



**MediaStorm**

## **MediaStorm's Compression Workflow: From Output to web-ready H.264**

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Created February 28, 2012  
Updated March 6, 2013  
Version 1.1

### **Rationale**

This document details MediaStorm's best practices for encoding a single H.264 file for playback on the web, iPad, and iPhone (4 and above). Note that H.264 files created with Compressor **will not work** on Kindle Fire HD or Android devices.

We will use Apple's [Compressor](#) to encode with the following settings:

#### **Video**

**Codec:** H.264 (mp4)

**Dimensions:** 1280 x 720 pixels

**Data Rate:** 1800 - 2400 kbits/sec

**Encoding:** Multi-pass

Note that your video **Data Rate** will vary, as detailed later, depending on how much motion your project contains.

#### **Audio**

**Format:** AAC

**Channels:** Stereo

**Rate:** 48.00 KHz

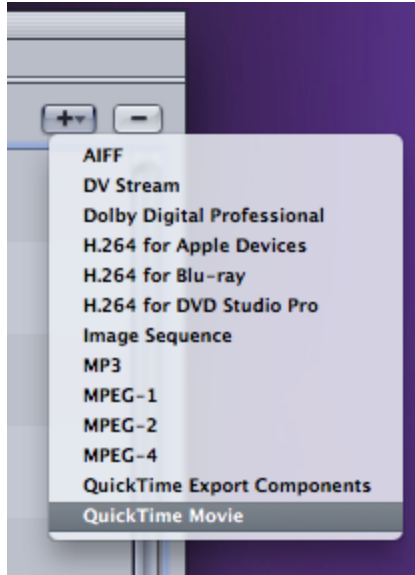
**Bit Rate:** 160 kbps

## Encoding with Apple's Compressor

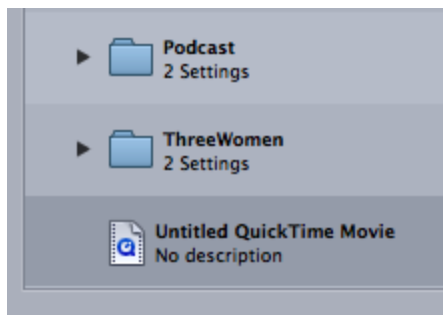
To begin, open [Compressor](#).

Note that Compressor used to be packaged with the Final Cut Studio. With the release of [FCP X](#), [Compressor](#) is now sold as a separate application for \$49.99 from the App Store.

In **Compressor's Settings** window (**command-3**), click the **plus** button on the right side. Choose **QuickTime** movie.



A new custom setting will appear in your window named **Untitled QuickTime Movie**.



# INSPECTOR

Double click it to open the settings in the **Inspector** window.

In the **Name** field, rename the setting. In determining your naming convention, you should make sure to include the descriptors **H.264** as well as **AAC** audio and the **1800kbits** data rate.

Also include the **file dimensions**. For HD files, use **1280x720**. For standard dimensions use **720x480** for NTSC, or **720x576** for PAL.

For example, a good name for your setting would be: H.264\_AAC\_1800\_kbs\_1280x720

Also, make sure to enable the following settings:

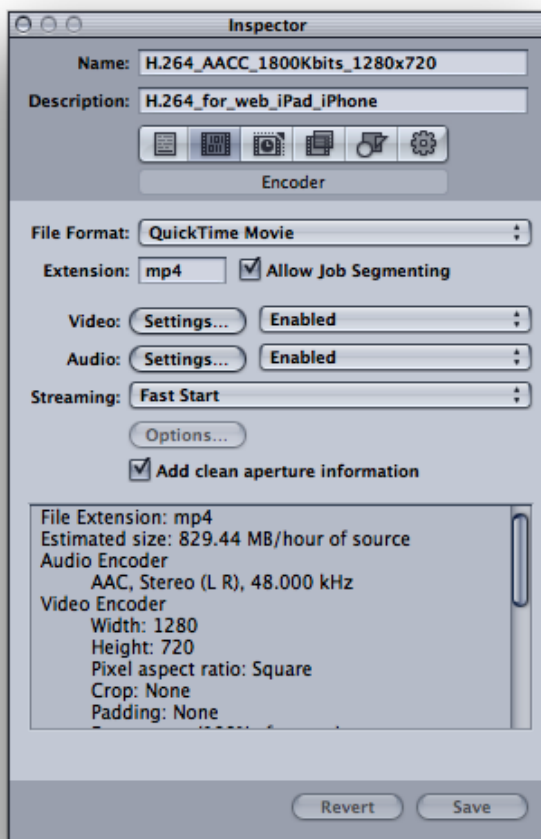
**File Format:** Select **QuickTime Movie**

**Allow Job Segmenting:** **Check** this box.

**Extension:** Enter **mp4**.

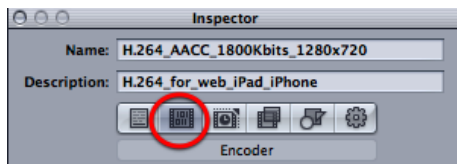
**Streaming:** Choose **Fast Start**.

**Add clean aperture information:** **Check** this box.

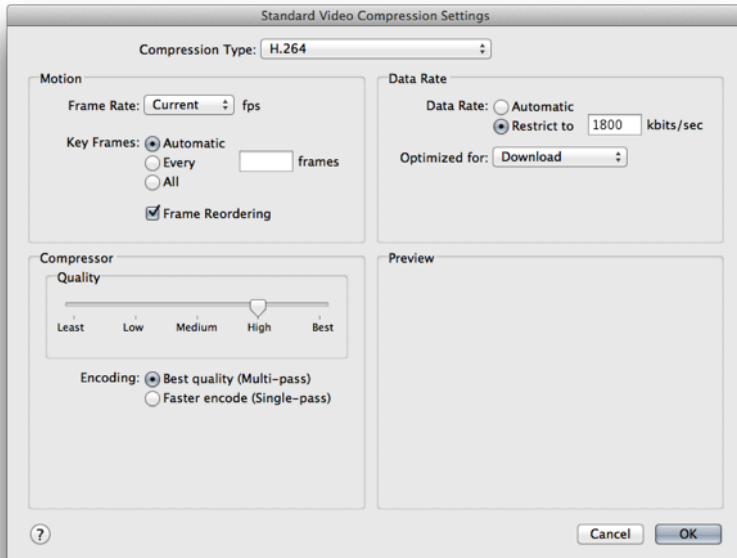


# VIDEO

In the **Encoder** tab, select the **Video: Settings** button.



Use the following settings:



### **Compression Type:**

Choose **H.264**.

### **Frame Rate**

Select **Current** to choose the same frame rate as your QuickTime file.

### **Key Frames:**

Select **Automatic** and check **Frame Reordering**.

### **Compressor Quality**

You can ignore the **Compressor Quality** as it will not be available when you **restrict** the **data** rate, below.

### **Encoding**

Set **Encoding** to **Best Quality (Multi-Pass)**.

### **Data Rate**

Restrict the **Data Rate** to 1800 kbits/sec to start. For files with more motion, you can increase the data rate up to 2400 kbits/sec. See **Encoding Multiple Files** below for further information.

### **Optimized for**

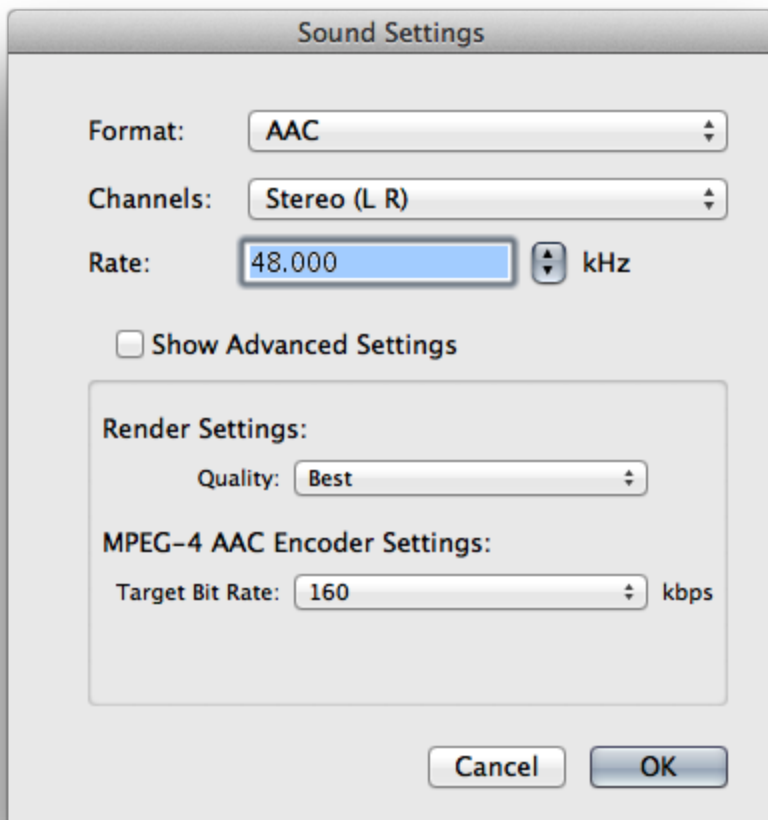
Set to **Download**.

Press **OK** at the bottom of the window.

## **AUDIO**

Back in the **Encoder** tab of the **Inspector** select the **Audio: Settings...** button.

Use the following settings:



**Format:** Choose **AAC**

**Channels:** Choose **(Stereo L R)**

**Rate:** Choose **48 kHz**

**Render Settings:** Choose **Best** quality

**MPEG 4 AAC LC Encoder Settings:**  
Choose a **Target Bit Rate** of **1600kbits**

Press **OK** at the bottom of the window.

# SIZE

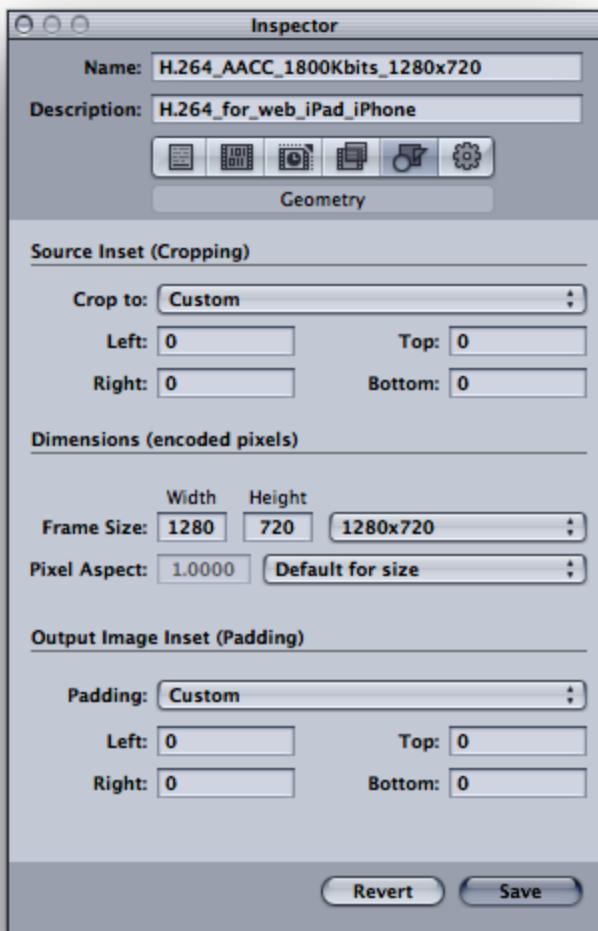
Select the **Geometry** tab of the **Inspector**.



Use the following settings:

## **Dimensions (encoded pixels)**

For 16:9 files, choose **1280x720** in the **Frame Size** pull down menu.



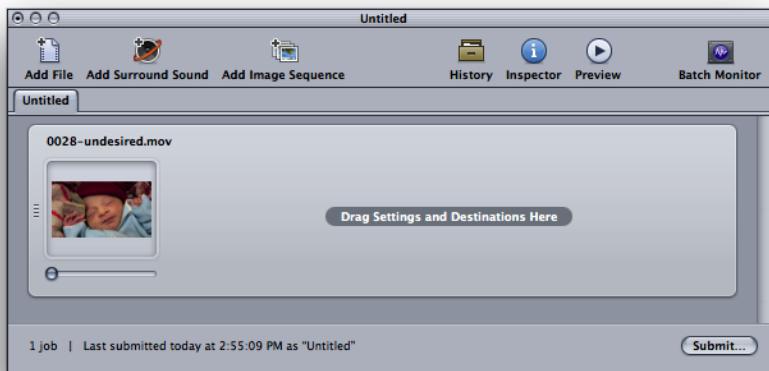
For 4:3 files, for formats such as DV (720x480) and PAL (720x576) choose **100% of source**.

**Note:** For best results using Standard Definition, de-interlace your footage using QuickTime Pro, first.

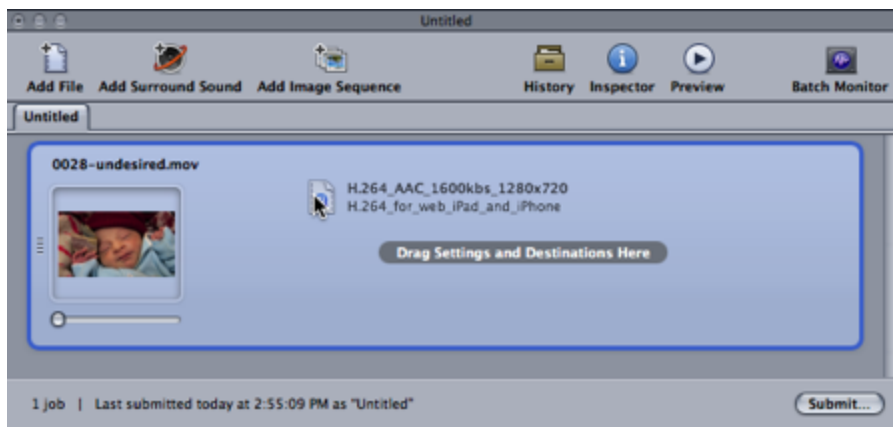
## **ENCODING YOUR FILE**

Create a new **Batch** window (**command-N**)

Drag your high resolution source file(s) into the batch window.



