

DJ HTML Creator

User Guide

Create Animated HTML Overlays for CasparCG, vMix, and OBS

A complete guide for first-time users

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1. Introduction

What is DJ HTML Creator?

DJ HTML Creator is a Windows desktop application for designing and animating HTML-based graphic overlays for broadcast use. It provides a visual timeline editor with keyframe animation, making it easy to create lower thirds, title cards, scoreboards, tickers, and other broadcast graphics without writing any code.

The application exports self-contained HTML files that can be loaded directly into CasparCG, vMix, OBS, or any other broadcast playout system that supports HTML templates.

Supported Playout Systems

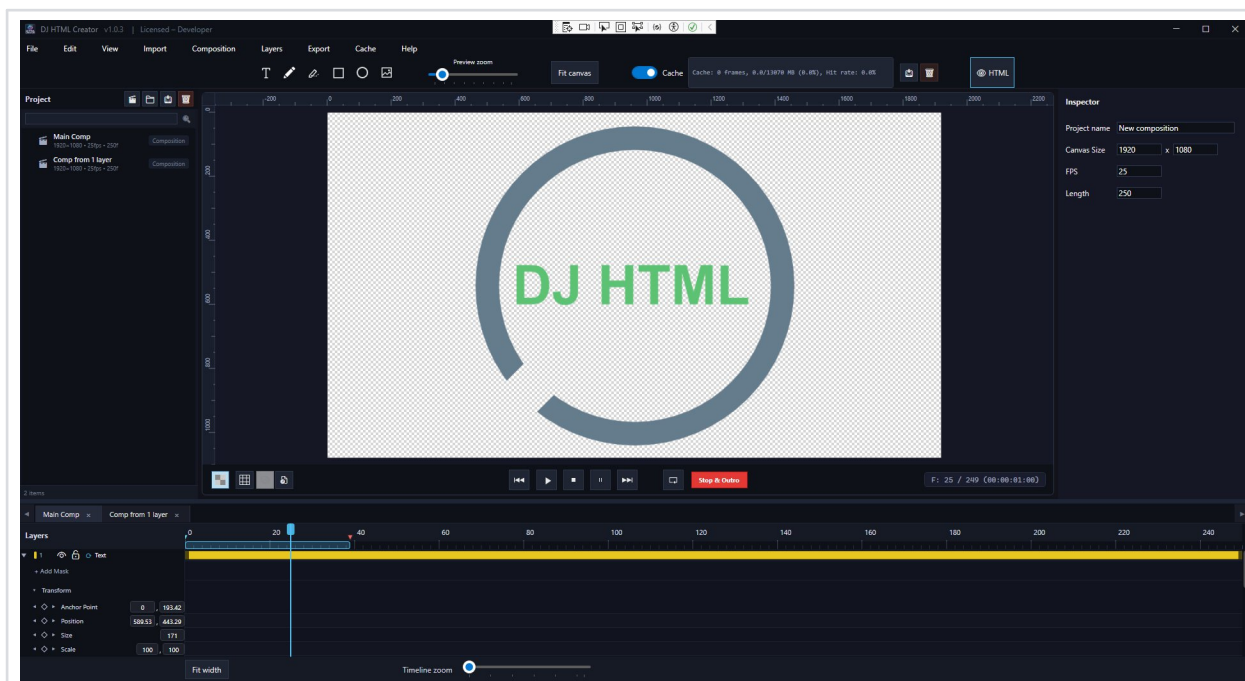
- **CasparCG** — Free, open-source broadcast graphics server that uses CEF (Chromium Embedded Framework) to render HTML templates as real-time video overlays
- **vMix** — Professional live video production software with Browser Input support for HTML overlays
- **OBS Studio** — Free, open-source streaming and recording software with Browser Source support
- **oGraf** — Open specification for HTML based graphics, used in live television and post production workflows
- **SPX Graphics** — Free, open-source HTML graphics controller for live productions, supporting HTML templates with dynamic data updates via its built-in web UI

System Requirements

- Windows 10 or later (64-bit)
- .NET 8.0 Runtime or later
- Minimum 4 GB RAM (8 GB recommended)
- Display resolution of 1920x1080 or higher recommended

2. Interface Overview

DJ HTML Creator's interface is organized into several key panels. Understanding each panel is essential for an efficient workflow.



DJ HTML Creator interface: Preview (center), Timeline (bottom), Inspector (right), Project (left)

Preview Panel

The Preview Panel is the large canvas area in the center of the screen. This is where you see your composition rendered in real-time. You can:

- **Zoom** in and out using the mouse scroll wheel
- **Pan** the canvas by holding the middle mouse button and dragging
- **Select** layers by clicking directly on them in the preview
- **Move, resize, and rotate** layers using the on-canvas gizmo handles

TIP: Hold Shift while resizing to maintain the aspect ratio of a layer.

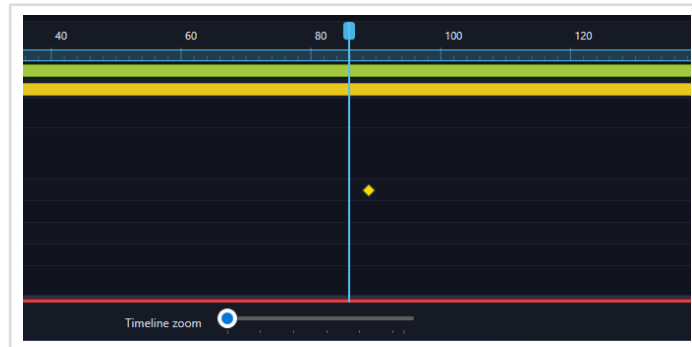
Timeline Panel



Timeline: Layer controls (left), duration bars and keyframes (right)

The Timeline Panel is located at the bottom of the interface. It displays all layers as horizontal tracks, each showing a colored duration bar that represents when the layer is visible in the composition.

- **Playhead** (blue vertical line): Shows the current time position. Drag it to scrub through the animation.



Playback controls: Skip back, Play, Stop, Pause, Skip forward

- **Playback controls:** Play, Pause, and Stop buttons for real-time preview of your animation.
- **Frame navigation:** Use arrow keys to step forward or backward one frame at a time.
- **Keyframe diamonds:** Small diamond shapes on the timeline indicate keyframes for animated properties.

