Autodesk® FBX®

Autodesk FBX for QuickTime Help

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Contents

Chapter 1 **FBX for QuickTime** 1
About the FBX format 1
Installation 1
Opening files 2
FBX for QuickTime controls 2
Keyboard shortcuts 3
FBX for QuickTime and the Web 5

Chapter 2 **Advanced FBX for QuickTime** 7
QuickTime Pro 7
Authoring for the web 8
Embedding FBX files on a web page 8

Chapter 3 **Troubleshooting** 11
Common questions 11
Known issues 12

Index 17

FBX for QuickTime

1

The Autodesk® FBX® for QuickTime® viewer is a plug-in for Apple® QuickTime that lets you play back and interact inside QuickTime with 3D files from any major 3D application that have been converted into FBX format.

NOTE You can use the FBX Converter utility to convert 3D files from any major 3D application into the FBX format. Download the FBX Converter for free *here*.

About the FBX format

Autodesk FBX is a platform-independent 3D authoring and interchange format that provides access to 3D content from all major 3D vendors and platforms. FBX is a file format that supports all major 3D data elements, as well as 2D, audio, and video media elements.

For more information on the FBX format, visit the FBX SDK and Plug-ins page at the Autodesk web site: *www.autodesk.com/fbx*.

Installation

To install FBX for QuickTime for Microsoft Windows:

1. Download the install file from the Autodesk web site ().
2. Double-click *FBX for QuickTime 7.0 Setup.exe* to launch the Autodesk plug-in installer.
3. Follow the on-screen installation instructions.

To install FBX for QuickTime for Apple Macintosh:

1. Download the *.zip* file from the Autodesk web site (*http://www.Autodesk.com/fbx*) to your desktop.
2. Double-click the ZIP file to extract the Installation disk image.
3. Double-click the package icon to start the installation.
4. Follow the on-screen installation instructions.

   NOTE On MAC OS X, the FBX for QuickTime plug-in supports only versions of QuickTime 7. You cannot install QuickTime 7.7 side-by-side with QuickTime X, which is pre-installed with Mac OS X Lion, so we advise you to install QuickTime 7.6.6 from *http://support.apple.com/kb/DL923*.

Opening files

To open an FBX file in QuickTime:

1. Select File > Open File from the QuickTime main menu.
2. Switch the Files of Type menu to All Files so you can view FBX files.
3. Select your file and click Open.

   NOTE You can open only one FBX file at a time, even though you can open multiple QuickTime files simultaneously. If you open a second file, a message appears telling you to close the first one.

   NOTE You cannot view ASCII FBX files in the FBX for QuickTime viewer. Instead, save your FBX file as a binary file.

FBX for QuickTime controls

FBX for QuickTime lets you play an FBX file in the QuickTime viewer like a standard QuickTime movie

- If the FBX file you have loaded has no animation, you can only control cameras and lights.
- If there is animation in the scene, use the transport controls to preview it.

  Use the Fast-Forward and Rewind buttons in the FBX for QuickTime viewer interface to move your animation forward or backward. To move to a specific point in the movie, drag the timeline cursor.

NOTE When you open a new FBX file or switch between applications, click within the movie to focus the interface on the FBX for QuickTime viewer. This is because you cannot use keyboard shortcuts unless the viewer has the window focus.

Keyboard shortcuts

The following table lists shortcuts used by the FBX for QuickTime component. Shortcuts are not case sensitive. While you are using FBX for QuickTime, press H on your keyboard, to see an on-screen list of shortcuts.

Action	Shortcut	Description
Help On/Off	H	Displays a help screen with a list of available short-cuts.
Cycle Camera View	C	Cycles through the different camera views: Producer perspective, Top, Left, Right, Bottom, Front, Back, Custom camera 1, and so on.
Axis On/Off	A	Shows or hides the XYZ axis in the left corner of the FBX for QuickTime viewer window.
Frame by Frame	Left or Right arrow	Steps through the animation frame-by-frame.
Display Modes	D	Cycles through the different display modes: Wireframe, Flat, Lighted, Textured, Shaded, and Shaded & Textured.
Frame All	F	Frames the camera view to include all objects.
Grid On/Off	G	Shows/Hides the grid.
Show Information On/Off	I	Shows/Hides information on the selected take, camera, display mode, frame rate, and so on.

