

# MediaPlayer Class

Reference

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## Definition

Namespace: [System.Windows.Media](#)

Assembly: PresentationCore.dll

Provides media playback for drawings.

C#

```
public class MediaPlayer : System.Windows.Media.Animation.Animatable
```

Inheritance [Object](#) → [DispatcherObject](#) → [DependencyObject](#) → [Freezable](#) → [Animatable](#) → [MediaPlayer](#)

## Examples

[How to: Play Media using a VideoDrawing](#)

## Remarks

Although you can declare an instance of this class in Extensible Application Markup Language (XAML), you cannot load and play its media without using code. To play media in XAML only, use a [MediaElement](#). Also, if you declare an instance in XAML, the only practical use is to fill property element syntax for the [Player](#) property.

When distributing media with your application, you cannot use a media file as a project resource. In your project file, you must instead set the media type to `Content` and set `CopyToOutputDirectory` to `PreserveNewest` or `Always`.

[MediaPlayer](#) can be used in two different modes, depending on what is driving the player: independent mode or clock mode. In independent mode, the [MediaPlayer](#) is analogous to an image and the media opened through the [Open](#) method drives playback. In Clock mode, the [MediaPlayer](#) can be thought of as a target for an animation, and thus it will have corresponding [Timeline](#) and [Clock](#) entries in the Timing tree which controls playback. For more information on media modes, see the [Multimedia Overview](#).

[MediaPlayer](#) is different from a [MediaElement](#) in that it is not a control that can be added directly to the user interface (UI) of an application. To display media loaded using [MediaPlayer](#), a [VideoDrawing](#) or [DrawingContext](#) must be used.

# Constructors

<a href="#">MediaPlayer()</a>	Initializes a new instance of the <a href="#">MediaPlayer</a> class.
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# Properties

<a href="#">Balance</a>	Gets or sets the balance between the left and right speaker volumes.
<a href="#">BufferingProgress</a>	Gets the percentage of buffering completed for streaming content.
<a href="#">CanFreeze</a>	Gets a value that indicates whether the object can be made unmodifiable. (Inherited from <a href="#">Freezable</a> )
<a href="#">CanPause</a>	Gets a value indicating whether the media can be paused.
<a href="#">Clock</a>	Gets or sets the <a href="#">MediaClock</a> associated with the <a href="#">MediaTimeline</a> to be played.

<a href="#">DependencyObjectType</a>	Gets the <a href="#">DependencyObjectType</a> that wraps the CLR type of this instance. (Inherited from <a href="#">DependencyObject</a> )
<a href="#">Dispatcher</a>	Gets the <a href="#">Dispatcher</a> this <a href="#">DispatcherObject</a> is associated with. (Inherited from <a href="#">DispatcherObject</a> )
<a href="#">DownloadProgress</a>	Gets the percentage of download progress for content located at a remote server.
<a href="#">HasAnimatedProperties</a>	Gets a value that indicates whether one or more <a href="#">AnimationClock</a> objects is associated with any of this object's dependency properties. (Inherited from <a href="#">Animatable</a> )
<a href="#">HasAudio</a>	Gets a value that indicating whether the media has audio output.
<a href="#">HasVideo</a>	Gets a value that indicates whether the media has video output.
<a href="#">IsBuffering</a>	Gets a value that indicates whether the media is buffering.
<a href="#">IsFrozen</a>	Gets a value that indicates whether the object is currently modifiable. (Inherited from <a href="#">Freezable</a> )
<a href="#">IsMuted</a>	Gets a value that indicates whether the media is muted.
<a href="#">IsSealed</a>	Gets a value that indicates whether this instance is currently sealed (read-only). (Inherited from <a href="#">DependencyObject</a> )
<a href="#">NaturalDuration</a>	Gets the natural duration of the media.
<a href="#">NaturalVideoHeight</a>	Gets the pixel height of the video.
<a href="#">NaturalVideoWidth</a>	Gets the pixel width of the video.
<a href="#">Position</a>	Gets or sets the current position of the media.
<a href="#">ScrubbingEnabled</a>	Gets or sets a value that indicates whether scrubbing is enabled.
<a href="#">Source</a>	Gets the media <a href="#">Uri</a> .
<a href="#">SpeedRatio</a>	Gets or sets the ratio of speed that media is played at.
<a href="#">Volume</a>	Gets or sets the media's volume.