Inspector Panel

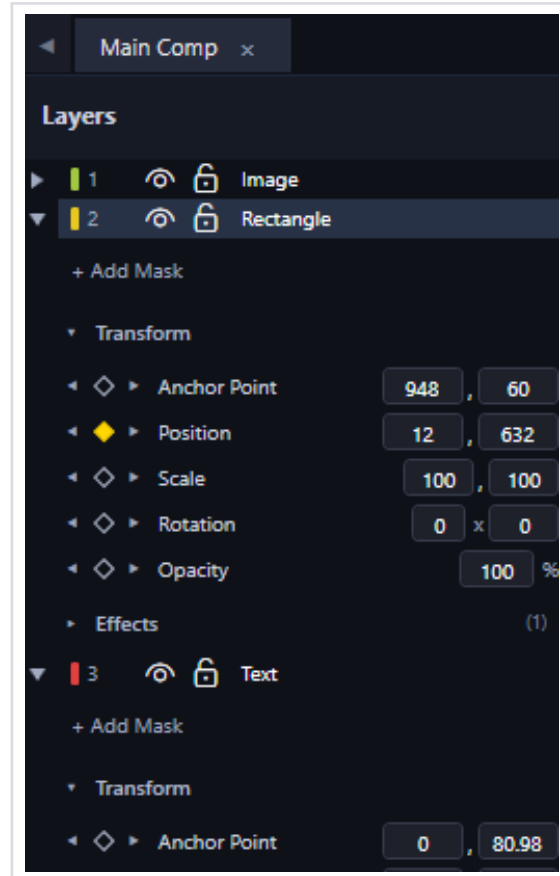


Inspector showing composition properties

The Inspector Panel is on the right side of the interface. When you select a layer, the Inspector shows all editable properties for that layer:

- **Transform properties:** Position, Scale, Rotation, Anchor Point, Opacity, Skew, Perspective, 3D Rotate X / Y / Depth
- **Text properties** (for text layers): Font family, size, weight, style, color, letter spacing, line height, alignment
- **Effect parameters:** Controls for any effects applied to the layer
- **Layer-specific settings:** Source file, playback speed, and other layer type settings

Layer Controls

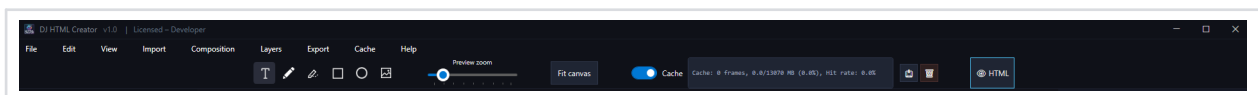


Layer controls with Transform section expanded

On the left side of the Timeline, the Layer Controls area shows:

- **Layer name:** Double-click to rename a layer
- **Visibility toggle** (eye icon): Show or hide a layer
- **Lock toggle** (lock icon): Prevent accidental edits to a layer
- **Transform section:** A collapsible group (click the triangle arrow) that shows property rows for Position, Scale, Rotation, etc. with keyframe controls

Toolbar & Menu Bar



Top bar: Menu Bar (left) and Toolbar with drawing tools (center)

The **Toolbar** at the top provides quick access to tools: Selection, Text, Rectangle, and Ellipse drawing tools. The **Menu Bar** contains File operations (New, Open, Save, Export), Edit operations (Undo, Redo), and composition settings.

3. Working with Compositions

Creating a New Composition

A composition is the container for your entire graphic. To create one:

- Go to **File > New** or press **Ctrl+N**
- Set the **Width** and **Height** in pixels (e.g., 1920 x 1080 for Full HD)
- Set the **Frame Rate** (e.g., 25 fps for PAL, 30 fps for NTSC, 50/60 for high frame rate)
- Set the **Duration** in seconds or frames

TIP: For broadcast use, standard resolutions are 1920x1080 (HD) or 3840x2160 (4K). Match the frame rate to your broadcast standard.

Coordinate System

DJ HTML Creator uses a standard screen coordinate system where **(0, 0)** is the **top-left corner** of the composition. X increases to the right, Y increases downward. All position values are in pixels.

Guidelines

Guidelines are horizontal and vertical reference lines that you can place on the canvas to help align and position layers precisely. They are purely visual aids and do not appear in the exported output.

- Drag from the ruler area to create a new guideline
- Move existing guidelines by dragging them to a new position
- **Lock guidelines** to prevent them from being accidentally moved. Once locked, guidelines stay fixed in place until you unlock them
- Delete a guideline by dragging it back off the canvas

TIP: Lock your guidelines once you have them positioned correctly to avoid accidentally moving them while working with layers.

Snap to Grid

DJ HTML Creator provides an adjustable **snap-to-grid** feature that helps you position layers at precise, evenly spaced intervals. When enabled, layers snap to the nearest grid point as you drag them on the canvas.

- Enable or disable snap to grid from the menu or toolbar
- Adjust the **grid spacing** to control how far apart the snap points are
- Grid snapping works with both position and resize operations

TIP: Use snap to grid together with guidelines for maximum precision when building pixel-perfect broadcast graphics layouts.

Nested Compositions

DJ HTML Creator supports **nested compositions**, allowing you to create a composition and then insert it as a layer inside another composition. This is a powerful organizational tool for building complex graphics from reusable components.

- Create a new composition with the elements you want to reuse (e.g., a lower third, a logo animation)
- In your main composition, insert the nested composition as a layer
- The nested composition behaves like any other layer — you can position, scale, rotate, and animate it
- Changes made to the source composition are reflected wherever it is used

NOTE: Nested compositions are ideal for reusable elements like animated logos, recurring lower thirds, or complex multi-layer components that appear across multiple projects.

4. Working with Layers

Layers are the building blocks of your composition. Each element (text, image, shape, video) exists on its own layer, and layers are stacked from bottom to top in the timeline.

Text Layers

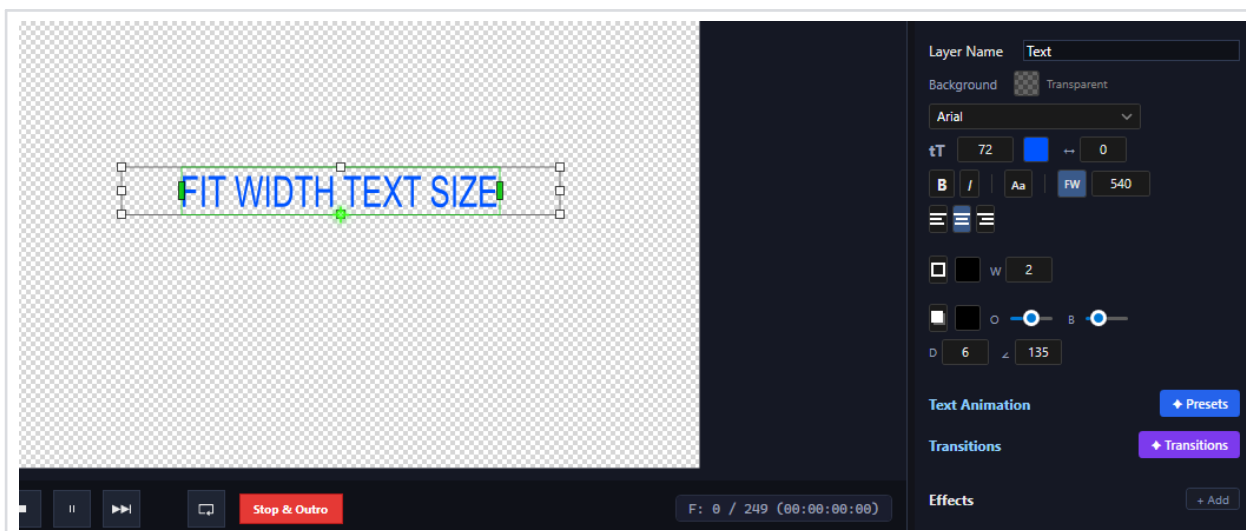
To create a text layer:

- Select the **Text tool** from the toolbar
- Click on the canvas where you want the text to appear
- Type your text. Press **Enter** for multi-line text
- **Double-click** on an existing text layer to enter inline editing mode

Text properties available in the Inspector:

