OnTheAir CG is composed of two different applications:

- **OnTheAir CG Designer** is used to create projects, and can only play one project at a time.
- **OnTheAir CG Server** plays out projects, and can play out multiple projects at a time. This is the one that is controlled by OnTheAir Video or OnTheAir Node.

While either application can output to a video device, only the one with the license activated will output without a blue demo watermark. It is recommended that you activate your license on the OnTheAir CG Server application, and use the OnTheAir CG Designer in "DEMO" mode. Even with OnTheAir CG Designer in DEMO mode, there are no limitations on the number of projects you create, and you may preview them in the user interface. OnTheAir CG Server will then be used to play out the projects.

The manual will be divided in 2 sections:
- *Part I* for OnTheAir CG Designer
- *Part II* for OnTheAir CG Server.

OnTheAir CG Designer

Table of Contents

First Things First

Before we get into the ins and outs of your OnTheAir CG application, and how to utilize its many features, you must first register your application (though when downloaded as a DEMO version, the application is fully functional, albeit with occasional watermark displayed in the playout).

When you register your license, it is important to remember that a single license may only be used for OnTheAir CG Designer OR OnTheAir CG Server at the same time. Most users opt to reserve the license for OnTheAir CG Server, leaving OnTheAir CG Designer in DEMO mode. While in DEMO mode, projects may still be created and modified without any interference.

Click here to view our on-line white pages article on HOW TO activate your serial number.

As well, if at any time you encounter a technical issue while using your OnTheAir CG application, please open a Support Ticket by clicking on Help > Contact Softron Support. You will be directed to gather logs, select the date of the issue, and to offer a brief description of the issue. Please indicate the Date and Time of the incident in the description (as the logs can be very long), and, if possible attach screen shots (or screen recordings). The more information you can provide, the more expeditiously we will be able to offer a solution. And remember: during the life of your Softron application we offer support at no cost.

PART I: OnTheAir CG Designer

In this section, we'll go over OnTheAir CG Designer, starting with the features present in the **User Interface** and then delving into features presented in the **Menu Bar**.

Most everything you need to create/ modify a project with OnTheAir CG is available on the User Interface.
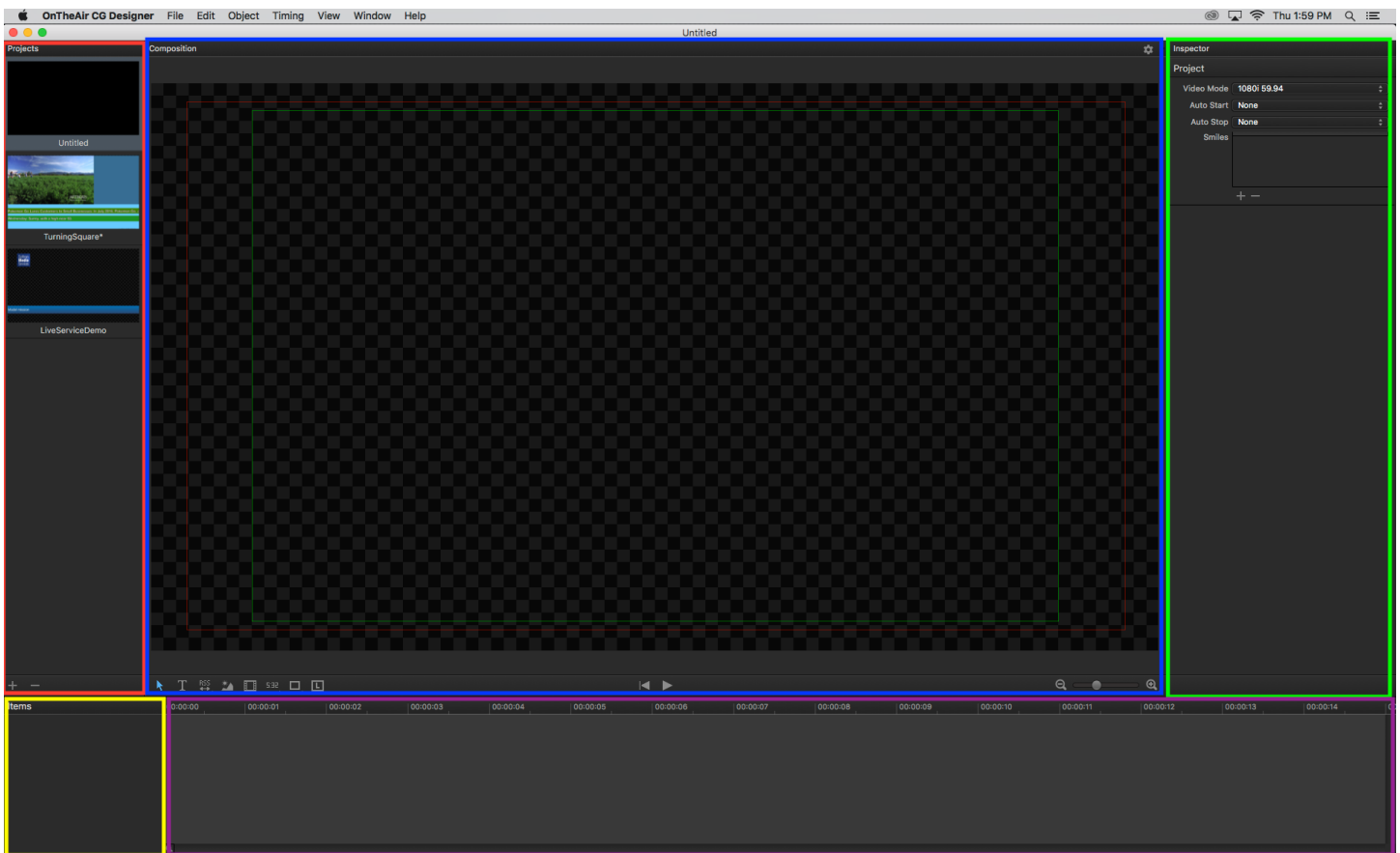
The **User Interface** contains five areas (color-coded in the screenshot above, with their relative locations):

- **Projects** (red, far left)
- **Composition** (blue, center)
- **Items** (yellow, bottom left-hand corner) and **Timeline** (purple, bottom)
- **Inspector** (green, far right)

You may Hide (or Show) the Projects, Inspector, or Timeline areas in the Window tab of the Menu Bar.

OnTheAir CG Designer

1. OnTheAir CG Designer User Interface

1.1. Projects

The **Projects** area displays projects that you have previously designed. You may modify an existing project by clicking on it and using the tools presented elsewhere.

1.2. Composition Area

The large central panel in the UI is where the project is displayed. As you add, subtract, or otherwise change features, the **Composition Area** will reflect those changes. Clicking on Items within the Composition Area allows you to modify certain features of the item, such as it's location and it's dimensions.

You may change the location by clicking on the Item and pulling where you would like it to be displayed. The dimensions may be changed by clicking on the Item and then manipulating the borders by dragging the white squares in the Item's perimeter.

Just below the Display area a number of icons used to design your project. To the bottom left is the Tool Bar; each Icon there is used to select a type of Tool to be created. Clicking on a Tool Icon causes it turn blue, indicating that it has been selected. Once an Icon is selected, clicking on the Display creates an Item that can be resized and moved about the Display.

