display until the DMP-7000 controller or VIP processor sends data to the display.
	Turn on power to the A/B Interfaces. <b>Note:</b> To avoid random garbled images displaying while the control systems boot up, turn off the A/B Interfaces after the DMP-7000 software begins running. However, scripts to send sign configuration and calibration data will need to be created within DMP-7000 and then executed after turning on the A/B Interfaces.
	Turn on power to the VIP processors, and wait until the processor is booted up for operation.
	Turn on all Digital Media Player (DMP) computers. <b>Note:</b> With continuously running control computers, Daktronics recommends to restart the controllers prior to each event.
	Wait until the DMP-7000 shell window opens and the world graphic spins on all DMP-7000 controllers.

	Turn on SCS equipment.
	Turn on any peripheral equipment (DSTI controller, ProShow® system, Stats computers, signal converters, etc.).
	Execute any display initialization scripts or other necessary scripts.
	Check the operation of the A/B Interface.
	Verify the SyncBack application runs and that the primary system successfully mirrors to the backup controller.
	Check for any working auxiliary feeds (All Sport® , camera feed, DakStats®, DSTI, RTD feeds, etc). Messages may display at this time

## Shutdown

<input checked="" type="checkbox"/>	Task
	Blank displays.
	Turn off power to displays, if possible.
	Turn off power to A/B Interfaces and Signal Converter.
	Turn off power to all Video/Image Processors.
	Close all program windows on DMP-7000 computers and shut down.
	Close all program windows on SCS computers and shut down.
	Close all program windows on DSTI computer and shut down.
	Turn off any related peripheral equipment.

## Routine Maintenance

	<b>Tip:</b> Do not perform maintenance tasks or upgrades immediately prior to or during an event.
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Task	Minimum Required Frequency <sup>1</sup>	Recommendations
<b>7</b> SyncBack	Daily after content creation	See <a href="#">SyncBack</a> , below
<b>Reboot</b>	Weekly	Reboot your SCS machines at least on a weekly basis; and before events
<b>Antivirus/Antispyware</b>	Weekly	See <a href="#">Antivirus/Antispyware</a> , below.
<b>Windows Update</b>	Weekly	Windows Update should be configured to automatically check for, download, and install high-priority updates (hardware driver updates are not recommended)

<b>7</b>	<b>V7ChkRif</b>	Monthly or more	See <a href="#">V7ChkRif Utility</a> , below
	<b>Disk Defragmentation</b>	Monthly	The utility should be run more often on computers which are used frequently
	<b>Windows CHKDSK</b>	Monthly	Can be run if the computer seems to be running slower than usual

<sup>1</sup> Users are encouraged to perform any of the maintenance tasks on a more frequent basis as their resources and schedule permit.

## Antivirus/Antispyware

Daktronics recommends maintaining anti-virus and anti-spyware software on all system computers. This software should be kept up-to-date with current virus and spyware definitions and a full system scan should be performed on at least a weekly basis.

AVG<sup>®</sup> antivirus software has been qualified to be compatible with Daktronics products and will protect computers from both viruses and spyware. Free and enhanced versions of the software are available from AVG. Other products are also widely available.

## **7** V7ChkRif Utility

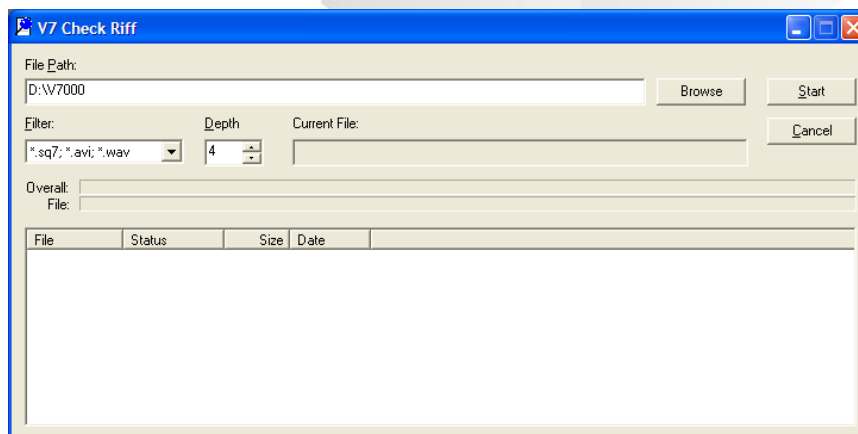
The v7chkref utility checks all DMP-7000 sequences and AVI files for corruption. Corrupt DMP-7000 sequences or AVI files can cause the DMP-7000 to run slower on certain animations. We recommend running v7chkref on a weekly basis if you engage in frequent file creation; or at least on a monthly basis if you create new media files on a more infrequent basis.

**Note:** V7chkref only identifies corrupt media files – it does not repair them.

1. Navigate to the DMP-7000 folder (usually D:\V7000) on the machine where your media files are stored.
2. Locate **v7chkref.exe** and double-click it to launch it.

**Note:** If this file is missing, download it from

<http://dakfiles.daktronics.com/downloads/venus7000/Tools/V7ChkRif.zip>, and then extract the file to your DMP-7000 folder.



