



Audiovisual Formats

[Intro](#)
[Film](#)
[Video](#)
[Magnetic Audio](#)
[Grooved Disc](#)
[Grooved Cylinder](#)
[Wire](#)
[Optical Media](#)
[Other Formats](#)

Wire

[Printable PDF version of this page](#)



Wire

Wire



Description: Wire recording is a recorded sound format made of magnetized recording-grade stainless steel wire. The wire is wound around a plastic or metal spool and can be any length.

History Wire recording was the first magnetic media recording technology. It was developed by Vlademar Poulsen in 1898 and was in use until the late 1930s/early 1940s when magnetic tape became available. Wire was used in military, commercial, office, and home environments for recording and playback.

Prone to the Following Problems

One of the most common issues with wire recordings is tangled wire. The wire is extremely thin (approximately .004 inches thick) and can wrap around itself and become tangled and possibly break. This problem is an annoyance but can be relatively easily resolved - the wire just needs to be untangled and rewound onto the reel. Breaks in the wire can be repaired by knotting the two ends of the wire together. Since wire travels at a high transport speed, the knot will be a minor sonic disturbance during playback. Although the wire is generally composed of recording-grade stainless steel, some recordings prior to WWII were made on steel wire, which is prone to rust. Occurrences of rust are typically rare. It can weaken the already thin wire and cause the wire to break during handling or playback and can impede signal retrieval. Signal print through can also be an issue. Print through occurs when the magnetized signal from one section of the wire migrates to lower sections and leaves a sonic imprint. Print through is often identifiable when a faint pre- or post-echo is heard during playback. Storing the wire in a tails-out manner-- with the end of the wire on the outermost layer of the spool-- can aid in minimizing some of the sonic disturbance. Storing the wire tails-out minimizes pre-echo, which is often more annoying than post-echo. However, storing the wire tails-out does not prevent print through from occurring.

Risk Level Inherent in Format Wire recording media and equipment are long obsolete, and based on the content, should be considered a high priority for reformatting.

Issues Related to Playback Wire can tangle and break, especially during playback. It is thin and, depending upon the material, can be susceptible to rust. Any surface abrasion or contaminant can wear down the playback heads on a wire recording. Additionally, playback equipment is increasingly difficult to find. Preservation playback and reformatting may be handled best by a vendor who has experience with handling this format.

Recommended Storage Conditions(+/- 2)

Best Temp (degrees F)	Good Temp (degrees F)
40-54 °	33-44 °

[Back to the top of the page](#)

[Intro](#) | [Film](#) | [Video](#) | [Magnetic Audio](#) | [Grooved Disc](#) | [Grooved Cylinder](#) | [Wire](#) | [Optical](#) | [Other Media Glossary](#) | [Bibliography](#)



This page is part of the Audiovisual Self-Assessment Program (AvSAP), an IMLS-funded audiovisual preservation assessment tool. AvSAP was designed at the University of Illinois at Urbana-Champaign Library. More information about AvSAP and a link to the program can be found here: http://www.library.illinois.edu/prescons/services/av_self_assesment_program.html

UNIVERSITY LIBRARY
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN