**HTML Multimedia**

Sound, music, videos, movies, and animations are all examples of multimedia on the internet.

## **What is Multimedia?**

Multimedia is available in a variety of formats. It could be images, music, sound, videos, records, films, animations, and more.

Multimedia elements of various types and formats are frequently found on web pages.

## **Browser Support**

Only text was supported in the early web browsers, and it was limited to a single font in a single colour.

Browsers with support for colours, fonts, images, and multimedia appeared later!

## **Multimedia Formats**

Media files contain multimedia elements such as audio and video.

Looking at the file extension is the most common way to figure out what type of file it is.

Multimedia files come in a variety of formats and extensions, including.wav,.mp3,.mp4,.mpg,.wmv, and.avi.

## **Common Video Formats**

There are numerous video formats available. HTML supports the MP4, WebM, and Ogg video formats. YouTube recommends the MP4 file format.

|  |  |  |
| --- | --- | --- |
| **Format** | **File** | **Description** |
| MPEG | .mpg .mpeg | MPEG. The Moving Pictures Expert Group created this. The first widely used video format on the internet. HTML is no longer supported. |
| AVI | .avi | AVI is an acronym for audio visual information (Audio Video Interleave). Microsoft created it. Frequently found in video cameras and television hardware. On Windows computers, it works fine, but not in web browsers. |
| WMV | .wmv | WMV (Windows Media Video) (Windows Media Video). Microsoft created it. Frequently found in video cameras and television hardware. On Windows computers, it works fine, but not in web browsers. |
| QuickTime | .mov | QuickTime. Apple created it. Frequently found in video cameras and television hardware. On Apple computers, it works fine, but not in web browsers. |
| RealVideo | .rm .ram | RealVideo. Real Media created this to allow low-bandwidth video streaming. In web browsers, this video does not play. |
| Flash | .swf .flv | Flash. Macromedia created it. To play in web browsers, it frequently requires an additional component (plug-in). |
| Ogg | .ogg | Theora Ogg is a fictional character. The Xiph.Org Foundation created it. HTML is a supporter of this. |
| WebM | .webm | WebM. Mozilla, Opera, Adobe, and Google collaborated on the project. HTML is a supporter of this. |
| MPEG-4 or MP4 | .mp4 | MP4. The Moving Pictures Expert Group created this. Frequently found in video cameras and television hardware. All browsers support it, and YouTube recommends it. |

**Note:** Only MP4, WebM, and Ogg video are supported by the HTML standard.

## **Common Audio Formats**

For compressed recorded music, MP3 is the best format. The term "MP3" has come to represent digital music.

MP3 is the format to use if your website is about recorded music.

|  |  |  |
| --- | --- | --- |
| **Format** | **File** | **Description** |
| MIDI | .mid .midi | MIDI (Musical Instrument Digital Interface) (Musical Instrument Digital Interface). All electronic music devices, such as synthesisers and PC sound cards, use this format. MIDI files contain digital notes that can be played by electronics rather than sound. It works on all computers and musical instruments, but not in web browsers. |
| RealAudio | .rm .ram | RealAudio. Real Media created this to allow low-bandwidth audio streaming. In web browsers, this video does not play. |
| WMA | .wma | WMA is an acronym for "World Music Association" (Windows Media Audio). Microsoft created it. On Windows computers, it works fine, but not in web browsers. |
| AAC | .aac | AAC is an acronym for "Assist (Advanced Audio Coding). Apple created this format as the default for iTunes. On Apple computers, it works fine, but not in web browsers. |
| WAV | .wav | WAV. IBM and Microsoft collaborated on this project. Plays well on Windows, Macintosh, and Linux computers. HTML is a supporter of this. |
| Ogg | .ogg | Ogg. The Xiph.Org Foundation created it. HTML is a supporter of this. |
| MP3 | .mp3 | MP3 files are the audio component of MPEG files. The most widely used format for music players is MP3. Combines high quality with good compression (small files). All browsers support it. |
| MP4 | .mp4 | MP4 is primarily a video format, but it can also be used to store audio data. All browsers support it. |

**Note:** Only MP3, WAV, and Ogg audio are supported by the HTML standard.

# HTML Video

The HTML <video> element is used to show a video on a web page.

## **The HTML <video> Element**

To show a video in HTML, use the <video> element:

### **Example**

<video width="320" height="240" controls>  
  <source src="movie.mp4" type="video/mp4">  
  <source src="movie.ogg" type="video/ogg">  
Your browser does not support the video tag.  
</video>

## **How it Works**

Video controls, such as play, pause, and volume, are added with the controls attribute.

Always include width and height attributes in your code. The page may flicker while the video loads if the height and width are not set.

You can use the <source> element to specify alternative video files for the browser to choose from. The browser will use the first format it recognises.

Only browsers that do not support the <video> element will see the text between the <video> and </video> tags.