3. Stop the **Venus 7000 sign service**. To do this, complete the following steps.
  - a. Open the **Venus 7000 Shell**.
  - b. Click on **Diagnostics**.
  - c. From the list of services, select **V7SS**.
  - d. Click **Stop**.

4. In the V7chkrf utility, set the filter to **\*.sq7; \*.avi; \*.wav**.

5. Set the depth to **4**.

6. In the **File Path** box, enter the path of your V7000 folder, or click **Browse** to navigate to it.

7. If navigating to the folder, select **v7shell.avi**. Click **Open**.

The utility will proceed to scan all media files in the V7000 folder and subfolders. The length of this process varies depending on the amount and size of the files. When the process completes, look for any files without an *OK* status. These files are corrupt.

## **7** SyncBack

The SyncBack utility is used to synchronize files and folders between a DMP-7000 primary and backup machine. This ensures that the system can continue to function properly in the event the primary DMP-7000 experiences a failure. Although your SyncBack utility is configured to run automatically on a regular basis, it is recommended to manually run SyncBack before any events to ensure that all of the latest changes are properly synchronized.

1. Launch **SyncBack** by double-clicking on its icon on your desktop.
2. Right-click on your synchronization profile name to open its context menu.
3. Select **Run**.

Once the backup runs, a **Differences for profile** box will appear to list the differences between the data in the source location and in the destination location.

4. To make the indicated changes, click **Continue Run**.

## Firewall Settings



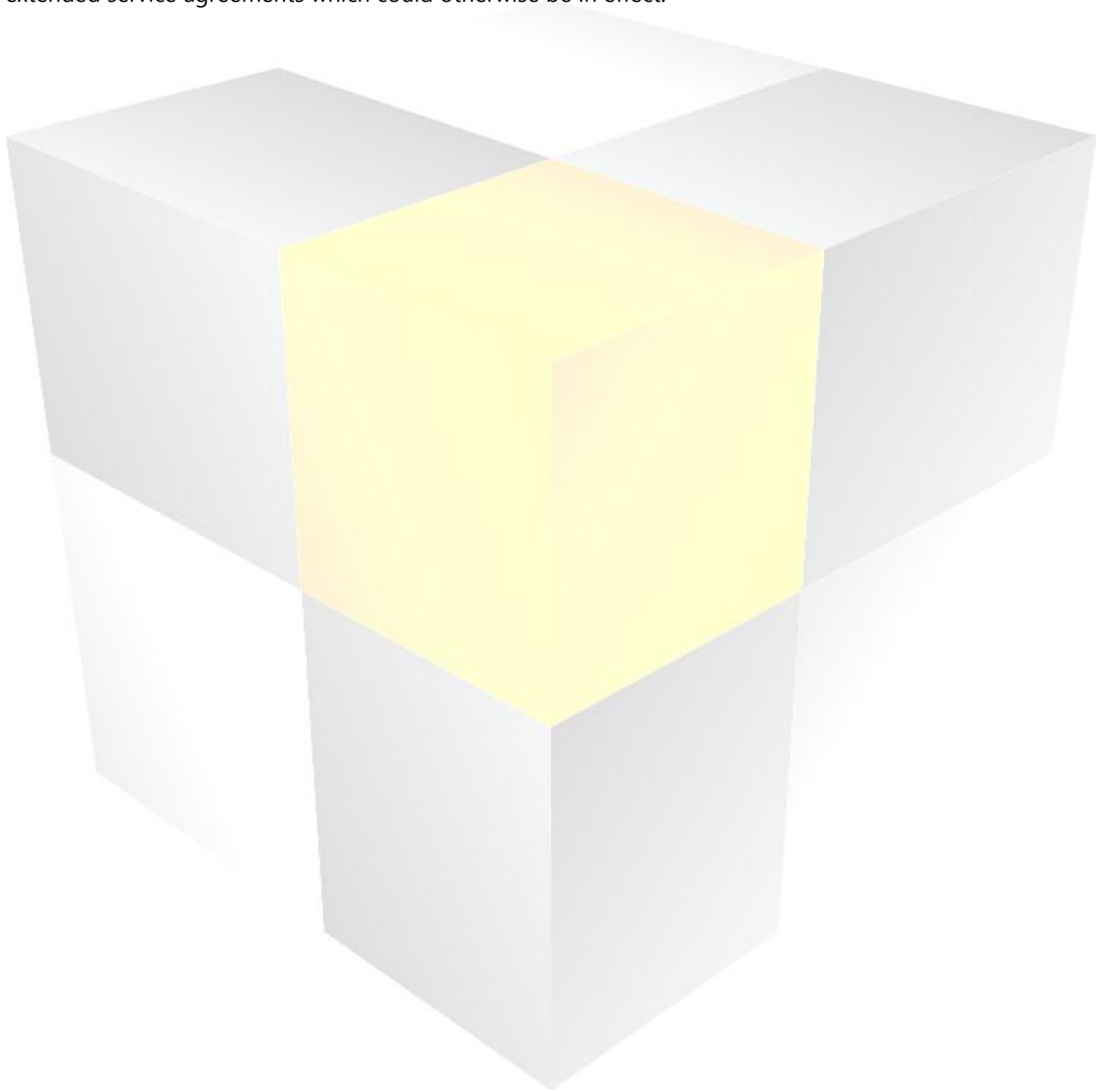
**Warning:** It is critical that the firewall settings on any computer in your digital sign network are not changed after they are configured during Show Control System installation. Incorrect firewall settings will cause malfunctions including, but not limited to, the inability of your user stations to communicate with your signs.