Icons with a dog-ear in the bottom right-hand corner have options that can be selected by right clicking on the icon. Most of these will be discussed more fully in the Inspector section.

Arrow: This sets your cursor to an arrow, allowing you to interact with the UI.

Text: Clicking this opens a text box wherein you may double-click to add text.

Ticker: Right-clicking on it gives you the option to create a Ticker with text created from a folder, through a Web feed, or entered manually.

Image: This allows you to select a still photo file from Finder.

Movie: This allows you to select a video file from folder.

 Clock: This allows you to create a clock display. Right-clicking on the icon allows you to set the display to either an analog or digital clock.

 Shape: This is used to add a shape to the display. Right clicking on it allows you to change the shape to either a rectangle, a rounded rectangle, or an ellipse.

 Live: The last icon allows you to insert a Live video feed.

Below the center of the display are two arrow keys:

The left-pointing arrow moves the project to the beginning of its **Timeline**. The right-pointing arrow acts as a Play button for the project.

Below the bottom right-hand corner of the display are **Zoom** controls (note that you can use the sliding bar or right-click on the Magnifying Glass icon to select a Zoom Level from a pop-up menu):

1.3.   Items & Timeline

The "**Items**" area displays the Items you have created in your project, and right next to them is the timeline area where you can view and modify the timing of each item.

OnTheAir CG Designer

1.3.1. Items
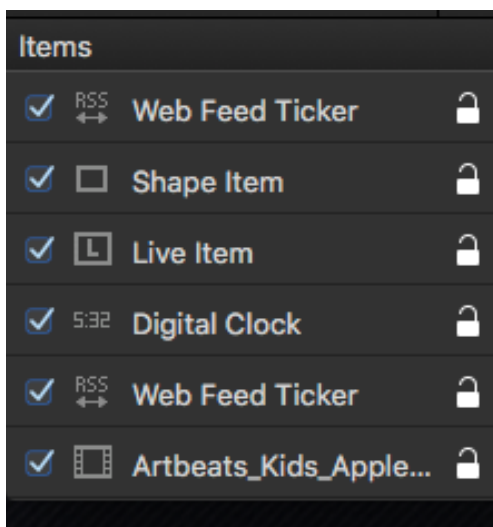
You can enable or disable items using the checkboxes on the left.

The padlock on the right allows you to lock and unlock an item. When locked you won't be able to modify it in the Composition area.

Clicking on an Item highlights it and the corresponding Timeline to the right, and opens controls on the Inspector Panel specific to that particular Item Type.

The order of the Items corresponds to the hierarchy of layering in the project. Items at the top of the list are layered over Items lower on the list. Items can be moved by dragging and dropping them wherever you would like them on the list, and hence in the layering hierarchy. You may also adjust the items' hierarchy by selecting the Item and then clicking Item in the Menu Bar, and from their moving the item as you desire.

1.3.2. Timeline

Each bar in the Timeline coincides with the Item to its left.
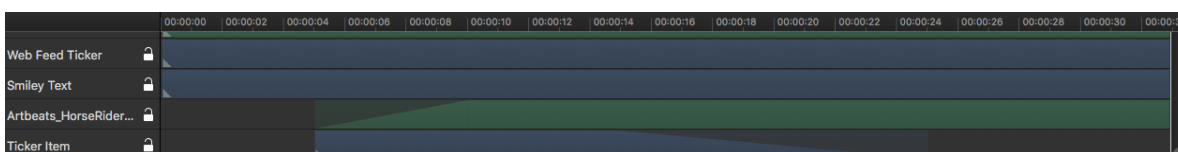
Above the **Timeline** bars are times that coincide to the Project's play time.

The Timing Bars begin and end at the times selected in the Delay and Hold features in the Item's Timing section. Items that are Faded in or out have sloping beginnings or endings. The start point of the slope coincides to when the Fade begins, while the end point of the slope coincides to when the Fade ends.

As the project is played, a white Timeline Marker will move along the Timeline, showing the current point of time in the project's playout.

Below the Timing Bars is a magnifying glass icon. Clicking on it brings up a sliding Zoom bar, allowing you to increase or decrease the spaces between the times. Clicking on the 1:1 button returns the spacing to the default setting.

1.4.   Inspector

The **Inspector** panel is the section where the Items in your project are fine-tuned. Clicking on an Item in the Items panel brings up a number of features specific to each Item Type (discussed below, by Item Type). Note that by holding your cursor over the right-hand corner of each feature section allows you to Hide or Show that section.

There are multiple sections in the Inspector, depending on which Item is selected. We will go through these in detail when talking about each item.
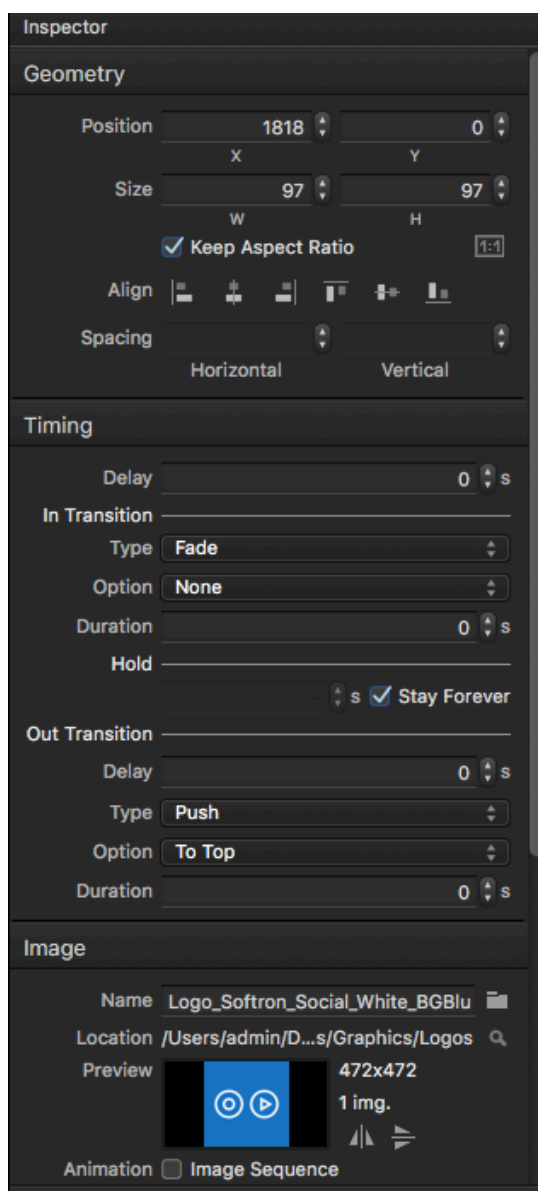
2. Creating projects

2.1. Create and delete projects

You may add a new project by clicking the "+" icon on the bottom left of the panel (or by selecting File > New in the Menu Bar), and you may delete a project by clicking on the "-" button. You may also reopen a project by selecting File > Open... or File > Open Recent in the Menu Bar, or by clicking on the "+" icon and selecting "Add existing projects."

To play out your Project on OnTheAirCG Designer, you must also set up your playback settings. To do so, select OnTheAir CG > Preferences > Playback, and then select the Video Output device (any compatible card that is connected to your mac will automatically be detected). You may in the same panel select the Video and Audio settings in which you would like to play out your projects.