Property	Description
Font Family	Choose from installed system fonts
Font Size	Size in pixels (animatable with keyframes)
Font Weight	Regular, Bold, Light, etc.
Font Style	Normal or Italic
Text Color	Color picker with RGBA support
Letter Spacing	Space between characters (can be negative)
Line Height	Vertical space between lines of text
Text Alignment	Left, Center, or Right
All Caps	Converts all text to uppercase
Tabular Nums	Forces every numeric digit (0–9) to occupy the same fixed advance width, so changing values such as scores, clocks, statistics or counters do not jitter horizontally as the digits change. Use this for any text that updates at runtime with numeric content. Has no effect on non-numeric characters.
Fit Width	Constrains text to a maximum width. When enabled, two guide lines appear on the canvas showing the width limit. If the text exceeds this width it is automatically scaled down horizontally to fit. Drag the right guide line to adjust. Shorter text is not affected.
Text Background	Background color behind the text
Scale X / Scale Y	Stretch or compress text horizontally/vertically

Fit Width



Fit Width enabled (FW button highlighted) with width limit of 540px shown by guide lines on the canvas

When **Fit Width** is enabled (click the **FW** button in the text properties panel), two vertical guide lines appear on the canvas showing the maximum allowed width. If the text exceeds this width, it is automatically scaled down horizontally to fit within the limit. Text that is shorter than the limit is not affected. You can adjust the width value in the input field next to the FW button, or drag the right guide line directly on the canvas.

TIP: Fit Width is especially useful for dynamic templates where text content changes at runtime (e.g., player names, headlines). It ensures that long text never overflows its designated area.

Image Layers

To add an image to your composition:

- **Drag and drop** an image file directly onto the canvas
- Or use **File > Import** to browse for image files

Supported image formats:

- **PNG** (recommended for transparency)
- **TGA** (Targa — commonly used in broadcast, supports alpha channel)
- **PSD** (can be imported as a flat image or as separate layers)
- **JPG / JPEG**
- **GIF**
- **BMP**

PSD Import Options

When you import a PSD file that contains multiple layers, a dialog window appears letting you choose how to import it:

- **Import Layers** — Each PSD layer becomes a separate layer in your composition, preserving the original layer structure. You can select/deselect individual layers before importing.
- **Merged** — The entire PSD is flattened and imported as a single image layer.

You can also import **TGA image sequences** and **PNG image sequences** as animated layers. Select the first frame in the sequence and DJ HTML Creator will automatically detect and import the entire sequence.

Atlas / Sprite Sheet Import

An **atlas** (also called a sprite sheet) is a single image file that contains multiple animation frames arranged in a grid. You can import an atlas via **File > Import Atlas**. The import dialog lets you configure:

- **Columns and Rows** — The grid layout of frames in the atlas image
- **Total Frames** — The actual number of frames (if less than columns × rows)
- **Frame Width / Height** — Size of each individual frame in pixels
- **Spacing** — Gap in pixels between frames in the grid
- **Read Order** — Whether frames are read row by row or column by column
- **Skip Empty** — Automatically skip fully transparent frames at the end

You can also import **multiple atlas files** at once to combine them into a single continuous animation sequence. The import dialog shows a live preview of the sliced frames so you can verify the grid settings before importing.

TIP: Use PNG or TGA format for images that need transparency (alpha channel). Both formats preserve alpha channel information that broadcast systems use for compositing overlays on top of live video.

Video Layers

Video layers allow you to include video content in your composition. Import video files by dragging them onto the canvas or using the import menu.

Supported video formats:

- **MP4** — H.264/H.265 compressed video
- **MOV** — QuickTime container, including **ProRes 4444 with alpha channel** for transparent video overlays
- **WebM** — VP9 codec with **alpha channel** support, ideal for lightweight transparent video in HTML-based workflows

Video layers play in sync with the timeline. You can trim and reposition them as needed.

NOTE: MOV files with ProRes 4444 codec and WebM files with VP9 codec both preserve the alpha channel, making them ideal for pre-rendered animated elements with transparency.

Shape Layers

Shape layers let you create basic geometric forms:

- **Rectangle:** With adjustable fill color, stroke, and rounded corners
- **Ellipse:** Circles and ovals with fill and stroke options

Crawl Layer (News Ticker)

A Crawl layer creates a horizontally scrolling text strip, commonly used for news tickers, stock tickers, and scrolling announcements in broadcast graphics.

Crawl layer properties:

Property	Description
Text	The scrolling text content
Speed	Scroll speed from 1 (slow) to 10 (fast). Speed in pixels/sec = value x 50
Direction	Right-to-Left (default, classic ticker) or Left-to-Right
Gap	Pixel gap between text repetitions in seamless loop (default: 200px)
Start Position	Where the crawl begins: Left edge, Center, or Right edge

Crawl layers automatically loop by default, creating a seamless continuous scroll. The text is duplicated internally so it wraps around without visible gaps.

Image Loader

An Image Loader is a special placeholder layer designed for **dynamic image replacement at runtime**. It creates a rectangular container on the canvas that external systems (CasparCG, vMix, OBS) can fill with an image URL during a live broadcast.

To create an Image Loader, select the Image Loader tool from the toolbar and drag a rectangle on the canvas to define its size. In the preview, it displays a placeholder icon until an image is loaded at runtime.

Image Loader fit modes:

- **Stretch** — Stretches the image to fill the entire container
- **Contain** — Scales the image to fit inside the container while maintaining aspect ratio
- **Cover** — Scales the image to cover the entire container, cropping if necessary
- **Fit Width** — Scales the image to match the container width
- **Fit Height** — Scales the image to match the container height
- **Original** — Displays the image at its original size without scaling

TIP: Image Loaders are essential for templates where images change during broadcast (e.g., player photos, sponsor logos). Name the layer descriptively (e.g., "PlayerPhoto") so the broadcast system can target it by name via the update() function.

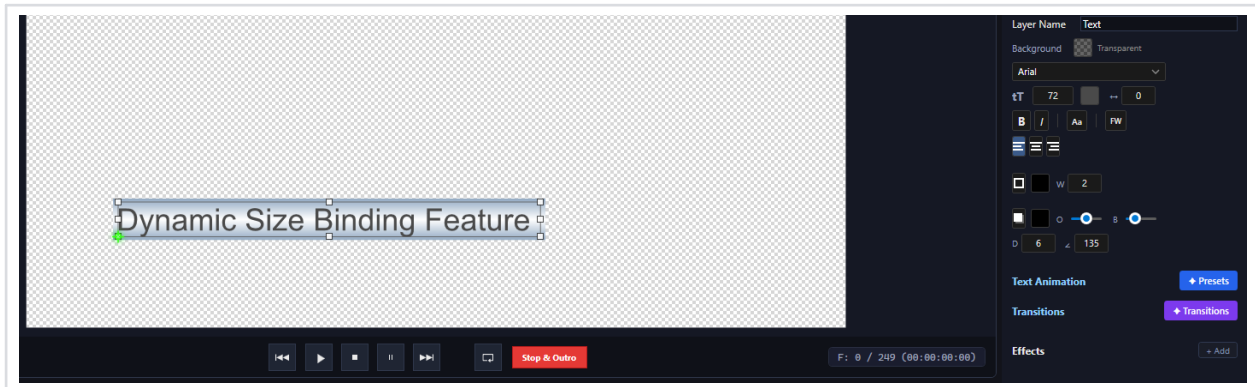
Layer Loop

Any layer can be set to **loop** its content continuously. When looping is enabled, the layer ignores its stop marker and repeats its content indefinitely. This is useful for:

- Continuously playing video or image sequence layers
- Looping nested composition animations
- Creating repeating motion patterns

To enable looping, **right-click** on a layer in the timeline and select **Enable Loop Layer**. A loop icon will appear in the layer header to indicate that looping is active. Crawl layers have looping enabled by default.