## Uninterruptible Power Supplies (UPSs)

Daktronics recommends that UPSs remain powered on at all times. If powered off, they will need powered up monthly to charge their batteries. Additionally, they must be maintained in a climate-controlled environment. Refer to your UPS manufacturer's documentation for more information.

## Third-Party Software

Third-party software which is not recommended or approved by Daktronics must not be installed on Show Control System computers or other Daktronics digital display equipment. Such software may interfere with the equipment's processing power, computer bus speed, other system resources, or proper configuration settings; all of which are vital to the proper functioning of your Show Control System. Please keep in mind that any unapproved alterations to your Daktronics equipment may void any warranty or extended service agreements which could otherwise be in effect.



# Software Licensing

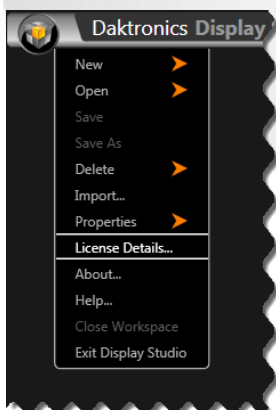
Your purchase of Show Control includes a license to use the Show Control software for the life of your equipment and a subscription to receive one (1) year of software updates at no additional cost. If you wish to continue receiving software updates beyond that first year, you will need to purchase subscription renewals and update your Show Control software license accordingly. If you do not renew your subscription, you will still be entitled to use the version of the software you purchased, but will not be able to install updates to the software. This section will explain how to keep your subscription up to date.

## What you will find in this section:

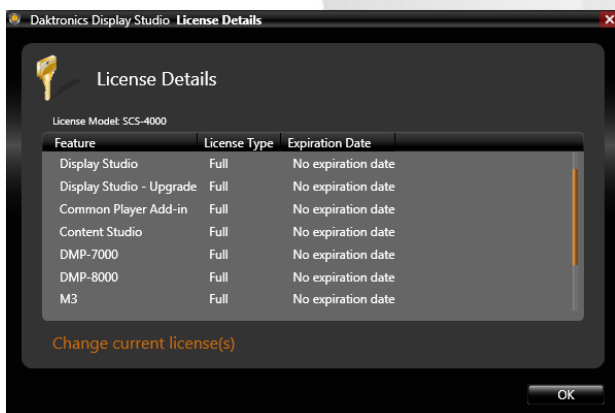
[Verifying License Status](#)  
[Requesting License Code](#)  
[Activating Software License](#)

## Verifying License Status

1. From within Display Studio, click the **Display Studio Hub** and select **License Details...** to open the **License Details** window.



2. The License Details window shows the status of your system's software licensing and ability to receive updates. If you wish to update your licensing, proceed to [Requesting License Code](#).

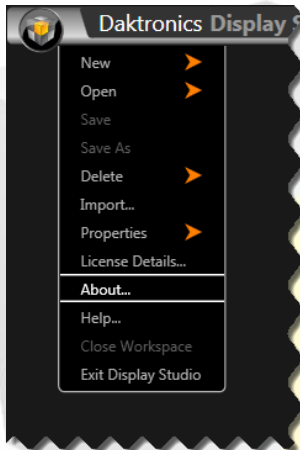


## Requesting License Code

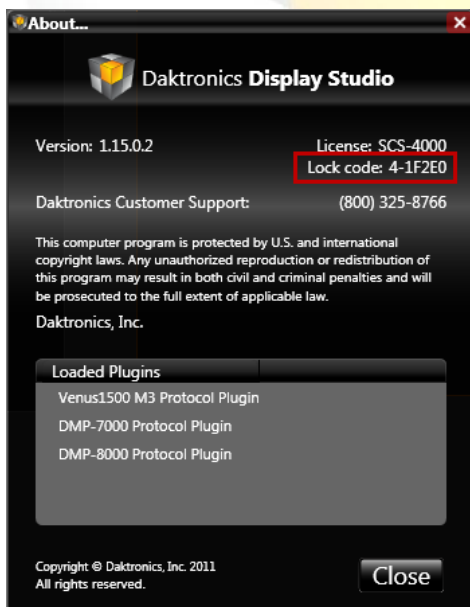
In order to update your Show Control software's license(s), you can elect to either call Daktronics to receive your license code update(s) or email Daktronics. Complete the steps for the desired option.

### Calling Daktronics

1. From within Display Studio, click the **Display Studio Hub** and then select **About...** to open the **About...** page.

