

# Audiovisual

## Definition

Audiovisual materials at Yale University Library include analog audio and video formats, digital audio and video formats, and film.

## External Resources

[One Format Does Not Fit All: FADGI Audio-Visual Working Group's Diverse Approaches to Format Guidance](#) [1] (October 31, 2013)

Carl Fleischhauer, "[Format Considerations in Audio-Visual Preservation Reformatting: Snapshots from the Federal Agencies Digitization Guidelines Initiative](#) [2]," *Information Standards Quarterly* 22, no. 2 (Spring 2010): 34-40.

Library of Congress [Audio-Visual Conservation Resources](#) [3](Last updated: 8/3/2007)

## Guidelines

Below is a chart showing AV preservation format recommendations YUL is considering adopting in accordance with a consulting report submitted by Audiovisual Preservations Solutions in June 2013. Two competing standards are currently in use at YUL: (1) uncompressed 10-bit video, which results in large files, and (2) mxf-wrapper motion JPEG 2000, which is not 100% open source.

Format	Preservation Master	Access Master	Access Copy
Audio-Analog	<ul style="list-style-type: none"> <li>- Broadcast Wav File (BWF) wrapper</li> <li>- PCM uncompressed</li> <li>- 24-bit</li> <li>- 96kHz</li> </ul>	n/a	<ul style="list-style-type: none"> <li>- MPEG Audio Layer 3 (MP3)</li> <li>- Bitrate 256Kbps</li> </ul>
Audio-Digital	<ul style="list-style-type: none"> <li>- Broadcast Wav File (BWF) wrapper</li> <li>- Native uncompressed data at original sample rate and bit-depth</li> </ul>	n/a	<ul style="list-style-type: none"> <li>- MPEG Audio Layer 3 (MP3)</li> <li>- Bitrate 256Kbps</li> </ul>
Video - Analog Standard Definition	<ul style="list-style-type: none"> <li>- Quicktime wrapper (.mov extension)</li> <li>- Video encoded as 10-bit YUV 4:2:2 uncompressed (v210)</li> <li>- Audio encoded as uncompressed PCM, 48kHz</li> <li>- Maintain original aspect</li> </ul>	<ul style="list-style-type: none"> <li>- Quicktime wrapper (.mov extension)</li> <li>- Video encoded as DV</li> <li>- Audio encoded as uncompressed PCM, 48kHz</li> <li>- Maintain original aspect ratio, recording standard, interlacing, number of</li> </ul>	<ul style="list-style-type: none"> <li>- MPEG4 wrapper (.mp4 extension)</li> <li>- Video encoded as H.264</li> <li>- Audio encoded as uncompressed AAC, 44.1kHz, 256Kbps</li> <li>- Bitrate 5.0Mbps</li> </ul>

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	ratio, recording standard, interlacing, number of audio channels, and auxiliary information such as original timecode and closed captioning	audio channels, and auxiliary information such as original timecode and closed captioning	
Video-Digital	<ul style="list-style-type: none"><li>- Native encoding and data rate in Quicktime wrapper (.mov extension), e.g. DV for MiniDV and DVCam</li><li>- Maintain original aspect ratio, recording standard, interlacing, number of audio channels, and auxiliary information such as original timecode and closed captioning</li></ul>	n/a	<ul style="list-style-type: none"><li>- MPEG4 wrapper (.mp4 extension)</li><li>- Video encoded as H.264</li><li>- Audio encoded as AAC, 44.1kHz, 256kbps</li><li>- Bitrate 5.0Mbps</li></ul>
Film	<p>16 and 8 mm:</p> <ul style="list-style-type: none"><li>- 2k 10-bit RGB 4:4:4 DPX log</li><li>- Uncompressed 96kHz/24-bit Broadcast Wav File (BWF) for audio</li></ul> <p>35 mm:</p> <ul style="list-style-type: none"><li>- 4k 10-bit RGB 4:4:4 DPX log</li><li>- Uncompressed 96kHz/24-bit Broadcast Wav File (BWF) for audio</li></ul>	<ul style="list-style-type: none"><li>- MXF wrapper</li><li>- AVC-Ultra</li></ul>	<ul style="list-style-type: none"><li>- MPEG4 wrapper (.mp4 extension)</li><li>- Video encoded as H.264</li><li>- Audio encoded as uncompressed AAC, 44.1kHz, 256kbps</li><li>- Bitrate of 5.0mbps</li></ul>

**Source URL:** <https://web.library.yale.edu/digital-initiatives/digitization-standards-and-guidelines/audiovisual>

### Links

[1] <http://blogs.loc.gov/digitalpreservation/2013/10/one-format-does-not-fit-all-fadgi-audio-visual-working-groups-diverse-approaches-to-format-guidance/> [2] [http://www.digitizationguidelines.gov/audio-visual/documents/IP\\_Fleischhauer\\_AudioVisual\\_Reformatting\\_isqv22no2.pdf](http://www.digitizationguidelines.gov/audio-visual/documents/IP_Fleischhauer_AudioVisual_Reformatting_isqv22no2.pdf) [3] <http://www.loc.gov/avconservation/preservation/resources.html>