Dynamic Size Binding



Dynamic Size Binding: a shape layer automatically resizes to match the text content width

Dynamic Size Binding allows you to link a shape layer's size to a text layer so that the shape automatically resizes whenever the text content changes. This is essential for building lower thirds, name straps, and other broadcast graphics where a background bar or box must always fit the text it contains.

How to set up Dynamic Size Binding:

- Create a **text layer** and a **shape layer** (rectangle) that serves as its background
- Select the shape layer and bind its width (or height) to the text layer
- The shape will now automatically resize to match the text dimensions, plus any padding you configure

When the text content is updated at runtime (e.g., via CasparCG UPDATE command), the bound shape layer dynamically adjusts its size to accommodate the new text. This ensures your graphics always look correct regardless of content length.

TIP: Dynamic Size Binding is perfect for templates with variable-length content such as player names, scores, or news headlines. Combine it with Fit Width on the text layer for maximum control over layout.

Common Layer Operations

Operation	How To
Select	Click in timeline or on canvas
Move	Drag on canvas or change Position values in Inspector
Resize	Drag corner handles on canvas or change Scale values
Rotate	Use rotation handle on canvas or set Rotation in Inspector
Delete	Select and press Delete key
Reorder	Drag layers up/down in the timeline

Lock / Unlock	Click the lock icon in layer controls
Show / Hide	Click the eye icon in layer controls

5. Transform Properties

Every layer has a set of transform properties that control its position, size, rotation, and visibility on the canvas. These properties can all be animated with keyframes.

Anchor Point

The anchor point is the pivot around which a layer rotates and scales. By default, it is at the center of the layer. Moving the anchor point changes the center of rotation and scaling without moving the layer itself.

Position (X, Y)

The position of the layer's anchor point on the canvas, in pixels. Changing Position X moves the layer horizontally; Position Y moves it vertically.

Scale (Width, Height)

The size of the layer as a percentage of its original size. 100% is original size, 200% is double size, 50% is half size. Scale Width and Scale Height can be set independently to stretch or compress a layer. Available for all layer types including text.

Rotation

Rotation in degrees around the anchor point. Positive values rotate clockwise. You can set multiple full turns (e.g., 2 turns + 45 degrees) for spinning animations.

Opacity

Controls the transparency of the layer, from 0% (fully invisible) to 100% (fully opaque). Use opacity keyframes to create fade-in and fade-out animations.

3D Rotation: Rotate X / Rotate Y / Depth

In addition to the flat 2D Rotation property, every layer has three independent **3D transform properties** that pivot the layer through perspective space around its anchor point:

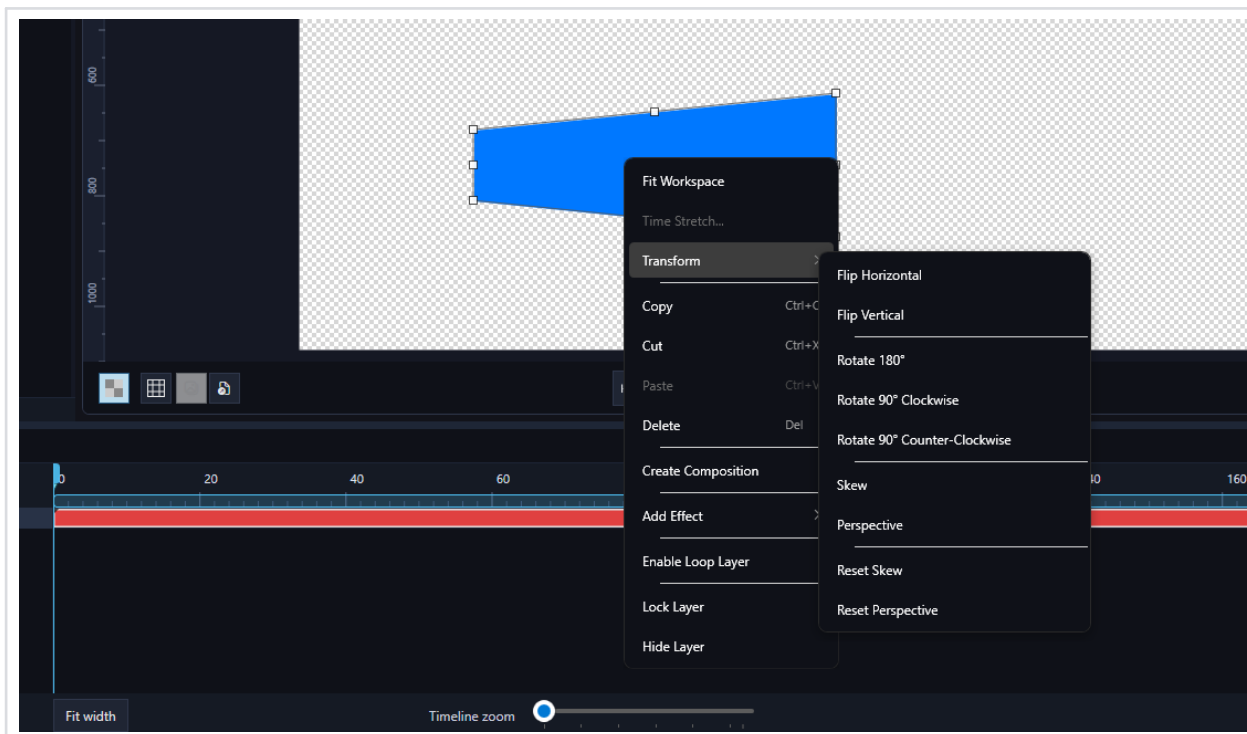
- **Rotate X** — tilt around the horizontal axis (top edge moves toward or away from the viewer). Positive values flip the top backward; negative values flip it forward. Use for card-flip and folding-in entrances.
- **Rotate Y** — tilt around the vertical axis (left edge moves toward or away from the viewer). Positive values swing the right edge backward; negative values swing it forward. Use for door-open and reveal-from-side animations.
- **Depth** — Z-axis offset that moves the layer toward the viewer (positive values, appearing larger) or away into the distance (negative values, appearing smaller). The amount of foreshortening depends on the perspective distance baked into the export.

All three properties are fully animatable with keyframes and can be combined freely with Position, Scale, Rotation, Skew and the corner-perspective handles described below. When multiple 3D rotations are active they compose around the same anchor point so layers behave like rigid cards in a 3D scene.

TIP: Use Rotate Y with a small Depth offset for a polished “flip-card” entrance: start at Rotate Y = 90° with Opacity 0, then animate Rotate Y to 0° and Opacity to 100% over 8–12 frames.