# Methods

<a href="#">ApplyAnimationClock(DependencyProperty, AnimationClock)</a>	Applies an <a href="#">AnimationClock</a> to the specified <a href="#">DependencyProperty</a> . If the property is already animated, the <a href="#">SnapshotAndReplace</a> handoff behavior is used. (Inherited from <a href="#">Animatable</a> )
<a href="#">ApplyAnimationClock(DependencyProperty, AnimationClock, HandoffBehavior)</a>	Applies an <a href="#">AnimationClock</a> to the specified <a href="#">DependencyProperty</a> . If the property is already animated, the specified <a href="#">HandoffBehavior</a> is used. (Inherited from <a href="#">Animatable</a> )
<a href="#">BeginAnimation(DependencyProperty, AnimationTimeline)</a>	Applies an animation to the specified <a href="#">DependencyProperty</a> . The animation is started when the next frame is rendered. If the specified property is already animated, the <a href="#">SnapshotAndReplace</a> handoff behavior is used. (Inherited from <a href="#">Animatable</a> )
<a href="#">BeginAnimation(DependencyProperty, AnimationTimeline, HandoffBehavior)</a>	Applies an animation to the specified <a href="#">DependencyProperty</a> . The animation is started when the next frame is rendered. If the specified property is already animated, the specified <a href="#">HandoffBehavior</a> is used. (Inherited from <a href="#">Animatable</a> )
<a href="#">CheckAccess()</a>	Determines whether the calling thread has access to this <a href="#">DispatcherObject</a> . (Inherited from <a href="#">DispatcherObject</a> )
<a href="#">ClearValue(DependencyProperty)</a>	Clears the local value of a property. The property to be cleared is specified by a <a href="#">DependencyProperty</a> identifier. (Inherited from <a href="#">DependencyObject</a> )
<a href="#">ClearValue(DependencyPropertyKey)</a>	Clears the local value of a read-only property. The property to be cleared is specified by a <a href="#">DependencyPropertyKey</a> . (Inherited from <a href="#">DependencyObject</a> )
<a href="#">Clone()</a>	Creates a modifiable clone of this <a href="#">Animatable</a> , making deep copies of this object's values. When copying this object's dependency properties, this method copies resource references and data bindings (but they might no longer resolve) but not animations or their current values. (Inherited from <a href="#">Animatable</a> )
<a href="#">CloneCore(Freezable)</a>	Makes this instance a deep copy of the specified <a href="#">MediaPlayer</a> . When copying dependency properties, this method copies

	resource references and data bindings (but they might no longer resolve) but not animations or their current values.
<a href="#">CloneCurrentValue()</a>	Creates a modifiable clone (deep copy) of the <a href="#">Freezable</a> using its current values. (Inherited from <a href="#">Freezable</a> )
<a href="#">CloneCurrentValueCore(Freezable)</a>	Makes this instance a modifiable deep copy of the specified <a href="#">MediaPlayer</a> using current property values. Resource references, data bindings, and animations are not copied, but their current values are.
<a href="#">Close()</a>	Closes the underlying media.
<a href="#">CoerceValue(DependencyProperty)</a>	Coerces the value of the specified dependency property. This is accomplished by invoking any <a href="#">CoerceValueCallback</a> function specified in property metadata for the dependency property as it exists on the calling <a href="#">DependencyObject</a> . (Inherited from <a href="#">DependencyObject</a> )
<a href="#">CreateInstance()</a>	Initializes a new instance of the <a href="#">Freezable</a> class. (Inherited from <a href="#">Freezable</a> )
<a href="#">CreateInstanceCore()</a>	Creates a new <a href="#">MediaPlayer</a> instance.
<a href="#">Equals(Object)</a>	Determines whether a provided <a href="#">DependencyObject</a> is equivalent to the current <a href="#">DependencyObject</a> . (Inherited from <a href="#">DependencyObject</a> )
<a href="#">Freeze()</a>	Makes the current object unmodifiable and sets its <a href="#">IsFrozen</a> property to <code>true</code> . (Inherited from <a href="#">Freezable</a> )
<a href="#">FreezeCore(Boolean)</a>	Makes this <a href="#">Animatable</a> object unmodifiable or determines whether it can be made unmodifiable. (Inherited from <a href="#">Animatable</a> )
<a href="#">GetAnimationBaseValue(DependencyProperty)</a>	Returns the non-animated value of the specified <a href="#">DependencyProperty</a> . (Inherited from <a href="#">Animatable</a> )
<a href="#">GetAsFrozen()</a>	Creates a frozen copy of the <a href="#">Freezable</a> , using base (non-animated) property values. Because the copy is frozen, any frozen sub-objects are copied by reference. (Inherited from <a href="#">Freezable</a> )
<a href="#">GetAsFrozenCore(Freezable)</a>	Makes this instance a clone of the specified <a href="#">MediaPlayer</a> object.