Once you have created your project, you must save it by selecting File > Save As (or just Save, if you are updating a project and keeping the same file name)>

Note, as well, that you can control OnTheAir CG Designer, as well as OnTheCG Server, via Remote Control by checking the appropriate box in the OnTheAir CG > Preferences > General tab.
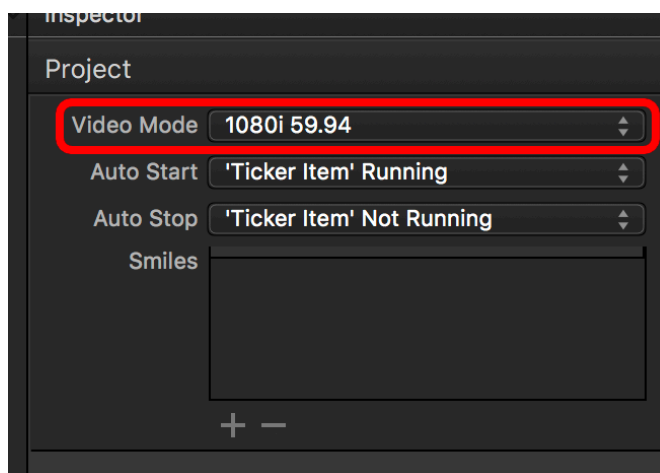
2.2. Projects settings

When you select a project in the project lists, and no item is selected, the inspector will only show the Project settings:
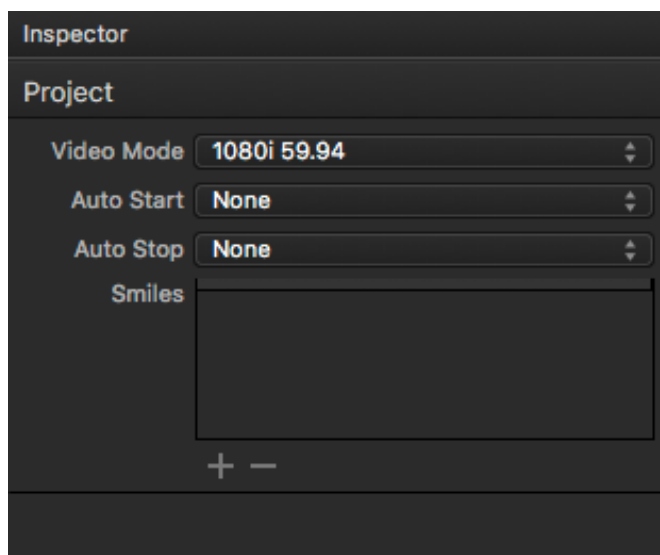
### 2.2.1.   Project Video Mode

This setting allows you to select the format of the videos playing on your project. A number of formats, from SD through 4K, are available.

IMPORTANT Note: If you have set your project to be 1080i59.94, but play it in a 4K output for example, the project will not be scaled to the output. It will look small at

the bottom left of the screen. So choose the same Mode for your project as the your playback settings.

### 2.2.2.   Automatically start stop project with ticker
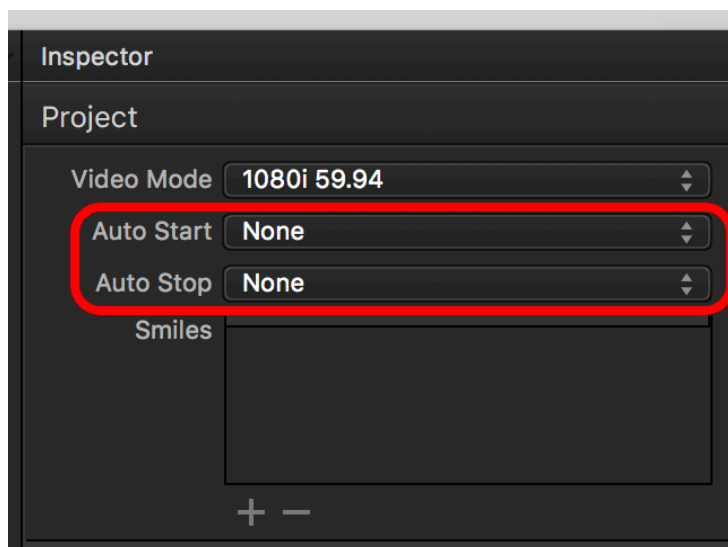
The **Auto Start** and **Auto Stop** feature is used with folder based tickers, and web-feed tickers. The ideas is that if there is no text to be displayed in the ticker, you

don't want to see the eventual background that was set. These 2 settings will allow you to force the whole project to start or stop if there is text crawling or not.

This feature only works with tickers, so first you will need to add a "Ticker" item to your project. Once that is done, click on the popup menu and select which (if there are multiple ones) tickers should be running:
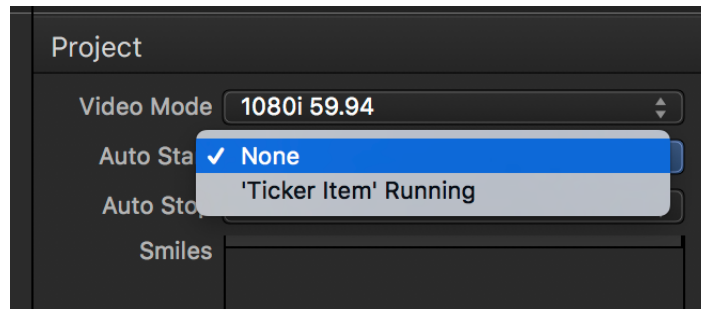

You can select one for the auto start and/or one for the auto stop:
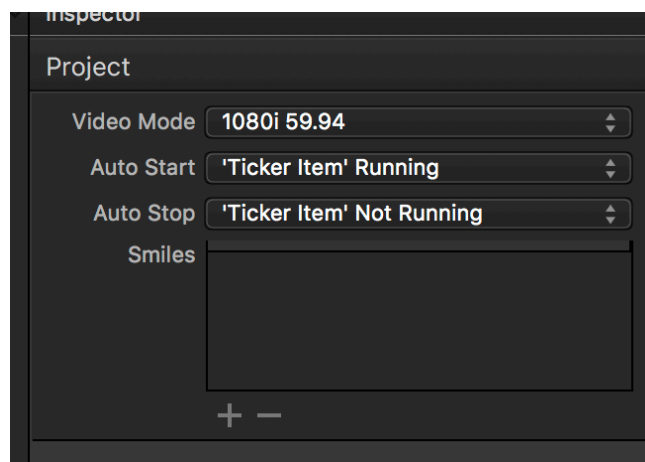
That way:
- When the "Ticker Item" is running (there is a text file in the folder and/or content in the RSS feed), the whole project will play
- When the "Ticker Item" is NOT running (there is no text file in the folder and/or there is no content in the RSS feed), the whole project will stop playing. When there are no text to be displayed, the status of the project in OnTheAir CG Server will be "Waiting"
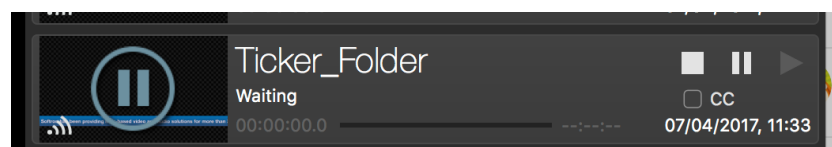
2.2.3. Setting up "Smiles"

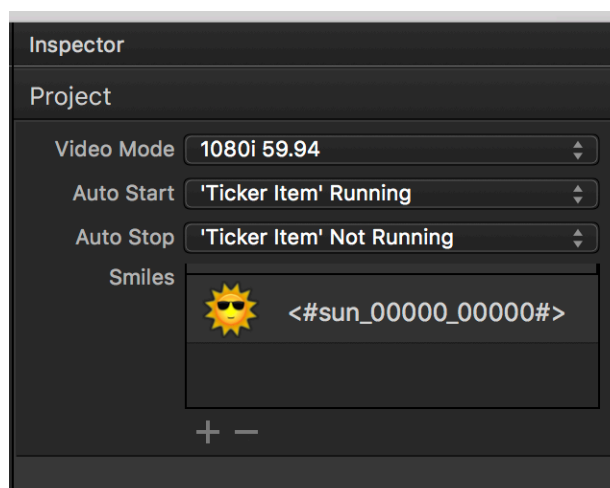**Smiles** are used to replace a text by an image, exactly as when you type ;-) on some smart phones it will be replaced by 😉 . This is very useful in tickers for example, so you can replace parts of the ticker by an image. It can be a fixed or animated image sequences.
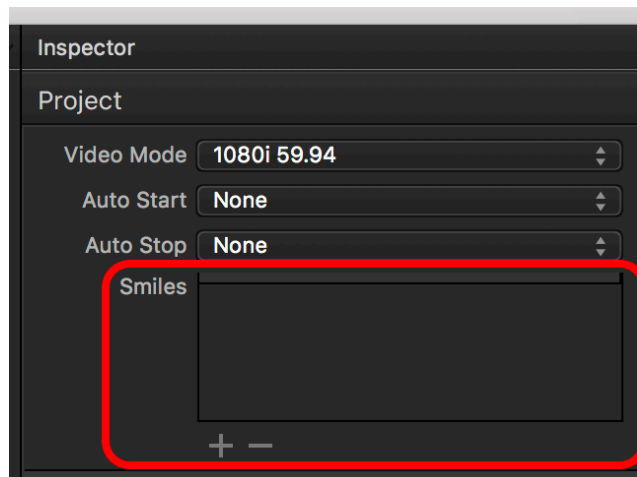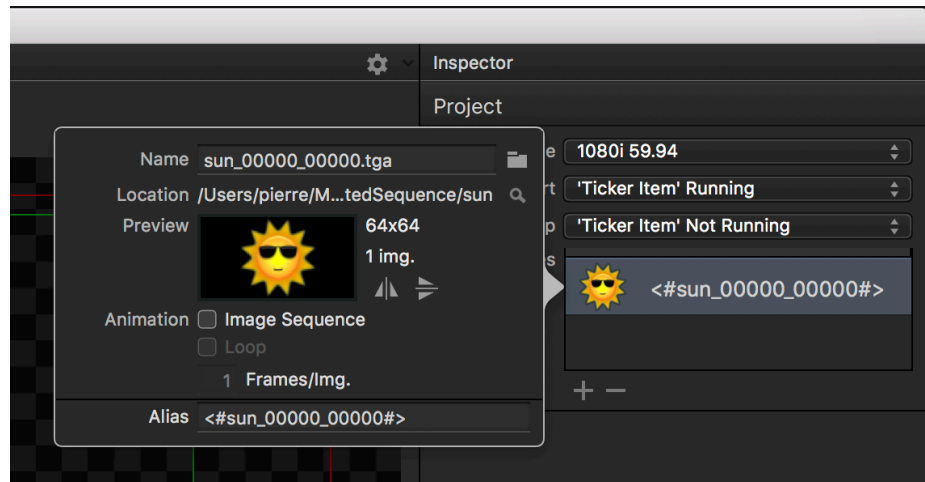

To create a new "Smile":
- click on the "+" icon
- select a still image or the first image of an animated sequence tga

-

- then to edit the settings of the smile, double click on it, so the following window opens:

- there you can edit 2 main things:
  - if it's an still image or image sequence (enable the Image sequence option)
  - modify the "Alias". The alias is the text that will be searched for and replaced by the image. Make sure that this text is unique. We offer a sample of what you could use but you can set it to something easier.

As soon as that is done, and in a text item (fixed, ticker, ...) you type what you have set in the "Alias" of the smile, it will be replaced by the image. Again this can be used in tickers, but also in fixed text as a quick way to add an image somewhere automatically.

3. Adding and editing items in projects

Once you have created (or reopened) and set up your project, you can add items to it. For that, simply select the project, click on any of the tools at the bottom to create a shape, text, still image, video, clock or live item.

As seen before, depending on the type of item created you will see different kinds of information in the Inspector. Geometry and Timing are always shown for all items.

3.1. Geometry and Timing of items

3.1.1. Geometry

You can position and resize items directly in the "Composition" area. But sometimes it is easier to work in the inspector. The Geometry section of the inspector allows you to fine-tune the dimensions and location of the Item.
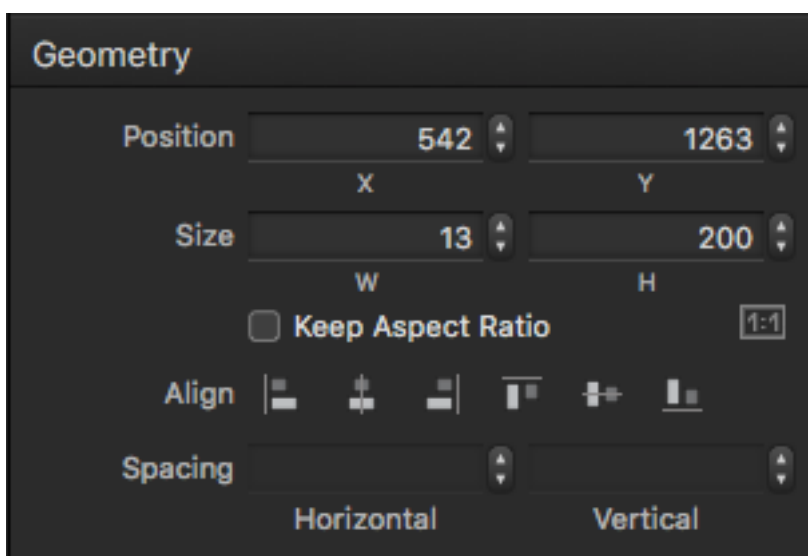
Position: This allows you to move the Item up and down (on the X and Y axes) in the Display via the arrows to the right of the boxes or by left clicking on the box and entering a number in the box itself. The bottom left-hand corner is the 0 point for both axes.

Size: This allows you to adjust the dimensions (Width and Height) of the Item. Checking the "Keep Aspect Ratio" maintains the Width to Height ratio as you adjust one or the other. The 1:1 button reverts the Item to its natural size — if, for example, the Item is a 1920 x 1080 video clip and you resized it to 1600 x 910, clicking on the button returns the clip size to its original 1920 x 1080.

Align: This allows you to adjust the alignment of the Item on the Composition panel.