NOTE: The Transform section in the layer controls panel can be collapsed or expanded by clicking the triangle arrow icon. This helps keep your workspace tidy when working with many layers.

Transform Operations (Context Menu)



Right-click context menu showing Transform submenu with Flip, Rotate, Skew, and Perspective options

In addition to the animatable transform properties, DJ HTML Creator provides a set of **quick transform operations** accessible from the right-click context menu under **Transform**. These apply immediate geometric transformations to the selected layer:

Operation	Description
Flip Horizontal	Mirrors the layer left-to-right
Flip Vertical	Mirrors the layer top-to-bottom
Rotate 180°	Rotates the layer by a half turn
Rotate 90° Clockwise	Rotates the layer 90 degrees to the right
Rotate 90° Counter-Clockwise	Rotates the layer 90 degrees to the left
Skew	Applies a skew (shear) distortion to the layer. When enabled, skew handles appear on the canvas that you can drag to adjust the horizontal and vertical skew angles. Skew values are animatable with keyframes.
Perspective	Applies a 3D perspective distortion to the layer. When enabled, perspective handles appear on the canvas corners that you can drag to create foreshortening effects (e.g., a flat image appearing to recede into the distance). Perspective values are animatable.
Reset Skew	Removes all skew distortion, returning the layer to its original shape
Reset Perspective	Removes all perspective distortion, returning the layer to its flat state

TIP: Skew and Perspective are powerful for creating dynamic motion graphics. Combine them with keyframe animation to create layers that tilt, lean, or fly into view with 3D depth.

6. Animation & Keyframes

Understanding Keyframes

Keyframes are the foundation of animation in DJ HTML Creator. A keyframe records a specific property value at a specific point in time. When you set two or more keyframes with different values, DJ HTML Creator automatically interpolates (creates smooth transitions) between them.

For example, if you set Position X = 0 at frame 0 and Position X = 500 at frame 30, the layer will smoothly slide from left to right over those 30 frames.

Adding Keyframes

Each animatable property has a set of keyframe controls in the layer controls panel:

- A **diamond button** to toggle a keyframe at the current playhead position
- **Previous/Next arrows** to jump between existing keyframes

To add a keyframe: move the playhead to the desired frame, then click the **diamond button** next to the property you want to animate. The diamond turns **yellow** when a keyframe exists at the current frame. Click it again to remove the keyframe.

TIP: To create a simple fade-in: move the playhead to frame 0, set Opacity to 0% and click the diamond to add a keyframe. Move the playhead to frame 15, set Opacity to 100% and add another keyframe. DJ HTML Creator will smoothly animate the fade between them.

Editing Keyframes

- **Move** a keyframe by dragging the diamond marker in the timeline
- **Delete** a keyframe by selecting it and pressing the Delete key
- **Copy/Paste** keyframes using Ctrl+C and Ctrl+V

Easing / Interpolation

Easing controls how the animation accelerates and decelerates between keyframes. Right-click on a keyframe to change its easing type:

Easing Type	Behavior
Linear	Constant speed from start to end (default)
Easy Ease	Smooth acceleration and deceleration for natural-looking motion
Ease In	Starts slowly and accelerates toward the end
Ease Out	Starts quickly and decelerates toward the end
Hold	No interpolation; value jumps instantly at the next keyframe

Custom Bezier

User-defined cubic bezier curve for precise control over timing

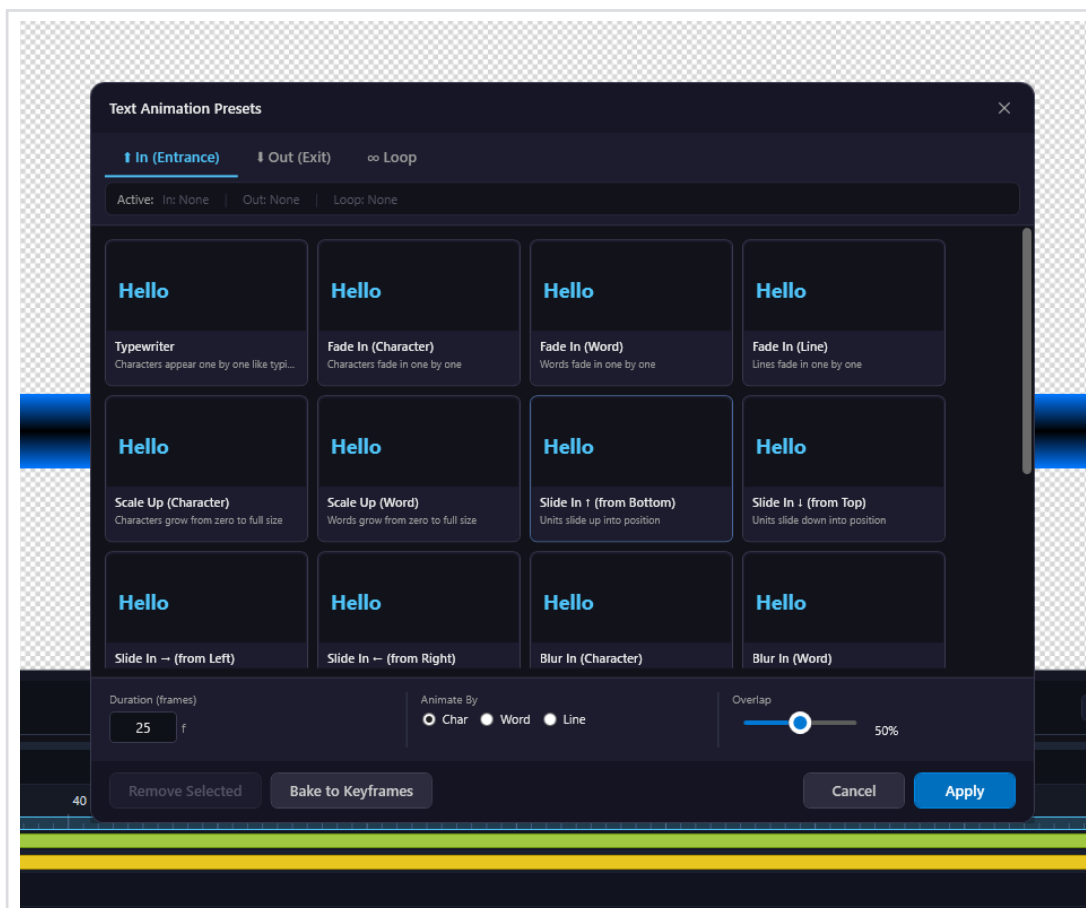
Animatable Properties

The following properties can be animated with keyframes:

- Position (X, Y)
- Scale (Width, Height)
- Rotation
- Opacity
- Anchor Point (X, Y)
- Skew (X, Y)
- Perspective
- Font Size (text layers)
- All effect parameters
- All mask properties (shape, position, feather, etc.)

Preset Text Animations

DJ HTML Creator includes a library of **preset text animations** that you can apply to Text and Crawl layers with a single click. These presets provide professionally designed entrance and exit animations, saving you from having to manually create keyframes.