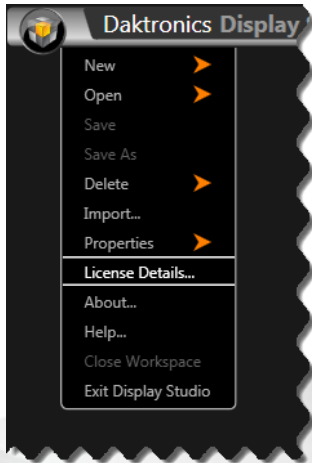


2. Note the **Lock Code** that is indicated on the **About...** page, and call Daktronics Customer Support at (800) 325-8766 to request your license code(s).

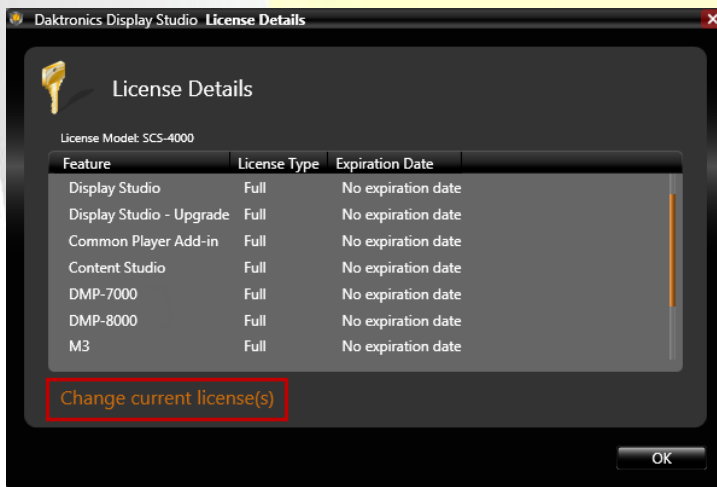


### Emailing Daktronics

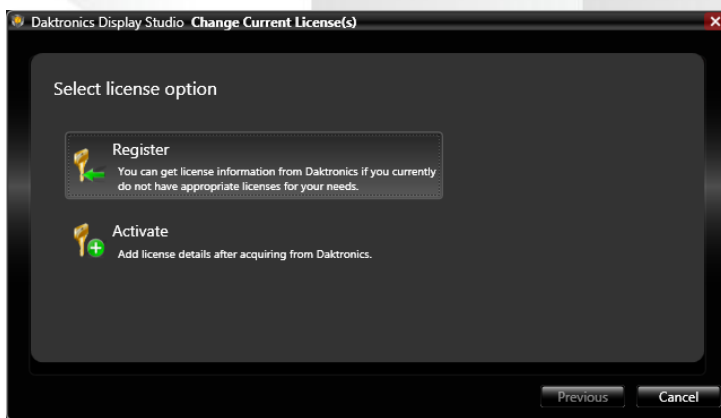
1. From within Display Studio, click the **Display Studio Hub** and select **License Details...** to open the **License Details** window.



2. Click **Change current license(s)** to open the **Select license option** window.




3. Click **Register**



4. In the **How would you like to acquire license(s)** window, click **Email Daktronics**.

Selecting this option will take you to a form which you will need to complete with your order number and contact information.

If e-mailing Daktronics, ensure you insert all of the requested information into the form, and then click **Finish**. Your default e-mail application will open and the information you entered into the form will be inserted into a new email message. Send this e-mail message to Daktronics ([SoftwareActivation@daktronics.com](mailto:SoftwareActivation@daktronics.com)).

 **Note:** If you click **Call Daktronics** you will be taken to a screen which will provide you with your software's **Lock Code** and instructions for calling Daktronics to retrieve your license code(s).



Daktronics Display Studio Change Current License(s)

Enter your contact information

Order number:

Company:

Name:

Street address:

City:  State / Province:

Zip / Postal code:  Country:

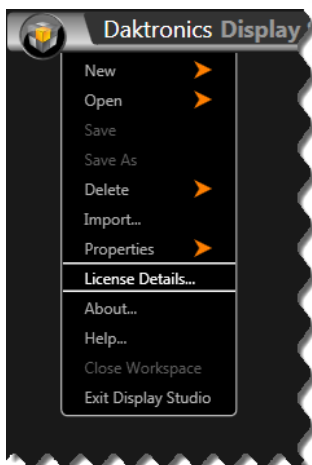
E-mail address:  Phone number:

Previous Finish Cancel

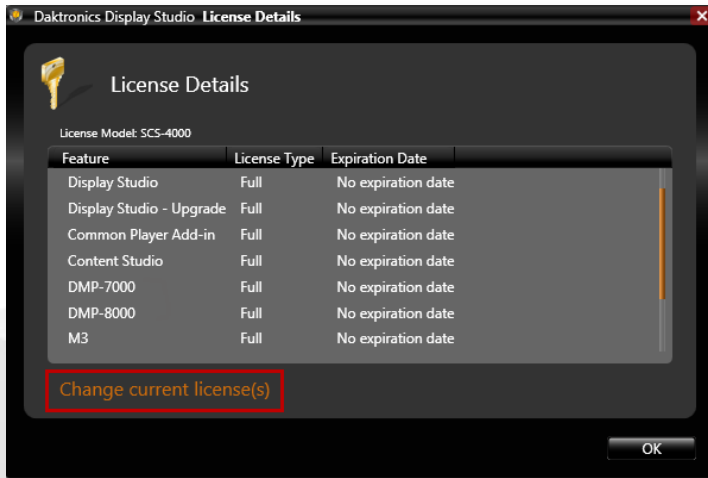
5. You can expect to receive your licensing details from Daktronics within 24-48 hours. Once you have received your licensing details from Daktronics, proceed to **Update License Code or Activate Software**.

