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# Quartz Composer WebKit Plug-in JavaScript Reference

Networking, Internet, & Web: Web Client



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Apple Inc.  
1 Infinite Loop  
Cupertino, CA 95014  
408-996-1010

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# Introduction to Quartz Composer WebKit Plug-in JavaScript Reference

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Quartz Composer is a development tool for processing and rendering graphical data using an easy-to-use visual programming approach and the rich media technologies available in Mac OS X. The Quartz Composer WebKit plug-in, available in Mac OS X v10.4.7 and later, displays Quartz Composer compositions in webpages and Dashboard widgets.

## Who Should Read This Document?

*Quartz Composer WebKit Plug-in JavaScript Reference* is for web content and Dashboard widget creators who want to manipulate a Quartz Composer composition used in a webpage or Dashboard widget via JavaScript. You will find a reference for the JavaScript API available from the Quartz Composer WebKit plug-in.

To learn how to create a composition using Quartz Composer, read *Quartz Composer Programming Guide*.

**Note:** *Quartz Composer WebKit Plug-in JavaScript Reference* was previously titled *Quartz Composer Web Kit Plug-in Programming Guide*. Earlier versions of the document described how to include and manipulate a Quartz Composer composition in a web page or Dashboard widget. You can now find this information in *Webpages and Widgets*.

## Organization of This Document

This document contains the following chapter:

- [“Quartz Composer WebKit Plug-in JavaScript Reference”](#) (page 7) documents the JavaScript API available when using the Quartz Composer WebKit plug-in.

## See Also

To learn more about Quartz Composer and creating compositions, along with including a composition in a web page or Dashboard widget, read *Quartz Composer Programming Guide*.

*Safari HTML Reference*, *Safari CSS Reference*, and *WebKit DOM Programming Topics* provide information on creating content for WebKit-based browsers like Safari.

For more on Dashboard widget creation, read *Dashboard Tutorial* and *Dashboard Programming Topics*.

## INTRODUCTION

Introduction to Quartz Composer WebKit Plug-in JavaScript Reference

# Quartz Composer WebKit Plug-in JavaScript Reference

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The JavaScript API provided by the Quartz Composer WebKit plug-in includes methods for changing a composition's state and manipulating its published inputs and outputs. To learn how to include a Quartz Composer composition in a web page or Dashboard widget, read [Webpages and Widgets](#).

**Note:** All of the method descriptions described in [“Methods”](#) (page 8) assume that the method is called on the composition object as obtained from the DOM. You can obtain the object by calling `document.getElementById`:

```
var composition = document.getElementById("myComposition");
```

Obtaining and manipulating the composition is discussed further in [Webpages and Widgets](#).

## Methods by Task

### Composition Metadata

- [“attributes”](#) (page 8)

### Composition Playback

- [“pause”](#) (page 10)
- [“play”](#) (page 10)
- [“stop”](#) (page 11)

### Composition Status

- [“loaded”](#) (page 9)
- [“paused”](#) (page 10)
- [“playing”](#) (page 11)

### Pasteboard Operations

- [“copyImageToPasteboard”](#) (page 8)

### Working with Published Values

- [“getInputValue”](#) (page 8)
- [“getOutputValue”](#) (page 8)
- [“inputKeys”](#) (page 9)
- [“outputKeys”](#) (page 9)
- [“setInputValue”](#) (page 11)

## Methods

### attributes

---

Returns an array of strings with the composition's attributes.

```
composition.attributes()
```

#### Discussion

The attributes returned are the composition's metadata, including its name, copyright, and description values, along with information about each port of the composition.

### copyImageToPasteboard

---

Copies the current context of the composition to the pasteboard.

```
composition.copyImageToPasteboard()
```

#### Discussion

Use this method in conjunction with an `oncopy` handler.

### getInputValue

---

Returns the value of a published input.

```
composition.getInputValue("key")
```

#### Discussion

The value of `key` is any of the inputs that you published in Quartz Composer.

If the returned value is a color, an object is returned with `red`, `green`, `blue`, and `alpha` properties. Each value is a floating-point number, on a scale from 0 to 1. Call `htmlColor()` on the object to return its HTML hexadecimal color value or `cssColor()` to return its `rgba` value.

No images are returned when calling `getInputValue`.