<a href="#">GetCurrentValueAsFrozen()</a>	Creates a frozen copy of the <a href="#">Freezable</a> using current property values. Because the copy is frozen, any frozen sub-objects are copied by reference. (Inherited from <a href="#">Freezable</a> )
<a href="#">GetCurrentValueAsFrozenCore(Freezable)</a>	Makes the current instance a frozen clone of the specified <a href="#">Freezable</a> . If the object has animated dependency properties, their current animated values are copied. (Inherited from <a href="#">Freezable</a> )
<a href="#">GetHashCode()</a>	Gets a hash code for this <a href="#">DependencyObject</a> . (Inherited from <a href="#">DependencyObject</a> )
<a href="#">GetLocalValueEnumerator()</a>	Creates a specialized enumerator for determining which dependency properties have locally set values on this <a href="#">DependencyObject</a> . (Inherited from <a href="#">DependencyObject</a> )
<a href="#">GetType()</a>	Gets the <a href="#">Type</a> of the current instance. (Inherited from <a href="#">Object</a> )
<a href="#">GetValue(DependencyProperty)</a>	Returns the current effective value of a dependency property on this instance of a <a href="#">DependencyObject</a> . (Inherited from <a href="#">DependencyObject</a> )
<a href="#">InvalidateProperty(DependencyProperty)</a>	Re-evaluates the effective value for the specified dependency property. (Inherited from <a href="#">DependencyObject</a> )
<a href="#">MemberwiseClone()</a>	Creates a shallow copy of the current <a href="#">Object</a> . (Inherited from <a href="#">Object</a> )
<a href="#">OnChanged()</a>	Called when the current <a href="#">Freezable</a> object is modified. (Inherited from <a href="#">Freezable</a> )
<a href="#">OnFreezablePropertyChanged(DependencyObject, DependencyProperty)</a>	Ensures that appropriate context pointers are established for a <a href="#">DependencyObjectType</a> data member that has just been set. (Inherited from <a href="#">Freezable</a> )
<a href="#">OnFreezablePropertyChanged(DependencyObject, DependencyProperty, DependencyProperty)</a>	This member supports the Windows Presentation Foundation (WPF) infrastructure and is not intended to be used directly from your code. (Inherited from <a href="#">Freezable</a> )
<a href="#">OnPropertyChanged(DependencyProperty ChangedEventArgs)</a>	Overrides the <a href="#">DependencyObject</a> implementation of <a href="#">OnPropertyChanged(DependencyPropertyChangedEventArgs)</a> to also invoke any <a href="#">Changed</a> handlers in response to a changing dependency property of type <a href="#">Freezable</a> .

	(Inherited from <a href="#">Freezable</a> )
<a href="#">Open(Uri)</a>	Opens the given <a href="#">Uri</a> for media playback.
<a href="#">Pause()</a>	Pauses media playback.
<a href="#">Play()</a>	Plays media from the current <a href="#">Position</a> .
<a href="#">ReadLocalValue(DependencyProperty)</a>	Returns the local value of a dependency property, if it exists. (Inherited from <a href="#">DependencyObject</a> )
<a href="#">ReadPreamble()</a>	Ensures that the MediaPlayer is being accessed from a valid thread.
<a href="#">SetCurrentValue(DependencyProperty, Object)</a>	Sets the value of a dependency property without changing its value source. (Inherited from <a href="#">DependencyObject</a> )
<a href="#">SetValue(DependencyProperty, Object)</a>	Sets the local value of a dependency property, specified by its dependency property identifier. (Inherited from <a href="#">DependencyObject</a> )
<a href="#">SetValue(DependencyPropertyKey, Object)</a>	Sets the local value of a read-only dependency property, specified by the <a href="#">DependencyPropertyKey</a> identifier of the dependency property. (Inherited from <a href="#">DependencyObject</a> )
<a href="#">ShouldSerializeProperty(DependencyProperty)</a>	Returns a value that indicates whether serialization processes should serialize the value for the provided dependency property. (Inherited from <a href="#">DependencyObject</a> )
<a href="#">Stop()</a>	Stops media playback.
<a href="#">ToString()</a>	Returns a string that represents the current object. (Inherited from <a href="#">Object</a> )
<a href="#">VerifyAccess()</a>	Enforces that the calling thread has access to this <a href="#">DispatcherObject</a> . (Inherited from <a href="#">DispatcherObject</a> )
<a href="#">WritePostscript()</a>	Raises the <a href="#">Changed</a> event for the <a href="#">Freezable</a> and invokes its <a href="#">OnChanged()</a> method. Classes that derive from <a href="#">Freezable</a> should call this method at the end of any API that modifies class members that are not stored as dependency properties. (Inherited from <a href="#">Freezable</a> )
<a href="#">WritePreamble()</a>	Verifies that the MediaPlayer is not frozen and that it is being accessed from a valid threading context.

# Events

<a href="#">BufferingEnded</a>	Occurs when buffering has finished.
<a href="#">BufferingStarted</a>	Occurs when buffering has started.
<a href="#">Changed</a>	Occurs when the <a href="#">Freezable</a> or an object it contains is modified. (Inherited from <a href="#">Freezable</a> )
<a href="#">MediaEnded</a>	Occurs when the media has finished playback.
<a href="#">MediaFailed</a>	Occurs when an error is encountered.
<a href="#">MediaOpened</a>	Occurs when the media is opened.
<a href="#">ScriptCommand</a>	Occurs when a script command has been encountered within the media.

## Applies to

Product	Versions
<b>.NET Framework</b>	3.0, 3.5, 4.0, 4.5, 4.5.1, 4.5.2, 4.6, 4.6.1, 4.6.2, 4.7, 4.7.1, 4.7.2, 4.8, 4.8.1
<b>Windows Desktop</b>	3.0, 3.1, 5, 6, 7, 8

## See also

- [Drawing](#)
- [VideoDrawing](#)
- [DrawingContext](#)