Spacing: This allows you to adjust the distance between two or more Items. You may hold the "Shift" or "Control" keys to select the Items, and use the arrow keys to set the number of pixels that separate them.

3.1.2.   Item's Timing

When you have created items, you can add to them start and end transitions, as well as set a duration.

1.   In the Timeline

The easiest way to handle the timing of items is to do it directly in the timeline (though you may also do so via the options in the Time tab in the Menu Bar). You can simply select an item in the list, then position the playhead where you want and use keyboard shortcuts :
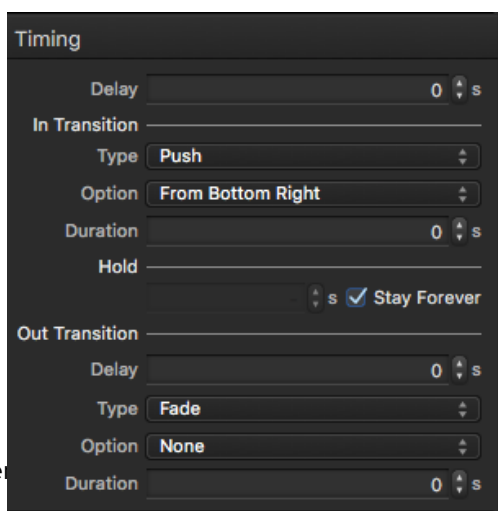
- U = set the start of the "In" transition
- I = set the end of the "In" transition
- O = set the start of the "Out" transition
- P = set the end of the "Out" transition

You can select multiple items and change all their timing information at once. You can also simply drag and drop the different elements directly into the timeline.

If you want to change the type of transitions, however, you'll have to do that in the inspector.

2.   In the Inspector

The **Timing** section allows you to set the time you'd like an Item to present itself, and when you'd like it to exit.

Here you may also set the Transition effects for the Item.

Delay: In the Delay box you may set the time, in seconds measured after the start of the Project, in which the Item will be displayed.

In Transition: This is where the Transition effects are set up for the start of the Item, and includes four items: Type, Option, Duration, and Hold.

Type: You may choose from four different transition effects: None, Fade, Push, or Push and Crop.

Option: The Push (and Push and Crop) effects allow you to choose the direction from which the Item is introduced. You select that from here.

Duration: This is where you set the duration of the transition effect.

Hold: Here you select, in seconds, how long you would like the Item to be present in the project. You may instead set the Item to remain in the project indefinitely by checking the "Stay Forever" box.

Out Transition: This is where Transition effects are set up to end the Item, and are set up in the same way as the In Transition effects.

## 3.2. "Publish" items

Most items (such as Text, images, tickers) have a "Publish" option:
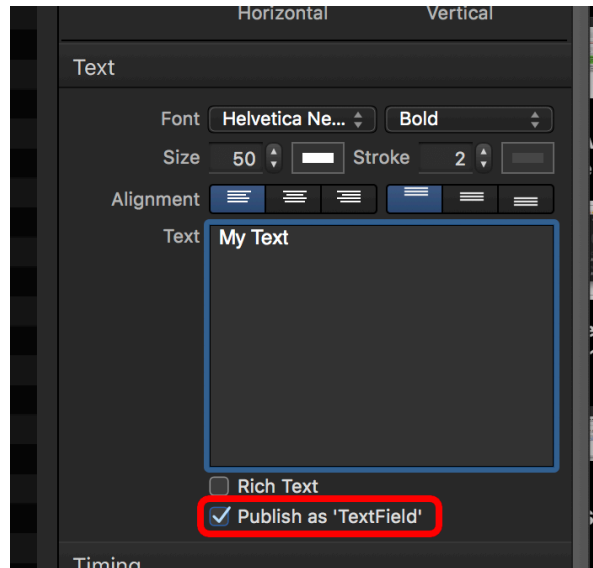
When this option is enabled, you will be able to modify it through the REST API. You need to enable this option if you intend for example to modify a text field from OnTheAir Node. But also if you work with the REST API to control OnTheAir CG, only the "published" items will be modifiable through the REST API.

3.3. Text Items

The Text Field Item Type includes a Text section:
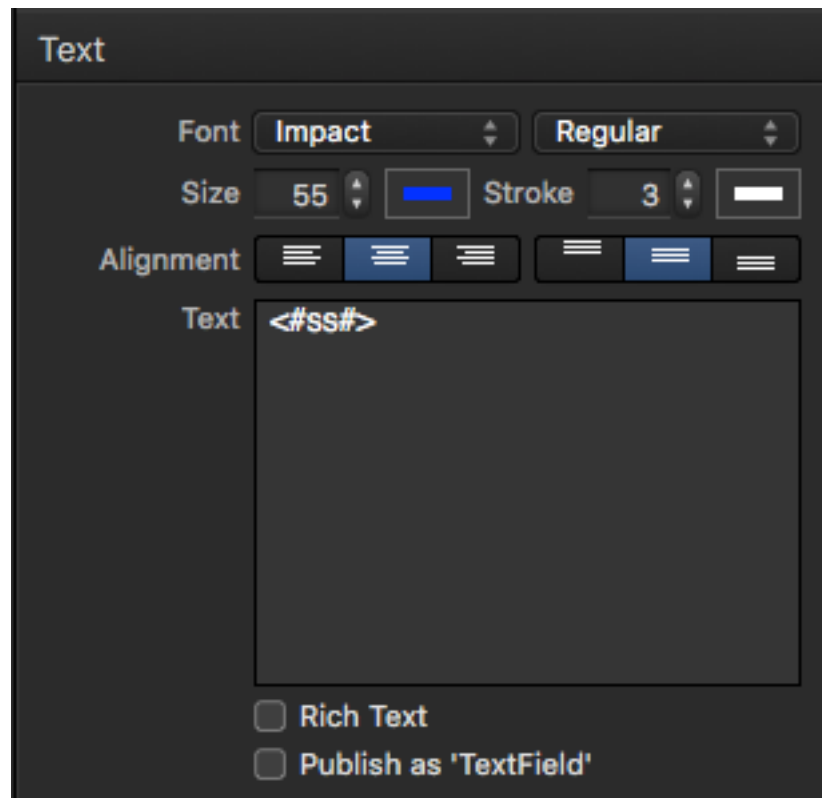
Font: Here you may select the font you would like to use for the text, as well as the different varieties of that font (Regular, Bold, Oblique, etc — the choices vary by Font).

Size: Here you set the size of the font you are using. To the right of that selection is a colored line, with which you choose the color of the font.

Stroke: Here you determine the thickness and color of the Text's outlines.

Alignment: Here you may select the Text's alignment within the Text box created in the Text Tool.
Text: This box is where you enter whatever text you would like to display.

Rich Text: Checking this box allows you to use different font sizes and styles in the Text.

Publish as 'TextField': Checking this box allows you to use this piece of the Project with any application that allows the integration of OnTheAirCG, such as OnTheAir Node or OnTheAir Video. See above point 3.2.

3.4. Tickers

There are three different types of Tickers to choose from (Manual, Folder-based, or Web Feed), and each has a different feature section available.