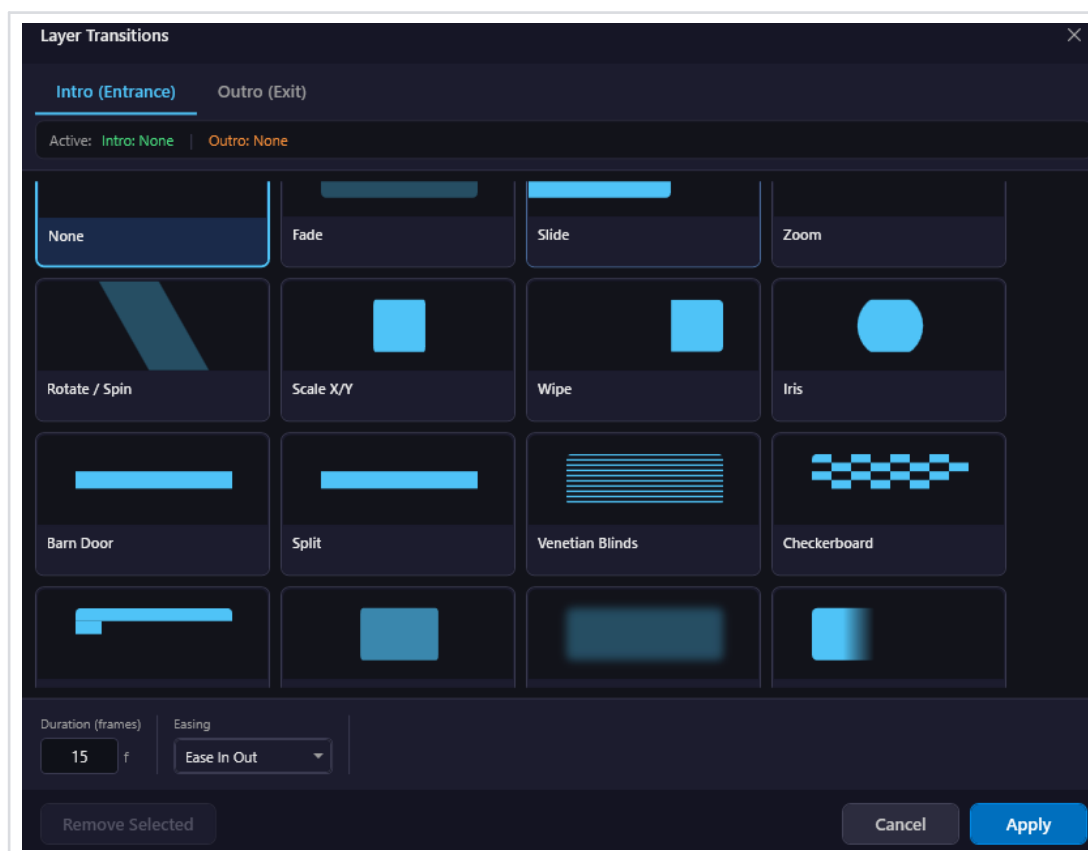


Preset text animation selector with available animation presets

To apply a preset animation, select a text or crawl layer, then open the preset animation panel. Browse the available presets and click one to apply it. The preset will automatically create the necessary keyframes on your layer. You can then fine-tune the timing and values of the generated keyframes to match your needs.

TIP: Preset animations are a great starting point. After applying a preset, you can customize the keyframe timing, values, and easing to create your own unique variations.

Layer Transitions



Layer Transitions dialog showing Intro (Entrance) transition presets with duration and easing controls

Layer Transitions provide ready-made entrance (Intro) and exit (Outro) animations that you can apply to any layer. Unlike preset text animations which work only on text layers, transitions work on **all layer types** including shapes, images, videos, and compositions.

To apply a transition, select a layer and click the **Transitions** button in the Inspector panel. The Layer Transitions dialog opens with two tabs:

- **Intro (Entrance)** — How the layer appears when the animation starts playing
- **Outro (Exit)** — How the layer disappears when the stop command is triggered

Available Transition Types

Transition	Description
None	No transition — the layer appears/disappears instantly
Fade	Smooth opacity fade in or out
Slide	Layer slides in from or out to a direction
Zoom	Layer scales up from a point or shrinks away
Rotate / Spin	Layer rotates in or spins out with scaling
Scale X/Y	Layer stretches or compresses along one axis
Wipe	A wipe edge reveals or conceals the layer from one side
Iris	Circular reveal expanding from the center outward
Barn Door	Two edges open from the center like barn doors
Split	Layer splits into halves that slide apart
Venetian Blinds	Horizontal stripe pattern that reveals the layer in bands
Checkerboard	Checkerboard grid pattern that tiles the layer into view

Transition Settings

- **Duration (frames)** — How many frames the transition takes to complete. Default is 15 frames.
- **Easing** — The interpolation curve for the transition. Options include Ease In Out (default), Linear, Ease In, and Ease Out.

You can set different transitions for Intro and Outro independently. The status bar at the top of the dialog shows the currently active transitions (e.g., "Active: Intro: Fade | Outro: Slide"). Click **Apply** to confirm your selection or **Remove Selected** to clear a transition.

TIP: Transitions work with the Play and Stop commands in the exported HTML template. The Intro transition plays when play() is called, and the Outro transition plays when stop() is called. This makes them ideal for on-air/off-air graphics workflows.

7. Effects

Effects add visual enhancements to your layers. To apply an effect, select a layer and use the right-click context menu or the Inspector panel to add effects.

Adding Effects

- Select the target layer in the timeline or on the canvas
- Right-click on the layer or use the effects section in the Inspector
- Choose from the available effects in the menu
- Adjust the effect parameters using the sliders and input fields

Available Effects

Effect	Parameters	Description
Drop Shadow	Color, Offset X/Y, Blur	Adds a shadow behind the layer
Gaussian Blur	Blurriness (0–200 px)	Softens the layer with a blur effect
Brightness	Brightness level	Adjusts the brightness of the layer
Contrast	Contrast level	Adjusts the contrast of the layer
Hue Rotate	Hue rotation angle	Shifts the hue of all colors in the layer
Saturate	Saturation level	Adjusts the color saturation of the layer

TIP: All effect parameters are animatable! You can keyframe blur radius, shadow offset, and other parameters to create dynamic visual effects over time.

Effect Stacking

Multiple effects can be applied to a single layer. Effects are processed in the order they appear in the Inspector (top to bottom). You can enable or disable individual effects without removing them, making it easy to compare before/after looks.

8. Masks

Masks allow you to show or hide specific regions of a layer. They are powerful tools for creating reveal animations, shaped cutouts, and creative transitions.

Creating Masks

To add a mask to a layer, select the layer and click **Add Mask**. A default rectangular mask will be created covering the full layer bounds. You can then drag the individual corner points in the preview to reshape the mask.

Multiple Masks per Layer

You can add **multiple masks** to a single layer. Each mask has its own independent properties and can be set to one of two combination modes:

- **Add** — Expands the visible area (union of masks). This is the default mode.
- **Subtract** — Cuts out the mask shape from the visible area, creating holes or cutouts.

By combining Add and Subtract masks, you can create complex shapes: for example, a large Add mask defining the overall visible area, with smaller Subtract masks cutting holes within it.

Mask Types

Editable Mask Shapes

Each mask is defined by corner points that you can **drag directly on the canvas** to reshape the mask. By default, a new mask starts as a rectangle with 4 corners, but you can drag any corner independently to create custom quadrilateral shapes such as trapezoids, parallelograms, or any arbitrary 4-point polygon. The mask shape can also be **animated with keyframes**, allowing you to morph the mask shape over time.