## Activating Software License

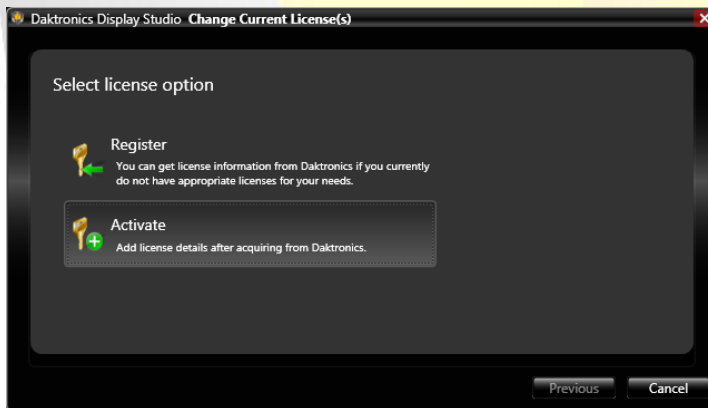
1. Save the file attachment included with the e-mail you received from Daktronics to an easily accessible location on your local hard drive.
2. From within Display Studio, click the **Display Studio Hub** and select **License Details...** to open the **License Details** window.



3. Click **Change current license(s)** to open the **Select license option** window.



4. Click **Activate**.



5. In the **How would you like to add license details** window, select from the following options:



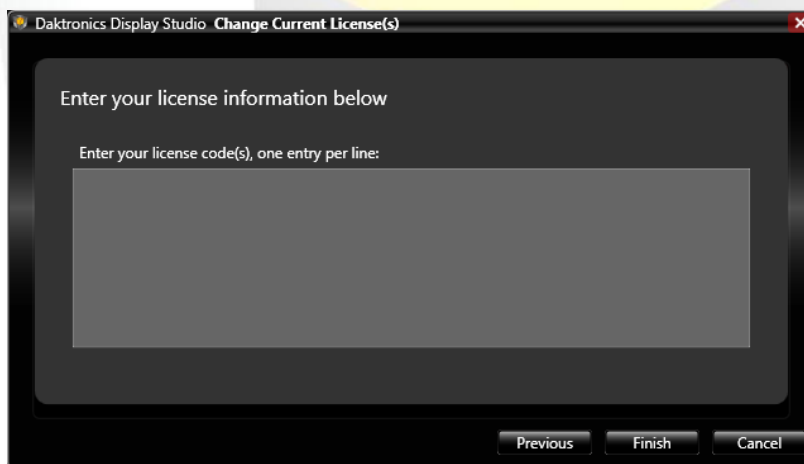
- a. **Add license(s) from file:** Selecting this option will take you to the **Browse for your license file** page. This page will allow you to import the license file e-mailed to you by Daktronics into Display Studio.

If using the e-mailed file, click the **Browse** button to locate and select the license file you were provided (which you saved to your hard drive in step 1). After selecting the file, click **Open**, and then click **Finish**.



- b. **Manually enter license code(s):** Selecting this option will take you to the **Enter your license information below** page. This page will allow you to manually enter the license code(s) you received from Daktronics into Display Studio.

If manually entering the code(s), enter the code(s) you received into the provided text box. Ensure that only one code is entered per line. When finished, click **Finish**.



If the license code(s) are valid, the Change Current License(s) window will close and you will return to Display Studio. If the license code(s) are invalid, you will be presented with an error message to assist you with diagnosing and resolving the problem.

# Troubleshooting

Just in case something were to go wrong with your Show Control System, this section will provide you with some tips that can help you get back up and running as soon as possible.

## Section Contents

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[Display Studio Status Errors](#)

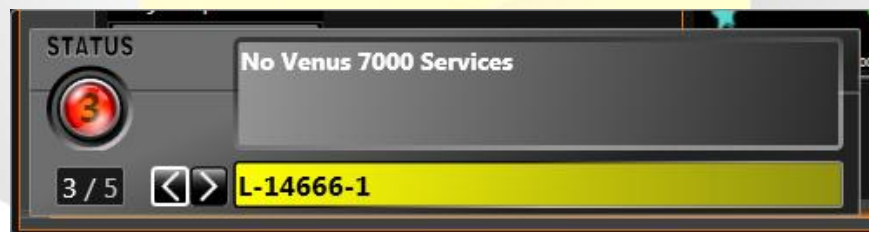
[Troubleshooting Scenario: Video/Image Processor Error](#)

[Troubleshooting Scenario: Single button click adds multiple files to display queue](#)

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## Display Studio Status Errors

The following lists contain possible error messages that can appear in the Display Studio Status Pane. The messages are categorized according to the system component that they pertain to, and detail the message, the likely reason for the message, and possible solution(s) to the error.



**Note:** Messages which produce a status of **Green**, meaning that the system is functioning properly, will not be addressed.

### Data Store

**Message:** **Folder Not Found**

**Likely Reason:** Display Studio is unable to locate the Data Store folder, usually located at C:\ProgramData\Daktronics\Nucleus Server\Disk Data.

**Potential solution:** Go to the above location and create a folder named "Disk Data". After creating the folder, follow the steps for [Manually Establishing Access to the Disk Data Folder](#).

**Message:** **Error Confirming Access to Disk Data**

**Likely Reason:** The Data Store folder is not shared or does not have its network access permissions properly configured.

**Potential solution:** Navigate to the Disk Data folder and follow the steps for [Manually Establishing Access to the Disk Data Folder](#).

### Show Control Server

**Message:** **Server is not responding. Make sure the Server is on and connected to the network.**

*Likely Reason:* The Show Control Server is not on; likely due to network issues.

*Potential solution:* Verify that the Show Control Server is running. Ensure that both the Show Control Client and Server have a network connection and can ping each other.

**Message:** **Unknown Error Contacting the Server. Make sure “Daktronics Nucleus Server” is running on the Server Machine.**

*Likely Reason:* The Nucleus Server service is not running on the Show Control Server.

*Potential solution:* Manually start the Nucleus Server service on the Show Control Server and ensure that it is set to start automatically.

**Message:** **Error Authenticating Client Credentials. Make sure that the Client and Server are set to the same time (GMT).**

*Likely Reason:* The clocks on the Show Control Client and Show Control Server are not synchronized. The clocks must be set for the same time, to within five minutes.

*Potential solution:* Synchronize the clocks on the two machines.

**Message:** **Error contacting the Show Control database. Make sure the SQL Server (Nucleus) is running on the Server machine.**

*Likely Reason:* The SQL Server (NUCLEUS) service is not running on the Show Control Server.

*Potential solution:* Manually start the SQL Server (NUCLEUS) service on the Show Control Server and ensure that it is set to start automatically.

## ERTD errors

**Message:** **The following signs share Id= <ERTD ID> : <Sign 1>, <Sign 2>, ...**

*Likely Reason:* Multiple signs are configured with the same ERTD sign number.

*Potential solution:* If this is the desired configuration, click **Ignore**. Otherwise, edit the ERTD number of the signs so that they all have unique sign numbers.

**Message:** **The following signs have an ERTD Id=0 : <Sign 1>, <Sign 2>, ...**

*Likely Reason:* There are one or more signs with an ERTD number of 0.

*Potential solution:* If this is the desired configuration, click **Ignore**. Otherwise, edit the ERTD number of the signs so they are unique and not 0.

## File Server

**Message:** **No file servers detected. Please check the player configuration.**

*Likely Reason:* The DMP-7000 File Server(s) are not configured with their full UNC path(es).

*Potential solution:* Add the DMP-7000 file server(s) to the Venus 7000 Shell System Configuration. Ensure that the full UNC path is entered (\\[Computer Name]\V7000)

**Message:** **Cannot find network path <File Server Path>. Check that network is accessible, the path exists, and the player is configured properly.**

**Likely Reason:** On the affected DMP-7000 machine, the C:\V7000 (or D:\V7000) folder is not configured to be shared.

**Potential solution:** On the affected DMP-7000 machine, set the V7000 folder to be shared with permissions to allow network users to change files.

**Message:** **Error writing to network path <File Server Path>. Check that permissions are set correctly.**

**Likely Reason:** On the affected DMP-7000 machine, the C:\V7000 (or D:\V7000) folder does not have proper access permissions configured.

**Potential solution:** On the affected DMP-7000 machine, set the network privileges for the V7000 folder. Ensure that network users are allowed to change files.

## Venus 7000 (DMP-7000)

**Message:** **Not Responding.**

**Likely Reason:** The affected DMP-7000 machine is not running or is experiencing network issues.

**Potential solution:** Make sure the affected DMP-7000 machine is running; that both it and the Show Control user station are connected to the network; and that they can ping each other. If the problem persists, it could be a DNS issue. Contact your IT administrator.

**Message:** **Imaging Service Not Responding.**

**Likely Reason:** The V7CPP Imaging Service service is not running on the affected machine.

**Potential solution:** Manually start the V7CPP Imaging Service on the affected machine and ensure that it is set to start automatically.

**Message:** **No Venus 7000 Services.**

**Likely Reason:** The Venus 7000 Sign service is not running or the V7000 account has been removed from either the affected DMP-7000 machine or the Show Control user station.

**Potential solution:** Ensure that the Venus 7000 Sign service is started and set to start automatically and confirm that the machines have matching usernames and passwords.

## DMP-8000

**Message:** **Not Responding.**

**Likely Reason:** The affected DMP-8000 machine is not running or is experiencing network issues.

**Potential solution:** Make sure the affected DMP-8000 machine is running; that both it and the Show Control user station are connected to the network; and that they can ping each other. If the problem persists, it could be a DNS issue. Contact your IT administrator.