3.4.1. Manual Ticker

The **Font**, **Size**, **Stroke**, **Alignment**, **Text**, **Rich Text**, and **Publish** features are as per
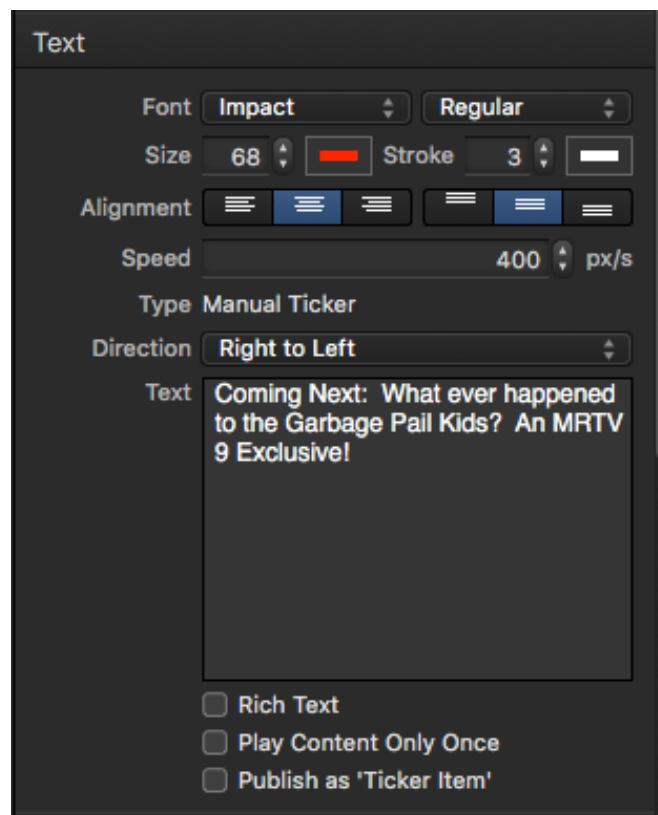
Text Fields, above.

Speed: This determines the speed the Ticker moves across the Display, measured in pixels per second.

Type: This displays the Ticker Type (Manual, Folder-based, or Web-Feed).

Direction: This allows you change the direction the Ticker enters the display. Right to Left is used for languages where the text is read from left to right, while Left to Right is used for languages where the text is read from right to left.

Play Content Only Once: Checking this box causes the Ticker to cross the display only once; by default, it will continually play again once it exits the screen.

3.4.2. Folder-Based Ticker:

The **Font**, **Size**, **Stroke**, **Alignment**, **Speed**, **Type**, **Direction**, and **Content Only Once**, and **Publish** features are as per those with the **Manual Ticker**, above.
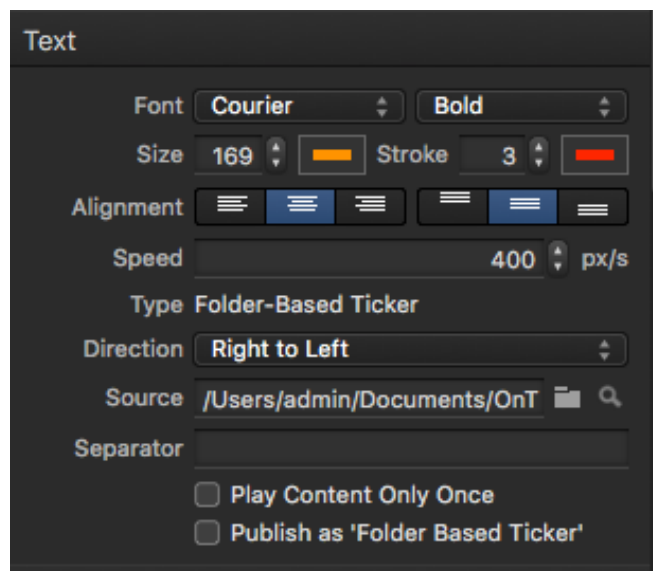
Source: This allows you to set up the path to the folder containing the text you are using as a source for the Ticker.

Separator: You may enter text in this box to be displayed on a ticker after the text in the folder ends and before the folder text starts to play again.

3.4.3. Web-Feed Ticker

The **Font**, **Size**, **Stroke**, **Alignment**, **Speed**, **Type**, **Direction**, **Play Content Only Once**, and **Publish** features are as per the **Folder-Based Ticker**, above.

Feed URL: Here is entered the URL of the RSS feed you would like displayed in the Ticker.

Separator: You may enter text here to separate the RSS feeds you receive from the URL address.

**Sort by:** Here you may select the manner in which the RSS feeds are displayed.

Refresh: This feature allows you to refresh the RSS feed at certain increments

Title: Checking this block displays the RSS feeds' titles in the Ticker.

Description: Checking this displays the RSS feed's description (often the body) in the Ticker.
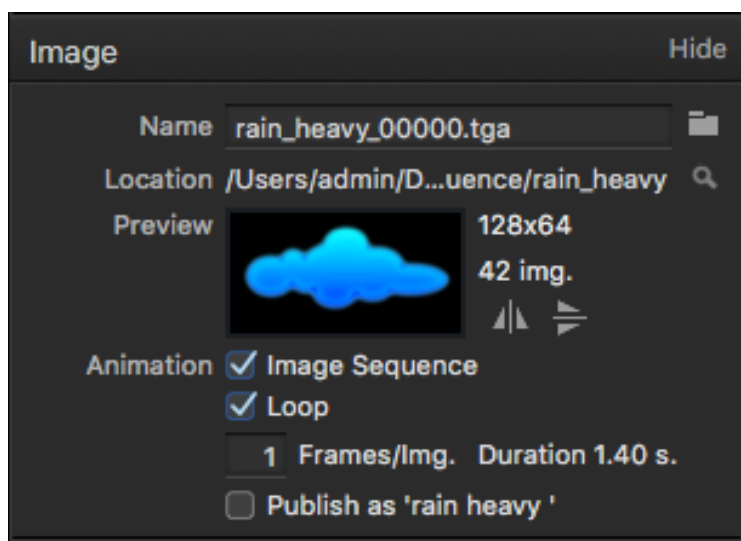
Content: Checking this only shows the RSS feed's content.

Play Content Only Once: Once an article has been played on screen once, it won't be shown again, unless you stop and restart the project.
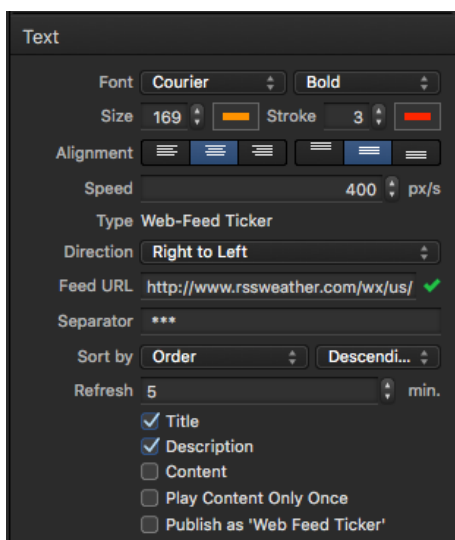
3.5. Image

The Image Tool has an Image section, which allows you to select and modify a still image (or sequence of still images, to form animation).

Name: This is the name of the still file you would like to display. A folder icon to the right of the Name box allows you to select the file from Finder.

**Location:** This is file path for the still image you have selected.

Preview: A thumbnail of the still image is displayed here. To the right of it are the the item's dimensions and arrow icons that allow you to rotate the image. The up arrows flips the image upside down, while the right-facing arrows flips the image from right to left.