Feathered vs Non-Feathered Masks

- **Feathered masks** (Feather > 0): Have soft, gradual edges. The Feather Radius controls how smoothly the mask fades from visible to hidden.
- **Non-feathered masks** (Feather = 0): Have crisp, hard edges for clean cutouts.

Mask Properties

Property	Description
Shape	Corner points defining the mask geometry (draggable in preview)
Position	Offset of the mask relative to the layer
Scale	Width and height scaling of the mask
Rotation	Rotation of the mask around its anchor point

Anchor Point	Pivot point for mask rotation and scaling
Feather	Softness of the mask edges (0 = hard, higher = softer)
Opacity	Strength of the mask effect (0–100%)
Invert	Reverses the mask: inside becomes hidden, outside becomes visible
Mode	Add (expand visible area) or Subtract (cut out from visible area)

Animating Masks

All mask properties can be keyframed, just like transform properties. This enables powerful reveal animations such as a mask that gradually uncovers text from left to right, or a shape that morphs between forms over time.

9. Gradients

Gradients allow you to fill shapes and text with smooth color transitions. DJ HTML Creator supports three types of gradients:

Type	Description
Linear	Colors transition along a straight line at a customizable angle
Radial	Colors radiate outward from a center point in a circular pattern
Reflected	A mirrored linear gradient that creates a symmetrical color transition

Color and Opacity Stops

Each gradient has at least two **color stops** that define the start and end colors. You can adjust the position of each stop along the gradient and modify its color and opacity independently. The gradient editor in the Inspector provides a visual interface for positioning stops and choosing colors.

10. Importing Media

DJ HTML Creator supports importing a wide range of media formats. You can import files by dragging and dropping them onto the canvas, or by using **File > Import**.

Supported Import Formats

Type	Formats	Notes
Images	PNG, TGA, PSD, JPG, JPEG, GIF, BMP	PSD: import as flat image or separate layers
Image Sequences	TGA sequence, PNG sequence	Select the first frame; the rest are detected automatically
Video	MP4, MOV, WebM	MOV ProRes 4444 and WebM VP9 support alpha channel

TIP: Use PNG or TGA for images with transparency. For video with transparency, use MOV with ProRes 4444 or WebM with VP9 codec — both preserve the alpha channel.

Importing HTML Templates

DJ HTML Creator can **import an existing HTML template back into a fully editable project**. Use **Import > Import HTML...** to open any compatible .html file; the importer reconstructs compositions, layers, text, image loaders, image sequences, fonts, masks, transitions, effects and per-frame animation, then opens the result as a new project so you can keep editing.

Two import paths are supported:

- **HTML files exported from DJ HTML Creator** — round-trip import recovers the full project structure (compositions, nested compositions, all layer types, animation keyframes with bezier easing, masks, effects, transitions). Embedded image sequences and base64-encoded fonts are extracted to disk alongside the imported .htmc.
- **HTML templates produced by other broadcast template tools** — the importer automatically detects the source format and parses its layout, animation and asset data. Layer types, positions, keyframe timing (including layer start-frame offsets), text content with alignment-aware positioning, font fallback, image-loader placeholders and rectangular masks are all converted into native DJ HTML Creator equivalents. The result is editable just like any project you created from scratch.

Imported assets are written to a sibling folder named **<source-filename>_imported/** next to the chosen .html, containing the generated **.htmc** project file plus an **assets/** subfolder with extracted PNG sequences and font files.

NOTE: Round-tripping HTML files exported by DJ HTML Creator is fully lossless when the source was produced by a current build. Imports from other tools rely on heuristics for naming and box-positioning conventions — the result will look pixel-correct in the vast majority of cases, but you may need to nudge a layer or two if the source tool uses an unusual layout convention.

11. Exporting

DJ HTML Creator offers multiple export options to cover different use cases: from HTML templates for broadcast playout systems to image sequences and video files.

TIP: WebP and WebM are the recommended defaults. HTML exports embed each frame as **WebP** ($\approx 6\text{--}8\times$ smaller than PNG, visually identical at the default quality), and pre-rendered video uses **WebM VP9** with alpha channel (smaller files, native Chromium playback). PNG and MOV ProRes 4444 remain available for legacy or external-editor workflows.

HTML Template Export

HTML templates are self-contained .html files with all animation data embedded directly in the file. There are no external dependencies — images, fonts, and animation data are all included. DJ HTML Creator provides dedicated export for the major playout systems and broadcast template specifications:

Export Target	Description
CasparCG (Single File)	Optimized for CasparCG broadcast server. Loaded via CG ADD, controlled with CG PLAY / STOP / NEXT / UPDATE commands. Supports dynamic data updates via template data protocol.
OBS (Browser Source)	Optimized for OBS Studio. Includes auto-play on visibility, URL parameter support (?autoplay=1, ?loop=1, ?delay=500), and OBS API integration for visibility events.
vMix (Browser Input)	Optimized for vMix live production. Integrates with vMix shortcut system (BrowserNavigate). Supports Play/Stop/Update commands and dynamic text field updates.
OGraf (Template)	Exports to the open OGraf graphics specification. Produces an OGrاف manifest (<name>.ograf.json) plus an ES module (graphic.mjs) inside a project subfolder. Field definitions, custom actions, real-time / non-real-time rendering modes and step counts are configured per-composition via Composition Settings > OGrاف Settings . Compatible with any OGrاف-conformant playout host.
SPX Graphics	Single-file HTML wrapped with a <code>window.SPXGCTemplateDefinition</code> block for the SPX Graphics Controller. Field definitions, play server, channel, layer, web playout, steps and out-mode are configured per-composition via Composition Settings > SPX Settings . Drop the exported file into SPX's templates folder for instant use.
HTML (Current Frame)	Exports the current frame as a static HTML file. Available with standard CSS transforms or CSS matrix() notation. Image assets are copied to a subfolder.

Lottie Animation Export

DJ HTML Creator can also export your composition as a **Lottie** animation in the industry-standard JSON format (**File > Export > Export Lottie Animation (JSON)**...). Lottie files play back in any Lottie-compatible runtime — web (lottie-web), iOS, Android, After Effects, Adobe XD, Figma, Origami Studio and many others — making it easy to share the same animation across mobile apps, websites and design tools.

What is exported:

- Composition dimensions, frame rate and the current Work Area as the in/out range
- All visible layers (text, shapes, images, image sequences, solids) with their position, scale, rotation, anchor point and opacity keyframes
- Keyframe easing converted to Lottie's bezier interpolation format
- Image assets embedded as base64 data URIs so the resulting JSON is fully self-contained

NOTE: Lottie's animation model is closer to After Effects than to broadcast HTML, so a small number of features (3D depth, perspective corner-handles, custom layer effects, image loaders) do not have an exact Lottie equivalent. The exporter falls back to the closest 2D approximation in those cases. For the cleanest Lottie output, design with the standard transform properties (Position, Scale, Rotation, Anchor, Opacity).

Frame Format & Quality (Export Settings)

When DJ HTML Creator embeds image-sequence and nested-composition frames inside an exported HTML template, it can encode them as either **WebP** (default) or **PNG**. The choice and quality level live in the **Cache & Performance > Export Settings...** menu and apply to every subsequent HTML export.

