

Media Storage Best Practices

Media	Priority	Reasons for Priority	Notes	Storage	Environment	Handling	Playback considerations	Helpful Links and Products
Wax Cylinders	High	- playback obsolescence difficult to store - extremely fragile and subject to mold	- Scratches, cracking, mold, warping, shattering.	Store upright (on end), in an acid-free box	- Avoid severe temperature swings or extreme temperatures (keep away from radiators/vents) - Store in a cool, relatively dry environment (avoid attics or crawl spaces) - Avoid or minimize exposure to light	- Handle only by using your index and middle fingers in a V-shape in the cylinder - Avoid contact with the outer grooved surface and the inner padding	- Bring to room temperature before playing (acclimation) - Let a professional handle these, as breakage is highly likely	- Acid-free boxes
Wire and Steel Band Recordings	High	- playback obsolescence difficult to store	- Breakage, tangling, demagnetization	Store in acid-free containers, one per box to avoid tangling	- Avoid heat sources at all costs - Keep in a relatively dry place, with low humidity - Avoid magnetic sources	- Wear archival gloves when handling	- Let a professional handle these, as breakage is highly likely	
Grooved Discs (78s, 45s, LPs, lacquers/"instantaneous")	Lower – except for lacquer discs, which are High	- shellac discs become very fragile due to continued curing and shrinking of material - playback equipment more readily available - many commercial recordings were mass produced (not unique) - lacquers are at the highest risk due to fragility and rare content	- Mold, delamination, breakage/chipping, scratches, warping. Shellac discs continue to cure over time, so the older the disc is, the more brittle the grooves become.	Store upright on sturdy shelving, in high-density polyethylene sleeves. Set fixed dividers every 4-6 inches and separate discs by diameter to avoid lateral pressure	- Avoid heat sources and direct sunlight - Keep in a relatively dry place, with low humidity	- Handle only by the edges and labels - Avoid contact with the grooved surface: oils, dust, and other particles can damage the grooves - If possible, wear archival gloves	- Over-playing or playing with a non-optimized device can result in irrevocable groove damage	- Polyethylene sleeves: Nagaoka No. 102 Anti-Static Record Sleeves - Mobile Fidelity Original Master Sleeve - NeedleDoctor.com: Find the best stylus & needle for your discs
Reel-to-Reels	Medium	- playback obsolescence relatively stable if storage conditions are ideal - delamination can lead to "fast pass" scenarios	- Mold, shedding, curling, demagnetization, sticky tape syndrome, layer adhesion	Store upright (on end) on sturdy shelving. If possible, store in boxes that contain a support for the hub, instead of letting the weight of the reel rest on the edge. Do not rewind until just before playback.	- Avoid heat sources and direct sunlight - Keep in a relatively dry place, with low humidity	- Avoid contact with the recorded surface - Be careful not to crinkle, stretch or break the tape	- Leader should be added at the top and tail of a reel to allow full playback and also to help with handling	
Cassette Tapes (cassettes, 8-tracks, micro-cassettes, etc.)	Medium – Low	- playback obsolescence relatively stable if storage conditions are ideal	- Breaking, unspooling, demagnetization, leader coming loose from the spool, warping, cracking, shedding	Store along the long edge, in its case	- Avoid heat sources and direct sunlight - Keep in a relatively dry place, with low humidity	- Avoid contact with the recorded surface	- Do not attempt to play cassettes whose cases are damaged or tape is not properly wound on the reels (i.e. tangled) - To avoid accidentally recording over the content, break the tabs off. See links for the how-to.	- Write-protection instructions: http://en.wikipedia.org/wiki/Write_protection
Optical Discs (CDs, DVDs, Minidiscs, etc.)	High	- CD-Rs and DVD-Rs have a very limited lifespan (~5 yrs) - susceptible to damage - playback obsolescence (yes!)	- Scratches, cracking	Ensure that the optical surface is not touching anything (i.e. in a jewel case that contains a functioning center hub	- Avoid heat sources and direct sunlight - Keep in a relatively dry place, with low humidity	- Handle carefully by the edge and center hole, avoiding contact with the surface		
Hard Drives	Low	- susceptible to damage or data corruption - obsolescence of connectivity or compatibility	- Breaking, obsolescence of connectivity, data corruption	Store on sturdy shelving and in anti-static sleeves. Spin up the drives periodically (2x a year or so), copy the content to a second digital media device and store off-site and/or use a RAID backup system.	In general, most hard drives are pretty stable regardless of environment. But you may wish to avoid heat sources and direct sunlight	- Avoid dropping	- create checksums for important files so you can later verify their integrity - create backups of files on separate devices or allow a RAID system to do this for you	- checksum programs: MD5 (Mac), MD5 Checker (PC) - RAID system setup options: http://en.wikipedia.org/wiki/Standard_RAID_levels - Anti-static bags: http://www.uline.com/cls_21/Anti-Static
F1's, Betamax, DAT	High	- playback obsolescence limited adaptation of the technology (rare) - high rate of errors						