**Message:** **No DMP-8000 Services.**

*Likely Reason:* The DMP-8000 player is not running or it is not able to communicate with the Show Control user station.

*Potential solution:* Ensure that the DMP-8000 player is started and properly configured to communicate with the Show Control user station.

### **M3 (DMP-1500)**

**Message:** **Not Responding.**

*Likely Reason:* The DMP-1500 is not powered on; there are network issues; or another program on the network is connected to the DMP-1500.

*Potential solution:* Ensure that the DMP-1500 is powered on and that both it and the Show Control user station are connected to the network. Shut down any programs on the network which could be connected to the DMP-1500 and ensure that it and the Show Control user station can ping each other.

### **Sync Server**

**Message:** **Unknown Fault.**

*Likely Reason:* An unknown error has occurred during synchronizing the server database or disk data.

*Potential solution:* Run the Client Server Sync Utility on the client computer and click the **Synchronize** button. If problem persists, contact Daktronics Support Services.

**Message:** **Attempting to Mirror Server Data to the Backup...**

*Likely Reason:* Indicates that data synchronization between the server database and client database has experienced errors after repeat attempts, and that the system is now attempting to backup the server database and restore the database on the client database.

*Potential solution:* No user action is necessary.

**Message:** **Local Scope Missing. Use "Client Server Sync Utility" to restore scope on local machine.**

*Likely Reason:* The Nucleus database on the local machine is not configured for the synchronization procedure, possibly due to the database being created or restored by a means other than the Display Studio installer.

*Potential solution:* Run the Client Server Sync Utility on the client computer and click the **Create Scope** button.

**Message:** **Server Scope Missing. Use "Client Server Sync Utility" to restore scope on server machine.**

*Likely Reason:* The Nucleus database on the server machine is not configured for the synchronization procedure, possibly due to the database being created or restored by a means other than the Display Studio installer.

*Potential solution:* Run the Client Server Sync Utility on the server computer and click the **Create Scope** button.

**Message:** **Cannot merge changes. Close Display Studio and use "Client Server Sync Utility" to mirror the database on local machine.**

*Likely Reason:* Data synchronization between the server database and client database has experienced errors after repeat attempts, and is unable to complete successfully; possibly due to not having the same startup database on the client machine and server machine, or the client database may have been pointed to a local database or other database before being pointed to the server database.

*Potential solution:* Run the Client Server Sync Utility on the client computer and click the **Mirror Server to Backup** button.

**Message:** **Failed Read/Write Access to Local Disk Data: <Client Disk Data Path>**

*Likely Reason:* The Disk Data folder on the client computer does not have the correct sharing or access permissions configured.

*Potential solution:* Navigate to the indicated Disk Data folder and follow the steps for [Manually Establishing Access to the Disk Data Folder](#).

**Message:** **Failed Read/Write Access to Server Disk Data: <Server Disk Data Path>**

*Likely Reason:* The Disk Data folder on the server computer does not have the correct sharing or access permissions configured.

*Potential solution:* Navigate to the Disk Data folder and follow the steps for [Manually Establishing Access to the Disk Data Folder](#).

## Video Processor

**Message:** **Video Processor Error**

*Likely Reason:* A Video/Image Processor is not responding to commands

*Potential solution:* There is a problem with the connection between a DMP-7000 and Video/Image Processor. Complete the steps in [Troubleshooting Scenario: Video/Image Processor Error](#).

## Software Licensing

**Message:** **License expired.**

*Likely Reason:* A software license has expired on the indicated machine.




*Potential solution:* Contact Daktronics to renew your software license.

## Troubleshooting Scenario: Video/Image Processor Error

In a Show Control System, when a Video Processor script command is triggered it must be sent to the Video/Image Processor by way of the DMP-7000 to which it is connected. If there is an issue which is

causing a VIP to not respond to commands, the Display Studio Status Indicator will turn red and indicate which VIPs are unresponsive. Complete the below steps to resolve the problem.



1. Anytime the Display Studio Status Indicator is showing red, click the **Status Button** to expand its details box.
2. Use the   buttons to cycle through the status messages until you locate the **Video Processor Error** message.
3. The Video Processor(s) experiencing the error(s) will be indicated in the message using the format *[DMP Name]\[Sign Name]: [VIP Name]*. Use this information to ensure that all hardware connections are properly made and communication settings are properly configured.
4. After corrective steps have been taken, return to the status details box and click the  button of the unresponsive VIP to update its status. If the VIP is responsive, it will be removed from the list of unresponsive VIPs. If it continues to be unresponsive, it will remain flagged red on the list.

## Troubleshooting Scenario: Single button click adds multiple files to display queue

Another common scenario you may experience is when you click a quick display button, it adds multiple instances of the same media file to your display queue.