Format	Description
WebP (default)	Recommended for all modern playout systems. Supports alpha. Produces dramatically smaller HTML files than PNG (typically 6–8x smaller). Compatible with CasparCG 2.2+ (CEF 63 and newer), OBS, vMix and any Chromium-based browser source.
PNG (legacy)	Lossless, bit-perfect. Use when targeting an older playout chain that lacks WebP support, or when an external tool needs to re-extract the embedded frames as PNG for further processing.

WebP exports come with a quality preset selector. Pick the right balance between file size and visual fidelity for your delivery target:

Preset	Use case
Lossless	Bit-perfect — identical to PNG, still ~40% smaller files. Use when downstream tools may re-encode the asset.
Q95	Maximum quality, visually identical to source. ~80% smaller than PNG.
Q90 (default)	Recommended balance. Visually identical for typical broadcast graphics. ~85% smaller than PNG.
Q85	Aggressive compression, still visually identical for most content. ~88% smaller than PNG.
Q80	High compression — possible artifacts on hard edges or small text.
Q75	Heavy compression — visible quality loss; use only when bandwidth is severely constrained.

NOTE: The Frame Format setting is global per installation, not per project — once you set it, every HTML export from that point uses the chosen format and quality.

HTML Preview

Before exporting, you can preview exactly how your composition will look as an HTML template using the built-in **HTML Preview** window. Access it via the toolbar button or the menu item **Preview HTML**.

The HTML Preview window provides:

- **Refresh** — Reload the preview after making changes to your composition
- **Play** — Trigger the play() function to test your animation start
- **Stop** — Trigger the stop() function to test your animation stop
- **Open in Browser** — View in your default web browser with keyboard shortcuts (F1 = Play, F2 = Stop)
- **DevTools** — Open browser developer tools for debugging

TIP: Always use HTML Preview to test your animation's Play and Stop behavior before deploying to a live broadcast system. This lets you catch timing or visual issues early.

Template Data Fields (Dynamic Content)

Layer names in your composition serve as **template data field keys** for dynamic content updates. When you export an HTML template, each layer's name becomes a field that external systems can update at runtime.

For example, if you name a text layer "**Headline**", the broadcast system can update that layer's text content by sending an update command referencing the "Headline" field. This is how live scores, breaking news tickers, and other dynamic graphics are driven in real-time during a broadcast.

How it works per playout system:

- **CasparCG:** Uses the CG UPDATE command with XML or JSON template data, where field keys match your layer names
- **vMix:** Uses BrowserNavigate commands to update fields by layer name
- **OBS:** Supports URL parameter-based updates and JavaScript API calls

NOTE: Choose descriptive, meaningful layer names (e.g., "PlayerName", "Score", "BreakingNews") because these names become the keys that your broadcast automation system uses to push live data into the template.

Media Export

In addition to HTML templates, DJ HTML Creator can export your composition as image files or video, which is useful for pre-rendering graphics or creating video assets.

Format	Options	Notes
PNG Image	Single image	With alpha channel (transparency)
PNG Sequence	Numbered image sequence	With alpha channel; one PNG per frame
TGA Image	Single image	With alpha channel (transparency)
TGA Sequence	Numbered image sequence	With alpha channel; one TGA per frame
MP4	Video file	H.264 with configurable quality (CRF)
MOV	Video file	ProRes 4444 with alpha channel
WebM	Video file	VP9 with alpha channel; configurable quality (CRF)

TIP: Use PNG or TGA sequences with alpha for compositing in external video editors. Use MOV ProRes 4444 or WebM VP9 when you need video with transparency for broadcast workflows. WebM VP9 produces smaller files and is natively supported by Chromium-based playout systems.

NOTE: Always test your HTML templates in the target playout system (CasparCG, vMix, or OBS) before using them in a live broadcast. Performance and rendering may vary.

12. Keyboard Shortcuts

Master these keyboard shortcuts to speed up your workflow:

Canvas / Preview

Shortcut	Action
Middle Mouse + Drag	Pan canvas
Scroll Wheel	Zoom in / out
← → ↑ ↓	Move selected layer 1 px
Shift + ← → ↑ ↓	Move selected layer 10 px
Escape	Cancel marquee / Exit mask edit

Timeline

Shortcut	Action
Space	Play / Pause
Ctrl + Scroll Wheel	Timeline zoom in / out
I	Set Work Area In point
O	Set Work Area Out point
Shift + I	Reset In to composition start
Shift + O	Reset Out to composition end
Alt + I	Nudge In point 1 frame left
Alt + O	Nudge Out point 1 frame right
Ctrl + ← →	Move playhead 1 frame
Home	Go to first frame
End	Go to last frame
Mouse Drag ↑	Reorder layer up / down

Editing

Shortcut	Action
Ctrl + C	Copy selected layer / keyframe
Ctrl + X	Cut selected layer / keyframe
Ctrl + V	Paste selected layer / keyframe

Delete	Delete selected layer / keyframe / mask / guide
Ctrl + Z	Undo
Ctrl + Y	Redo
Ctrl + Shift + Z	Redo (alternative)

View

Shortcut	Action
Ctrl + R	Toggle rulers
Ctrl + ;	Toggle guides
Ctrl + Shift + ;	Toggle snap to guides

Composition

Shortcut	Action
Ctrl + N	New Composition
Ctrl + M	Export Media

Pen Tool

Shortcut	Action
Escape	End drawing as open path / Cancel
Enter	End drawing as open path

Draw Tool

Shortcut	Action
Left Mouse + Drag	Draw
Right Mouse + Drag	Erase

13. Tips & Best Practices

General Workflow

- **Save frequently** using Ctrl+S. Unexpected crashes can happen, and regular saving protects your work.
- **Name your layers** descriptively (e.g., "Lower Third - Name", "Logo Reveal"). This makes complex compositions much easier to navigate.
- **Use the preview** to check your animations before exporting. Play through the entire timeline to catch any timing or visual issues.

Animation Tips

- **Use anchor points strategically.** When animating rotation or scale, the anchor point determines the center of the effect. For a door-opening animation, place the anchor at the edge; for a pulsing effect, keep it centered.
- **Apply easing** to keyframes for more natural-looking motion. Linear interpolation looks mechanical; Easy Ease gives animations a polished, professional feel.
- **Keep animations short and purposeful.** Broadcast graphics typically animate in within 0.5–1 second. Avoid overly long or complex entrance animations.

Broadcast Production Tips

- **Match your composition** to the target resolution and frame rate of your broadcast system.
- **Test on the actual playout system.** CasparCG, vMix, and OBS may each render HTML templates slightly differently.
- **Optimize image assets.** Large images increase the HTML file size and memory usage. Resize images to the dimensions they actually appear on screen.
- **Use PNG or TGA for transparency.** When layers need to composite over live video, images with alpha channels produce the best results.
- **Export MOV ProRes 4444 or WebM VP9** when you need pre-rendered video with transparency. WebM VP9 is smaller and ideal for HTML-based playout; ProRes 4444 is best for external video editors.

Thank you for reading the DJ HTML Creator User Guide. For updates and more information, visit the DJ HTML Creator website.