#### See Also

["inputKeys"](#) (page 9)

["outputKeys"](#) (page 9)

["setInputValue"](#) (page 11)

["getOutputValue"](#) (page 8)

### getOutputValue

---

Returns the value of a published output.

```
composition.getOutputValue("key")
```

**Discussion**

The value of `key` is any of the outputs that you published in Quartz Composer.

If the returned value is a color, an object is returned with `red`, `green`, `blue`, and `alpha` properties. Each value is a floating-point number, on a scale from 0 to 1. Call `htmlColor()` on the object to return its HTML hexadecimal color value or `cssColor()` to return its `rgba` value.

No images are returned when calling `getOutputValue`.

**See Also**

[“outputKeys”](#) (page 9)

[“inputKeys”](#) (page 9)

[“setInputValue”](#) (page 11)

[“getInputValue”](#) (page 8)

## inputKeys

---

Returns an array of strings with the names of a composition’s published inputs.

```
composition.inputKeys()
```

**See Also**

[“setInputValue”](#) (page 11)

[“getInputValue”](#) (page 8)

[“outputKeys”](#) (page 9)

[“getOutputValue”](#) (page 8)

## loaded

---

Returns whether the composition is loaded.

```
composition.loaded()
```

**See Also**

[“playing”](#) (page 11)

[“paused”](#) (page 10)

## outputKeys

---

Returns an array of strings with the names of a composition’s published outputs.

```
composition.outputKeys()
```

**See Also**[“getOutputValue”](#) (page 8)[“inputKeys”](#) (page 9)[“setInputValue”](#) (page 11)[“getInputValue”](#) (page 8)

## pause

---

Pauses playback of a composition.

```
composition.pause()
```

**Discussion**

If a composition wasn't playing, calling this method does nothing.

**See Also**[“play”](#) (page 10)[“stop”](#) (page 11)

## paused

---

Returns whether the composition is paused.

```
composition.paused()
```

**Discussion**

If the composition is stopped (as opposed to paused), `paused` returns `false`.

**See Also**[“playing”](#) (page 11)[“loaded”](#) (page 9)

## play

---

Begins or pauses playback of a composition.

```
composition.play()
```

**Discussion**

The `play` method starts playback of a composition if it was stopped or hasn't played yet, pauses playback if the composition is already playing, and resumes playback if the composition was paused.

**See Also**[“pause”](#) (page 10)[“stop”](#) (page 11)

## playing

---

Returns whether the composition is playing.

```
composition.playing()
```

### See Also

[“paused”](#) (page 10)

[“loaded”](#) (page 9)

## setInputValue

---

Gives the composition the provided value for published input.

```
composition.setInputValue("key", value)
```

### Discussion

The value of `key` is any of the inputs that you published in Quartz Composer.

If you're setting an input to a color value, you can pass in:

- An object like that returned by [“getInputValue”](#) (page 8) and [“getOutputValue”](#) (page 8), with `red`, `green`, `blue`, and `alpha` properties
- An HTML hexadecimal color value, like `#FFFFFF`
- An HTML color name, like `red` or `green`
- A CSS `rgb` or `rgba` value

If the input value can't be parsed, no change is made. Also, images aren't allowed as an input value.

### See Also

[“inputKeys”](#) (page 9)

[“outputKeys”](#) (page 9)

[“getInputValue”](#) (page 8)

[“getOutputValue”](#) (page 8)

## stop

---

Stops playback of a composition.

```
composition.stop()
```

### Discussion

The `stop` method releases all resources associated with the composition and clears its visuals from the page. After calling `stop`, you can call `play` to restart the composition.

### See Also

[“play”](#) (page 10)

[“pause”](#) (page 10)



# Document Revision History

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This table describes the changes to *Quartz Composer WebKit Plug-in JavaScript Reference*.

Date	Notes
2009-01-06	Updated the description of the attributes method.
2008-10-15	Corrected typos.
2006-12-05	Retitled document to Quartz Composer Web Kit Plug-in JavaScript Reference. Quartz Composer Web Kit Plug-in usage and HTML attributes moved to Quartz Composer Programming Guide
2006-08-07	New document that explains how to use the Quartz Composer plug-in included with Mac OS X v.10.4.7.

## REVISION HISTORY

### Document Revision History