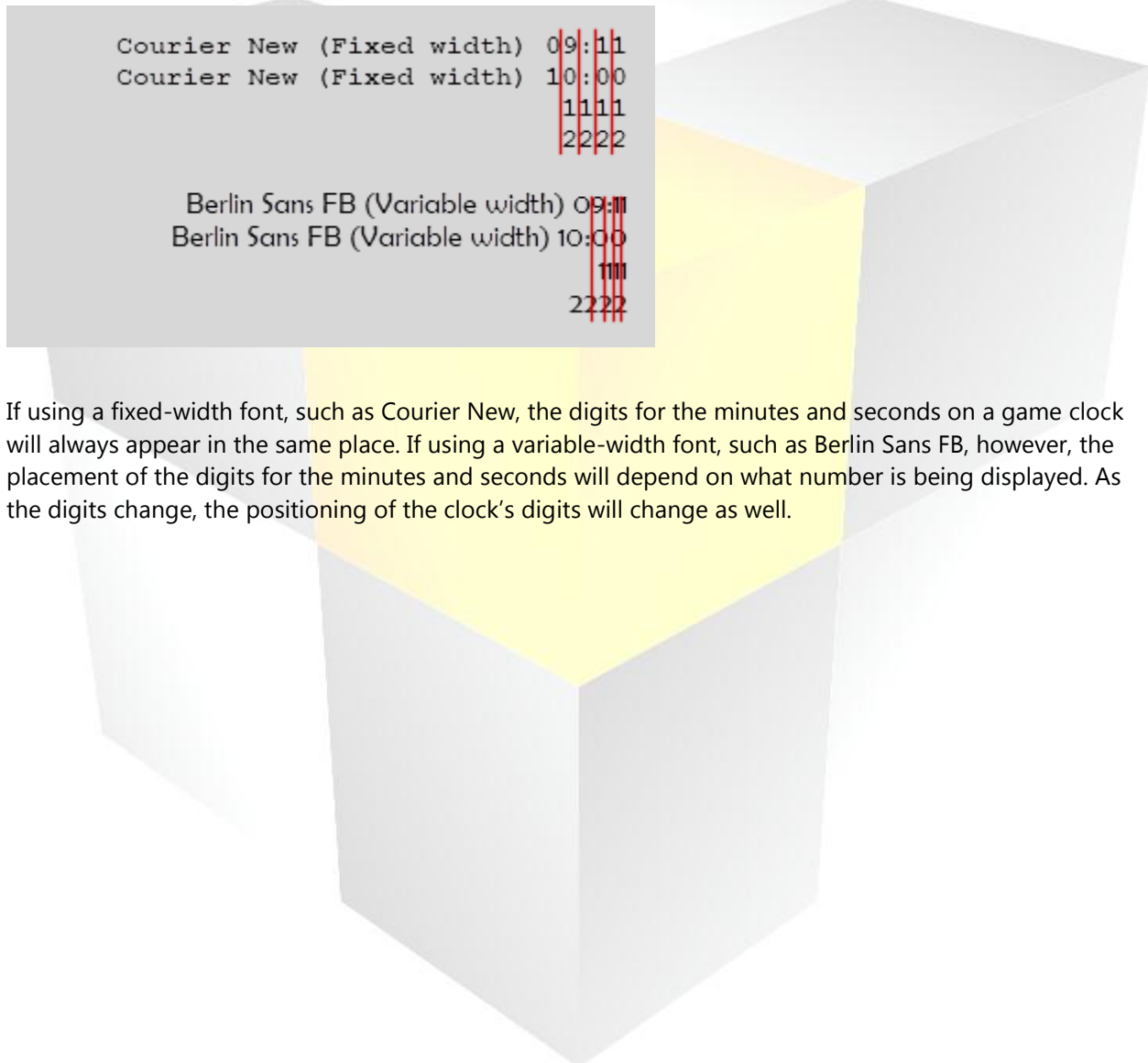


The most likely cause of this scenario is having multiple network connections enabled on the affected machine(s) at the same time. If your machine has a wireless network interface card (NIC) in addition to its Ethernet NIC, it is recommended to disable the wireless card.

For assistance with this or any other errors that you encounter while using your Show Control System, please contact [Daktronics Customer Service](#).

## Troubleshooting Scenario: Dynamic Content “jitters” or “jumps around” when playing

If it is noticed that dynamic content, such as a game clock, “jitters” or “jumps around” while it is playing, it is probably an issue caused by the type of font which was selected for the content. If the font being used for the content is not a fixed-width font, the differences in the widths of different characters will cause the text to appear to “jitter” or “jump around” on the display. Compare the following two fonts (the red lines have been added to illustrate how the first font is aligned in distinct columns, and how the second font does not line up as consistently):



If using a fixed-width font, such as Courier New, the digits for the minutes and seconds on a game clock will always appear in the same place. If using a variable-width font, such as Berlin Sans FB, however, the placement of the digits for the minutes and seconds will depend on what number is being displayed. As the digits change, the positioning of the clock’s digits will change as well.

# Contact Daktronics

Daktronics is committed to delivering the most comprehensive and reliable customer support in the digital signage industry. If you have any questions, comments, or concerns about using your Show Control System, please contact us via any of the below methods:

## Mail

Daktronics Customer Service  
201 Daktronics Drive  
P.O. Box 5128  
Brookings, South Dakota 57006

## Phone

### In the United States and Canada

Call toll free: 1-800-DAKTRONICS (1-800-325-8766)

### Outside the United States and Canada

+1-605-697-4000

## Internet

Visit us online at <http://www.daktronics.com>