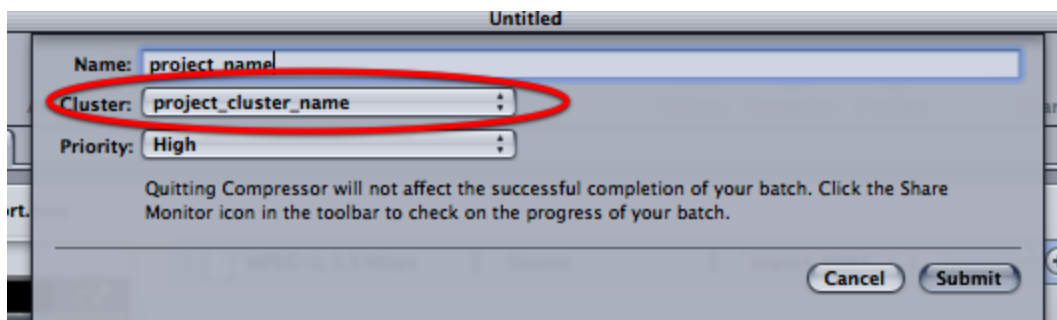
Drag the **setting** you just created on to the file.



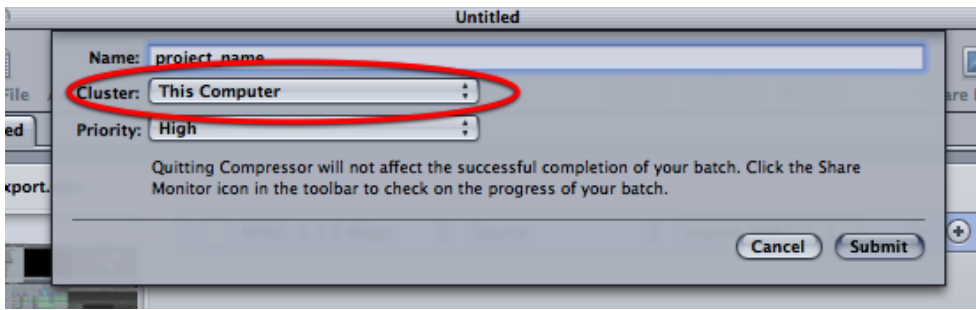
Click **Submit** at the bottom of the window.

If you have setup **Qmaster** as described in the MediaStorm document, [Setting up QMaster for Faster Transcoding and Compression](#), choose your Qmaster cluster name from the **Cluster** popup menu.

Then, press **Submit**.



If you are not using Qmaster, select **This Computer** from the **Cluster** popup menu.



Then, click the **Submit** button.

## ENCODING MULTIPLE FILES TO FIND THE RIGHT BITRATE

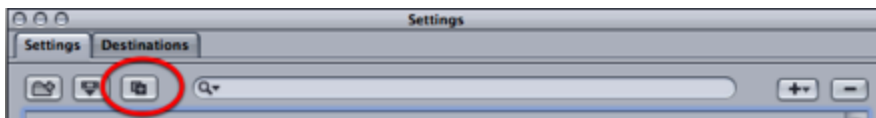
Because compressing files involves so many variables such as frame size and amount of motion, it's difficult to provide a 'one-size-fits-all' solution. Your **data rate** will need to change depending on the nature of your material.

Projects that contain only still photography will usually look great at 1800 kbits, while projects with a lot of motion may need a data rate as high as 2200 or 2400 kbits. **Note:** keep in mind that data rates, or bit rates, for the iPhone and the iPad **cannot exceed 2500 kbits**.

Therefore, consider compressing your file with several settings at once. This way you can easily compare results. To setup to encode for multiple bit rates, follow the steps below.

## SETTINGS WINDOW

In the **Settings** window, select your compression setting. Then, **click** the copy **button** at the top of the page.



A new setting is created with the appended name **copy**.

**Double click** the **setting** and it will open in the **Inspector** window.

## INSPECTOR WINDOW

In the **Encoder** tab, **click** the **Video: Settings...** button. In the popup window increase your data rate as needed.

**Click OK.** In the **Inspector** window **rename** your setting to reflect your changes.

Repeat this process as necessary. Consider creating settings for **2000**, **2200** and **2400** kbits.

## ENCODING MULTIPLE FILES

To encode one file with multiple settings, simply follow the procedures described in **Encoding Your File** above but this time drag multiple settings on to your file. Compressor will then produce multiple versions, each according to your different setting. You can then compare the results.