Action	Shortcut	Description
Keyboard Trigger On/Off	K	Activates/disables keyboard triggering if your FBX file was created with MotionBuilder and uses a keyboard device or the Trigger tool. Note: These animations might be constraint-based (that is, rule-based) or actual 'animation sequences' that you trigger. For more about authoring triggers and constraints, consult the FBX for QuickTime documentation.
Lights On/Off	L	Switches lights on or off.
Free Running On/Off	R	Continues evaluation of scene elements even if you stop the QuickTime player when it is active. Activate Free Running when you use the Keyboard Trigger to trigger animation.
Take Cycling	T	Switches take (animation sequence). Press "T" to cycle through all available takes.
View Mode Cycling	V	Cycles through the different viewing modes: Normal, Models Only, and X-Ray.
Crane/Pan camera	Shift-drag	Creates a crane/pan camera movement by moving both the camera and its interest. Note: This feature does not work with Orthographic cameras (Top, Left, Right, Bottom, Front, and Back).
Dolly camera	Z-drag	Translates the camera along the Z axis, no rotation.
Orbit camera	Click-drag	Orbits the camera around the camera interest.Note: This feature does not work with Orthographic Producer cameras (Top, Left, Right, Bottom, Front, and Back.)

FBX for QuickTime and the Web

You can also use FBX for QuickTime to include FBX data on Web pages. See the next Chaper Authoring for the Web (page 8) for more on using FBX for QuickTime on the web.

Advanced FBX for QuickTime

2

The following section contains information about more advanced functions of the FBX for QuickTime viewer.

QuickTime Pro

FBX for QuickTime Pro gives a variety of additional controls. Specifically, you can work with 3D as a standard QuickTime “Track Type”, and composite the FBX 3D track along with other Video, Audio, Text, and 2D tracks. You can also use QuickTime Pro to save FBX files as MOV files.

All track controls such as Add/Replace/Trim are available to FBX tracks as on other Track types. You can activate/disable/delete an FBX 3D track, as well as control the position of the FBX track “layer” using Get Movie Properties from the Movie menu. FBX for QuickTime also supports QuickTime Pro full-screen mode.

NOTE

FBX for QuickTime does not currently support other Movie Property controls in QuickTime Pro - such as Size and Position. For example, while you can resize 2D files “over” the FBX 3D layer, you cannot modify the 3D layer size.

Saving an FBX file as an MOV file

You can save FBX tracks (“embed”) in MOV files, like other Tracks in QuickTime Pro. This lets you open them in another QuickTime player or over the Web.

To save a QuickTime file including FBX data:

1 Select File > Save As from the main menu, and save the file. You have two options:

Option	Behavior
Save Normally	Creates a link to the FBX file in the MOV file. Use this option if you are going to work on the FBX file in the same file location.
Make movie self-contained	Embeds the FBX track information directly into the resulting MOV file. Use this option if you want to transfer the data to another computer, or want to use the file across platforms.

Authoring for the web

You can use the FBX for QuickTime viewer to display FBX files over the internet so you can share files with a larger audience.

The following is a list of supported browsers for viewing FBX files on a web page:

- Windows Internet Explorer 8
- Firefox 3
- Safari 3
- Google Chrome

Embedding FBX files on a web page

You can embed the FBX for QuickTime viewer on a web page so that visitors to the web page can use it to view an FBX file. You can do this by adding a JavaScript file that points to the FBX file to the website root directory.

To do this, you must add the following three things to the index of the page:

- A JavaScript file that launches the FBX for QuickTime viewer

- HTML code that refers to the JavaScript file
- The FBX file

To modify a webpage so that it can show FBX files with the FBX for QuickTime viewer:

1. Download the AC_QuickTime.js JavaScript code from . There is a link to download the JavaScript file under the heading **External JavaScript Solution Two**.
2. You will use this script on the web page to launch the FBX for QuickTime viewer.
3. Using a web page editor, access the index of the web page where you want to embed the FBX file.
4. Write the following HTML code. This code points to the JavaScript file that you downloaded:

```
<html>
<head>
<title>Embedded FBX QuickTime movie in a web
page</title>
<script src="AC_QuickTime.js" language="JavaScript"
type="text/javascript"></script>
</head>
<body bgcolor="#6699FF">
<h1>Embedded FBX file in a web page</h1>
<div/>
<script language="JavaScript" type="text/javascript">
QT_WriteOBJECT_XHTML('Tester.FBX', '800', '600', '',
    'autoplay', 'true',
    'emb#bgcolor', 'black',
    'align', 'middle');
</script>
<hr/>An fbx file should be playing now above, using a
 QuickTime player embedded.
</body>
</html>
```

5. Add the JavaScript to your web page code and upload the FBX file you wish to view to the web page index.

Troubleshooting

3

The following section covers common questions about FBX for QuickTime as well as contains a list of known issues.

If you have questions, suggestions or comments about FBX for QuickTime, e-mail *fbxplugins@Autodesk.com*.

Common questions

The following table contains the answers to some common questions about FBX for QuickTime.

Question	Answer
How can I get FBX files to open faster in QuickTime?	Save your file in the QuickTime Player with the "Save As..." option in the menu. (Using "Save As" creates a QuickTime movie that has an *FBX* track. Make sure to save it in "Self-Contained" mode, so that the FBX file embeds in the MOV file. Otherwise, reference it externally.)
I can see my character, but why is it not positioned the way I saved it?/ Why can't I see my animation?	If your character is not positioned correctly, or you cannot see your animation, you probably forgot to plot (or Bake) your character.
What is plotting (or Baking)?	Plotting finalizes your project by copying the animation directly to your models.

Question	Answer
There's no animation in my scene, but it has a special effects shader that is not moving.	Set your take length to zero, so that the Free Running option is automatically active when your *FBX* file opens in QuickTime.
When I use a keyboard as a device in a constraint to make my character move, why is the frame rate weird, or the animation is inactive?	Set the take length to zero, so the Free Running option activates automatically when your *FBX* file opens in QuickTime.
Why can't I see my textures?	When exporting *FBX* files, activate the Embed Media option. This embeds textures and other media with the *FBX* file.
Why can't I view my ASCII FBX file?	This is a known limitation. Save your *FBX* file as Binary instead. See Known issues (page 12)

Known issues

The following problems are known issues that can occur when you use FBX for QuickTime:

Windows errors

If you receive the following error(s) when you run FBX for QuickTime, you are missing the *MSVCP100.dll* and/or *MSVCR100.dll* files:

- Error - 2091: an unknown error occurred
- The program can't start because MSVCR100.dll is missing from your computer. Try reinstalling the program to fix this problem.
- The program can't start because MSVCP100.dll is missing from your computer. Try reinstalling the program to fix this problem.

The MSVCR100 and MSVCP100 .dll files are contained in the **vcredist_x86.exe** package, which you can download at *http://www.microsoft.com/download/en/details.aspx?id=26999*.

ASCII FBX Files

You cannot view ASCII FBX files in the FBX for QuickTime viewer. Instead, save your FBX file as a binary file.

This is because a change was made to the way FBX files were opened because of problems with viewing FBX files on a web page. The files had to be read from memory, as they require a data stream. The function that reads the FBX Files from memory currently only works with binary files.

Exporting FBX

FBX for QuickTime currently does not support export of 3D data in any 2D format. Export of a multimedia presentation (for example, an MPEG-4 stream overlaying an FBX track,) results in the correct export of the 2D, video, and audio layers, and black frames in the place of the 3D track.

Driver warnings

FBX for QuickTime requires an OpenGL accelerator video card, and an appropriate software driver.

