

How to Preserve Archival Material in Audiovisual Format, including Digital Media



Media	Ideal storage conditions	Life expectancy	Notes	Handling instructions
Film (motion picture and still photography)	<ul style="list-style-type: none"> • Constant temperature of 5°C • Steady relative humidity of 40% • Should be stored flat to prevent sagging • Store photographic negatives standing upright • Avoid exposure to light, especially for extended periods • Store in a clean environment with minimal dust • Store motion picture film in vented polypropylene containers. Do not use polyvinyl chloride (PVC) or metal containers • Store photographic negatives in acid-free buffered paper, polyethylene or propylene enclosures. Do not use polyvinyl chloride (PVC) or glassine enclosures 	<ul style="list-style-type: none"> • Film stored in a cool, dark place away from moisture can last decades. Black and white film lasts longer than colour film under room-temperature conditions • Film stored in below-freezing temperatures can last hundreds of years. Temperature and humidity in home freezers will fluctuate, which can damage film • Even without freezing, film is likely to last longer than magnetic or digital formats • Polyester film is chemically stable and has the longest life expectancy at room temperature 	<ul style="list-style-type: none"> • The deterioration of early film bases (nitrate and acetate) is unpredictable and difficult to control • Nitrate film is extremely flammable at room temperature • Acetate film, also known as safety film, exhibits “vinegar syndrome”. This causes the film to deteriorate, shrink, become brittle and emit the vinegar odour of acetic acid • Film shrinks and can be easily damaged by a projector • Limited vendor availability makes film expensive to duplicate 	<ul style="list-style-type: none"> • Wear snug fitting cotton, vinyl or nitrile gloves when handling film • Handle film by the edges and avoid touching the image surface

Media	Ideal storage conditions	Life expectancy	Notes	Handling instructions
Grooved audio discs (i.e. Records)	<ul style="list-style-type: none"> • Constant temperature of 14°C with a sustained relative humidity of 40% • Stable conditions with minimal fluctuations • Store vertically and pack snugly to avoid warping • Avoid exposure to light • Store in a clean environment with minimal dust 	<ul style="list-style-type: none"> • Audio discs can last from one or two plays (“instantaneous recordings” of the 1930s and 1940s) to decades (vinyl 33 1/3 rpm and 45 rpm records from the 1940s and later) 	<ul style="list-style-type: none"> • The technology for some disc formats is now largely obsolete, making it difficult to play and migrate the recording • Damage due to scratches and flaking on the surface layer of the disc can result in the loss of information • Playback can damage the disc. In some instances this happens immediately, and in others, over repeated use 	<ul style="list-style-type: none"> • Wear snug-fitting cotton, vinyl or nitrile gloves when handling the disc • Handle the disc by the edges and avoid touching the playing surface • Use polyethylene or acid-free paper sleeves, not polyvinyl chloride (PVC) sleeves
Video and audio on magnetic tape	<ul style="list-style-type: none"> • Constant temperature of 14°C with a sustained relative humidity of 40% • Stable conditions with minimal fluctuations • Store flat to avoid warping • Store in a clean environment with minimal dust • Use polyethylene storage containers • Avoid storage near magnetic fields 	<ul style="list-style-type: none"> • 20 to 50 years, depending on format, tape manufacture and storage conditions • Not considered to be a format for long-term storage 	<ul style="list-style-type: none"> • Generational loss occurs with duplication, so the original recording is often the best one • Acetate-based tapes may become brittle and break during use • Technology and formats have changed over time and tape quality varies • The technology is now largely obsolete, making it difficult to play and migrate the recording • There are no options for preservation other than digitization 	<ul style="list-style-type: none"> • Avoid exposure to light, especially for extended periods
Digital Media	<ul style="list-style-type: none"> • Store at room temperature • Keep away from moisture 	<ul style="list-style-type: none"> • Less than one year to upwards of 10 years, depending on the format • Generational loss is minimal in non-compressed formats during transfer from one digital format to another 	<ul style="list-style-type: none"> • A short lifespan is complicated by rapidly changing and obsolescing technologies and formats • Loss of information is more complete and irreversible than with analog formats • Consider all digital media to be temporary • Keep a master copy of all data, but store copies in multiple locations on multiple formats 	

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