## **HTML <video> Autoplay**

To start a video automatically, use the autoplay attribute:

### **Example**

<video width="320" height="240" autoplay>  
  <source src="movie.mp4" type="video/mp4">  
  <source src="movie.ogg" type="video/ogg">  
Your browser does not support the video tag.  
</video>

**Note:** Chromium browsers do not allow autoplay in most cases. However, muted autoplay is always allowed.

Add muted after autoplay to let your video start playing automatically (but muted):

### **Example**

<video width="320" height="240" autoplay muted>  
  <source src="movie.mp4" type="video/mp4">  
  <source src="movie.ogg" type="video/ogg">  
Your browser does not support the video tag.  
</video>

## **HTML Video Tags**

|  |  |
| --- | --- |
| **Tag** | **Description** |
| [<video>](https://www.w3schools.com/tags/tag_video.asp) | Defines a video or movie |
| [<source>](https://www.w3schools.com/tags/tag_source.asp) | Defines multiple media resources for media elements, such as <video> and <audio> |
| [<track>](https://www.w3schools.com/tags/tag_track.asp) | Defines text tracks in media players |

# HTML Audio

The HTML <audio> element is used to play an audio file on a web page.

## **The HTML <audio> Element**

To play an audio file in HTML, use the <audio> element:

### **Example**

<audio controls>  
  <source src="horse.ogg" type="audio/ogg">  
  <source src="horse.mp3" type="audio/mpeg">  
Your browser does not support the audio element.  
</audio>

## **HTML Audio - How It Works**

Audio controls, such as play, pause, and volume, are added with the controls attribute.

You can use the <source> element to specify alternative audio files for the browser to choose from. The browser will use the first format it recognises.

Only browsers that do not support the <audio> element will see the text between the <audio> and </audio> tags.

## **HTML <audio> Autoplay**

To start an audio file automatically, use the autoplay attribute:

### **Example**

<audio controls autoplay>  
  <source src="horse.ogg" type="audio/ogg">  
  <source src="horse.mp3" type="audio/mpeg">  
Your browser does not support the audio element.  
</audio>

**Note:** Chromium browsers do not allow autoplay in most cases. However, muted autoplay is always allowed.

Add muted after autoplay to let your audio file start playing automatically (but muted):

### **Example**

<audio controls autoplay muted>  
  <source src="horse.ogg" type="audio/ogg">  
  <source src="horse.mp3" type="audio/mpeg">  
Your browser does not support the audio element.  
</audio>

## **HTML Audio - Methods, Properties, and Events**

For the audio> element, the HTML DOM defines methods, properties, and events.

You can use this to load, play, pause, and adjust the duration and volume of audio files.

There are also DOM events that can alert you when an audio file starts playing, stops playing, or is paused.

For a full DOM reference, go to our [HTML Audio/Video DOM Reference](https://www.w3schools.com/tags/ref_av_dom.asp).

## **HTML Audio Tags**

|  |  |
| --- | --- |
| **Tag** | **Description** |
| [<audio>](https://www.w3schools.com/tags/tag_audio.asp) | Defines sound content |
| [<source>](https://www.w3schools.com/tags/tag_source.asp) | Defines multiple media resources for media elements, such as <video> and <audio> |

## **The <object> Element**

All browsers recognise the <object> element.

The <object> element in an HTML document specifies an embedded object.

It was created to include plug-ins in web pages (such as Java applets, PDF readers, and Flash Players), but it can also be used to include HTML in HTML:

### **Example**

<object width="100%" height="500px" data="snippet.html"></object>

Or images if you like:

### **Example**

<object data="audi.jpeg"></object>

## **The <embed> Element**

In all major browsers, the embed> element is supported.

An embedded object within an HTML document is also defined by the embed> element.

For a long time, web browsers have supported the embed> element. Prior to HTML5, it was not included in the HTML specification.

### **Example**

<embed src="audi.jpeg">

Note that the <embed> element does not have a closing tag. It can not contain alternative text.

The <embed> element can also be used to include HTML in HTML:

### **Example**

<embed width="100%" height="500px" src="snippet.html">

## **Playing a YouTube Video in HTML**

Follow these steps to embed your video on a web page:

• Upload the video to YouTube

• Write down the video id

• Create an <iframe> element in your web page

• Set the src attribute to the video URL

• Use the width and height attributes to specify the player's dimensions

• Add any additional parameters to the URL (see below))

### **Example**

<iframe width="420" height="315"  
src="https://www.youtube.com/embed/tgbNymZ7vqY">  
</iframe>

## **YouTube Autoplay + Mute**

You can let your video start playing automatically when a user visits the page, by adding autoplay=1 to the YouTube URL. However, automatically starting a video is annoying for your visitors!

**Note:** Chromium browsers do not allow autoplay in most cases. However, muted autoplay is always allowed.

Add mute=1 after autoplay=1 to let your video start playing automatically (but muted).

### **YouTube - Autoplay + Muted**

<iframe width="420" height="315"  
src="https://www.youtube.com/embed/tgbNymZ7vqY?autoplay=1&mute=1">  
</iframe>

## **YouTube Playlist**

A list of videos to watch, separated by commas (in addition to the original URL).

## **YouTube Loop**

To make your video loop indefinitely, add loop=1.

The video will only play once if the value is 0 (the default).

Value 1: The video will play over and over again (forever).

### **YouTube - Loop**

<iframe width="420" height="315"  
src="https://www.youtube.com/embed/tgbNymZ7vqY?playlist=tgbNymZ7vqY&loop=1">  
</iframe>

## **YouTube Controls**

To disable controls in the video player, set controls=0.

Value 0: The player controls aren't visible.

Value 1 (default): The player is in charge of the display.

### **YouTube - Controls**

<iframe width="420" height="315"  
src="https://www.youtube.com/embed/tgbNymZ7vqY?controls=0">  
</iframe>