For optimal performance, the card and driver must support the OpenGL PBuffer extension. If your video driver does not support the PBuffer extension, a warning dialog box appears when you load an FBX file into FBX for QuickTime. Visit the web site of your video card manufacturer for information on your video card support of the PBuffer extension. In many cases, updating the OpenGL driver resolves this problem.

NOTE

You can still view your files in QuickTime, but the software must run emulation mode which results in slower playback speeds.

Multiple and renamed components

Never rename the component when using FBX for QuickTime. The component name must be *QTFbx.qtx* (or *QTFbx.component* on Mac OS/X) or it does not work.

In addition, the QuickTime components directory must contain only the most recent component version; do not have more than one version of the component.

MotionBuilder Story window

The FBX for QuickTime component does not support the Story window, so do not use the MotionBuilder Story window to create FBX files. However, if your animation uses the Story window, you can plot the results to a new take, and then view animation with FBX for QuickTime.

0-Length Files (MotionBuilder)

FBX for QuickTime has a Free Running control that lets certain effects created with Autodesk tools (for example, MotionBuilder Particle shaders) to run constantly, even when there is no animation playing.

Normally, this option is Off by default. But if you want to start the Free Running of a file automatically upon load, save the file in MotionBuilder (or other Autodesk authoring tool) with a 0 frame length animation. By default, the scene plays back effects as soon as it loads.

Animation triggering with separate FBX files

If you are using MotionBuilder and have a series of separate FBX files that the MotionBuilder Trigger tool or Animation Trigger uses, include separate FBX files with your distribution.

To use trigger animation in FBX for QuickTime files:

1. Move the FBX files used by the Trigger tool to the same file location as the main FBX file.
2. Open the main FBX file in MotionBuilder.
3. Update the location in the Trigger tool or Animation Triggering window of the moved FBX files so that the path reflects the correct location.
4. Save the FBX file.
5. Store the triggered FBX files in the same location as the main FBX file when you distribute the FBX file.

MotionBuilder Edge Cartoon shader

If you use the MotionBuilder Edge Cartoon shader to create an FBX file, the size of the outline edge is absolute regardless of the size of the QuickTime viewer. However, the size of the model changes.

For example, if you reduce the QuickTime viewer to half its size, the model scales down by half but the outline edge of the models with Edge Cartoon shaders remains the same size; this results in a disproportionately thick edge.

To work around this, adjust your cartoon shader settings using a camera set to the default size of the QuickTime window before you save the scene.

Index

A

about FBX format 1
animation triggering 14

B

browsers
    supported 8

C

common questions 11
controls 2

D

driver warnings 13

E

errors
    Windows DLLs 12
exporting to FBX 13

F

FBX for QuickTime
    animation triggering 14
    common questions 11
    controls 2
    driver warnings 13
    exporting FBX 13
    keyboard shortcuts 3
    known issues 12
    MotionBuilder 0 length files 14
    MotionBuilder Edge cartoon shader 14
    MotionBuilder Story window 14
    multiple and renamed components 13
    QuickTime Pro 7
    troubleshooting and support 11
    web authoring 5
    Windows FBX 12
    Windows installation 1
FBX for QuickTime Pro
    saving an FBX as an MOV 7
FBX for QuickTme
    Macintosh installation 2
FBX for QutickTime
    ASCII files 13
FBX format
    about 1
files
    opening 2

I

installation
    Macintosh 2
    Windows 1

K

keyboard shortcuts 3
known issues 12
    animation triggering 14
    driver warnings 13
    Edge cartoon shader 14
    exporting FBX 13
    MotionBuilder 0-length files 14
    MotionBuilder Story window 14
    Window errors 12
known limitations
    ASCII files 13
    multiple and renamed components 13

M

MotionBuilder
    0-length files 14
    Edge cartoon shader 14
    Story window 14
MOV file
    saving an FBX file as 7
multiple components 13

O

opening files 2

P

procedure
    load a file 2
    Mac install 2
    Windows install 1

Q

Quicktime Pro and FBX 7

R

renamed components 13

S

supported browsers 8

T

troubleshooting 11

W

web authoring and FBX for QuickTime 5