Animation: If the file location contains a series of images and the Image Sequence box is checked, the images will all be displayed, in order, at a duration you set up in the "Frames/Img." box. Set for how long each image will be displayed. By default, each image is played for the duration of one frame. But you can also set that each image is displayed during 2 frames, or longer, and thus playing it for longer. This creates an animated sequence of the images. If the Loop box is checked, the animation will continue to repeat itself.

Publish: This works as in the other sections, above.

3.6. Movie

The **Movie** Tool contains a Movie section, wherein you may select the video clip to be played in the project, view information on the clip, and set options for the video's playout.

OnTheAir CG Designer
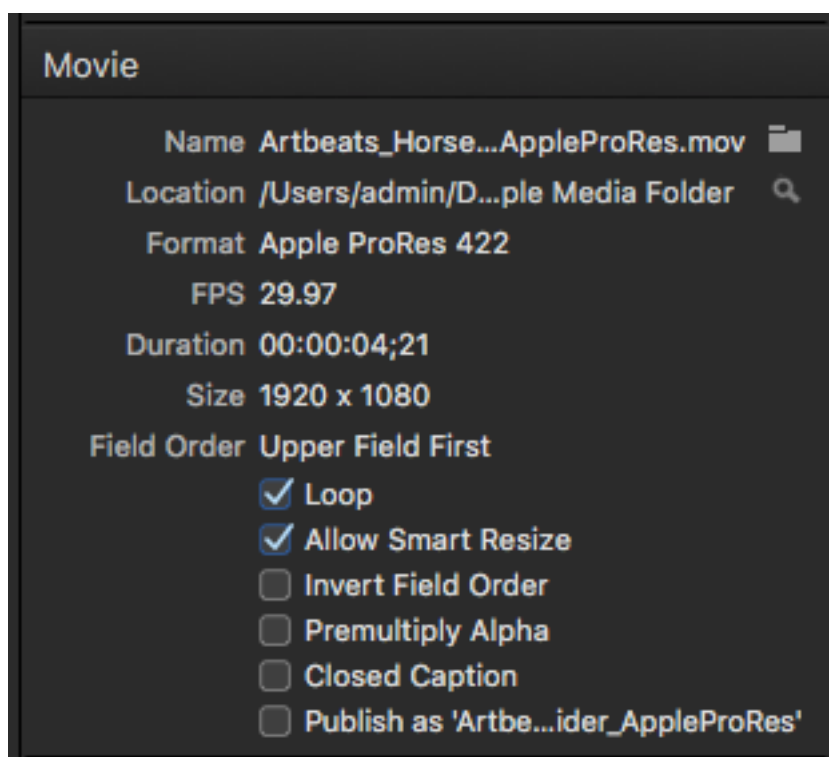
Name: This is the name of the video file you would like to be shown on the Display. A folder icon to the right of the Name box allows you to select the file from Finder.

Location: This is the path to the folder in which your video clip is located.

Format: This is the format of the video file.

FPS: This is the frame rate of the video file.

Duration: This is the duration of the video file, in Hours:Minutes:Seconds:Frames.

Size: This shows the dimensions of the video file.

Field Order: By default, the Upper Field is first when playing out Interlaced files.

Loop: This allows you to play the video file in a loop.

Allow Smart Resize: This allows the Smart Resize feature to be active, which allows the high quality resizing of interlaced videos.

Invert Field Order: This changes the field order of interlaced video files.

Premultiply Alpha: This allows you premultiply the alpha.

Closed Caption: If the QuickTime video file (.mov) that you play has a Closed Captioning CEA-708 track, and it uses the same format as the playback format of OnTheAir CG, it will be outputted to the video card through the VANC, the same way as with other playout applications. Note that you can only have one movie with the option enabled per project, otherwise there will be a conflict between the 2.
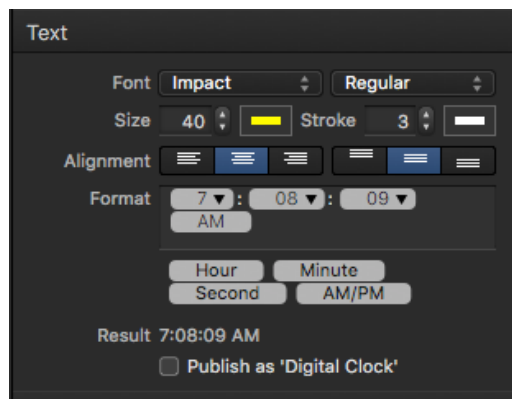
Publish: This works as in the other sections, above.

3.7. Clock

There are two separate **Clock** Tools available (**Digital** and **Analog**), and each includes its own feature.

### 3.7.1. Digital:

The Digital Clock Tool has a Text feature section:

Font, **Size**, **Stroke**, **Alignment**, and **Publish** all work as per the Text Field Item, above.
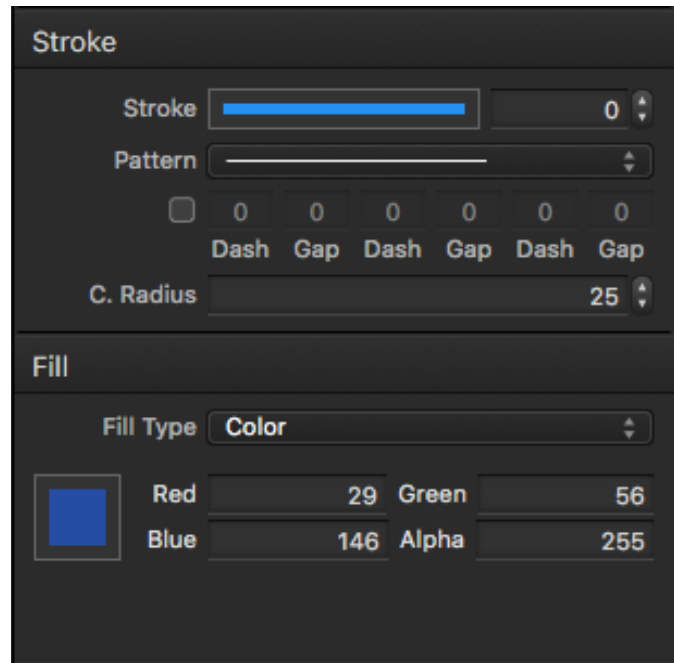
Format: These controls allow you to change the format of the clock's display (for example, from a 12 hour AM/PM cycle to a 24 hour cycle). The Result of the formatting shows an example of how the clock will be shown in response to the Format chosen.

3.7.2. Analog

The Analog Clock Tool has an Image feature section, which operates just like that of the Image Tool:
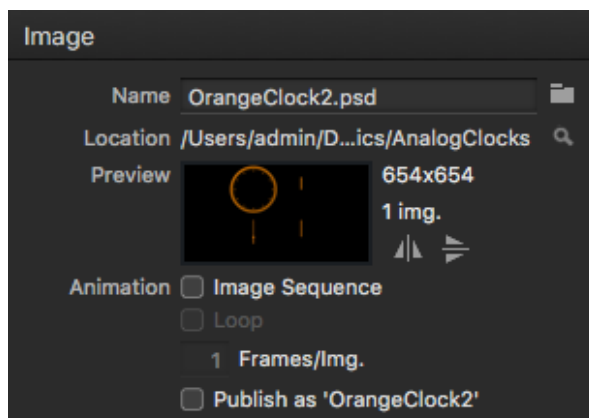
3.8. Shape Item

The **Shape Item** Tool contains two unique sections: **Stroke** and **Fill**.

The Stroke section allows you to create and modify an outline for the shape you have crated.

Stroke: This allows you to change the color and thickness of the outline (a thickness of 0 leaves no outline).

Pattern: This allows you to set a pattern for the outline, i.e. a solid line or dashed line. If you select a dashed or dotted outline, you can modify the layout of the dashes (or dots) with the Dash and Gap boxes.

**C. Radius:** This allows you to change the corner radius on a rectangle or rounded rectangle shape.

Fill Type: You may select how you would like the shape to be filled.

- Color: This fills the shape with a solid color, selected from the colored box to the left (or by adjusting the RGBA display to the right of the colored box).
- Linear Gradient: This fills the shape with a gradually darkening color from top to bottom (or you may click on points on the color bar to add colors to the shape); Angle allows you to change the angle of the shape, while Invert flips the shape 180 degrees.

- Radial Gradient: This fills the shape with a gradually darkening circle that gets darker as it radiates from the center (or you may click on points on the color bar to add colors to the shape); Angle allows you to change the angle of the shape, while Invert reverses the order of color.

3.9. Live

The **Live** Tool contains a Live section that allows you to select a Source for the Live Input.
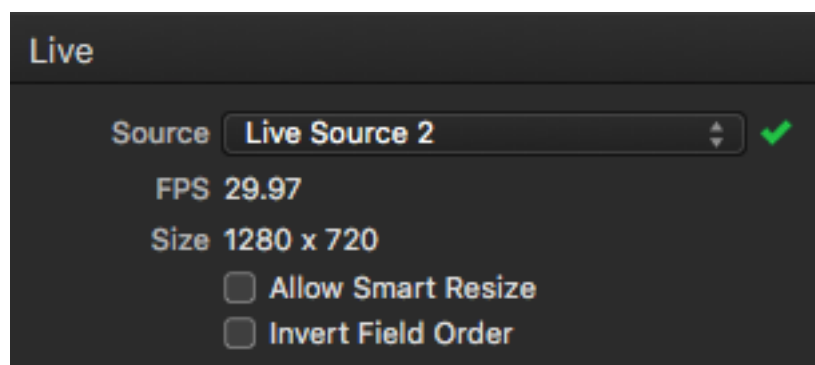
Source: Here you select the Source of the Live Input. If the Source is available, a green check mark will be displayed. If not, a red circle will be displayed.

To use the Live Sources, you must first set up your sources in the Preferences > LIVE panel. There you may add (+) or remove (-) sources. When you add a source, you must select a Video Device Input (any connected devices will be automatically detected). You may change the input device by clicking on the gear icon and choosing from the selection shown there.

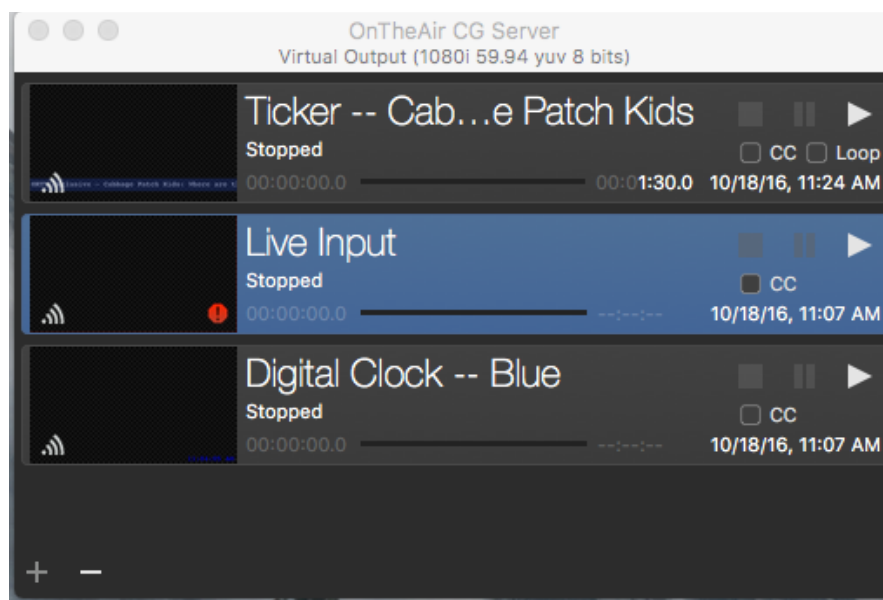**FPS**, **Size**, **Allow Smart Resize**, and **Invert Field Order:** See **Movie**, above.

PART 2: OnTheAir CG Server

OnTheAir CG Server is the application used to play out the projects you have created using **OnTheAir CG Designer**.

4.   Using OnTheAir CG Server

4.1.   The User Interface

The **User Interface** of OnTheAir CG Server is a single panel:

To add projects to OnTheAir CG Server, simply click the "+" icon in the bottom left and select the project you would like to add. To remove a project, highlight the item and click on the "-" icon. You may also add or close projects through the Playback submenu in the Menu Bar.

The projects displayed in the panel are shown in the overlay hierarchy; those at the top of the list will overlay those below it. You may move the projects up or down the list simply by dragging and dropping them where you would like them displayed.

A thumbnail of the project is displayed on the left side, and will show a wifi icon if the project has been published. If a red circle is shown on the thumbnail, the video source is not available for the project.

To the right of the thumbnail will be displayed the project's title. Below that will be a status indicator (Playing, Stopped, or Paused), and below that is the timecode bar for

the project. To the left of the bar will be displayed the length of time that the project has played, and to the right is the duration of the project (if any; if the project is set to Stay Forever, the duration display will read —/—/—.

To the right of the project's title will be the project's playback controls (stop, pause, and play), below which are boxes to enable Closed Captioning (CC) and put the project in a Loop. Below those controls are the dates and times the project was published to OnTheAir CG Server. The Playback controls are also available in the Menu Bar > Playback submenu, or the following hot keys may be used:

Start/ Pause: Space bar
Pause: K
Stop: S

4.2. Playing Out from OnTheAir CG Server

To play your projects out from OnTheAir CG Server, you must first set up your playback device. To do so, go to the Menu Bar and select OnTheAir CG Server > Preferences > Playback. There you must select the Video Output Device (any compatible video card will automatically be detected and displayed), and then you may select the video and audio settings as you desire.

You may set your OnTheAir CG Server application to resume playback at start up by clicking the appropriate box under the General tab in the Menu Bar > Preferences submenu.

4.3. Live Sources

To playout a Live Video project, you must set up your Live Sources. To do so, go to the Menu Bar and select OnTheAir CG Server > Preferences > Live Sources. There, you may add a Live Source by clicking on the "+" icon in the bottom left corner of the panel and then entering the Live Source Name; this name must be identical to that indicated in the Project, as set in OnTheAir CG Designer. You may then select the Video Device Input from which the Live Source will be fed (all compatible input devices will automatically be detected and displayed).

You may change the settings of your Live Source by clicking on the gear icon, or you may remove the Live Source by highlighting it and clicking on the "-" icon.