MOVING IMAGE COLLECTIONS: GUIDANCE NOTES

These guidance notes for moving image collection were produced by the British Film Institute's National Film and Television Archive. They were written in support of a mapping survey questionnaire for archives, libraries and museums in London. They provide some general principles for the care of film and video materials in collections.

The film gauge identification chart at the end of this guide is reproduced by kind permission of the Scottish Screen Archive.

Some basic principles of film and video conservation and preservation:

Most people's immediate concern when dealing with moving image material will be about the inherent dangers of nitrate film stock. The great majority of pre-1951 35mm film has a cellulose nitrate base. Nitrate film is chemically unstable and highly inflammable. Once ignited it is hard to extinguish. Nitrate film should be treated as a hazardous material. If identified in your collection it should be kept as cool as possible, be stored in a vented container and kept separate from acetate reels. You should contact a specialist film archive for further advice.

However, virtually all post 1951 35mm film, almost all 16mm and almost all 8mm film used by amateur and independent filmmakers is 'safety' with an acetate or polyester base

There are crucial chemical differences between black & white and colour film. In black-and-white films the image is made of silver metal particles. Unless it was poorly processed at the outset, the silver image will remain stable unless exposed to high humidity or contaminants. Most colour processes are much less stable.

Passive conservation:

Film and video in general should be stored at low temperatures and low relative humidity (RH) levels. At least as critical a consideration is stability: Even quite small fluctuations in temperature and RH can be a major cause of deterioration.

Different formats have slightly differing specific requirements, and the main ones are indicated below:

Stock type	Recommended temp range	Recommended RH range
Acetate: Colour	0-5 degrees centigrade	35%
Acetate: B/W	10 – 15 degrees centigrade	35%
Nitrate	5 – 8 degrees centigrade	35%
Polyester	15 – 18 degrees centigrade	40 – 45%
Video / Magnetic	10 – 15 degrees centigrade	35 – 40%

Access and active preservation:

Viewing copies

Original material should be handled as little as possible. User access should always be to viewing (or surrogate) copies with the original being retained as a master unless you can be sure that a copy of the title with identical content and of equivalent or higher quality is being acceptably preserved elsewhere. The viewing copy might be in a different format from the original, including digital files as well as film or video tape.

Preservation copies

Additionally, due to the fragility of film and video it is also often necessary to make copies for *preservation* purposes. This may be eg. to transfer from nitrate to 'safety' film, to transfer from acetate 'safety' film which is suffering from acetic deterioration (commonly called Vinegar Syndrome) or to retrieve content from obsolete formats. In this case, the new copy should also be treated as a master, replacing or supplementing the original. Wherever possible, any new master replacing an original should be on an appropriate format eg a new master from a title originating on film should usually also be on film of an equivalent format, even though the viewing copy may be video or digital. A new master taken from an obsolete format should be on to a current format of equivalent or greater quality.

Film and Video Formats

Film:

8mm aka Standard 8: Film that is 8mm wide, with small square perforations on the edge of the film. Most commonly used as a medium for home movies and other amateur filmmaking, from 1932.

Super 8: Film that is 8mm wide, with smaller rectangular holes, enabling larger picture area, on the edge of the film. Most commonly used as a medium for home movies and other amateur filmmaking, from 1965.

9.5mm: Film that is 9.5mm wide, with rectangular perforations in the middle of the film, between frames. Most commonly used as a medium for home movies and other amateur film-making, and also commonly used for distributing 'printed down' versions of commercially produced films for home use, from 1922.

16mm: Film that is 16mm wide. Used for various professional (non-theatrical, including television) production, for distributing 'printed down' versions of commercially produced films, and as a medium for home movies and other amateur filmmaking, from 1923.

35mm: Film that is 35mm wide. Used for various professional, including all theatrical, production and distribution, from 1895.

Video:

VHS/S-VHS: Standard domestic recording and playback format from early 1980s. Super-VHS (S-VHS) is a significantly higher-quality version of this format in 1986. Never used in professional production, commonly used for amateur production throughout into 1990s.

Hi-8: Higher quality amateur format, commonly used for more advanced or semi-professional amateur production from late 1980s. Cassette is very small, and the tape is fragile.

DV: Name for a family of currently popular and relatively high-quality digital formats (including DV-Cam, DVC-Pro and mini-DV), used both for less expensive professional production and amateur production since mid-1990s.

U-Matic: Format used for some broadcast and much non-broadcast professional and semi-professional production through 1980s and early 1990s, now largely obsolete. Actually two formats: 'Hi Band' and 'Lo Band' U-Matic. The latter in particular is of relatively low quality.

Betacam SP aka **Beta SP**: Format used for most broadcast and non-broadcast professional production from 1986. High quality.

Digital Betacam aka **Digibeta**: Today's industry standard, used for almost all broadcast and much non-broadcast professional production from 1994. Very high quality.

Betamax: Early competitor to VHS as domestic format. Became obsolete.

Other formats common from 1970s through early 1990s were large 1" and 2" tapes – however, these were largely confined to broadcast television and are now obsolete. There are also a large number of early (1960s/1970s) video formats, often on 'open reels' also now obsolete.

Other:

Multimedia formats include laserdiscs, CD-ROMs and DVDs, as well as digital files stored on hard drives or networks.

Viewing equipment

As noted above, user access should always be to viewing copies.

Film viewing equipment includes:

Film Projectors: Still available for all formats. Projection was by far the most common method of viewing material originally and is still used extensively for screening material to audiences today. However, standard projectors are not archival equipment and projection can cause major damage to film. Projection should only be used when screening viewing copies to audiences, and never with original or master material.

Film viewing machines: For 35mm and 16mm, Viewing tables also known as editing tables or by the makers' name Steenbecks are the safest method for individual researchers and staff to view film. Most specialist film archives will have Steenbecks. This equipment needs careful handling however, and, again, should only be used in exceptional circumstances for viewing master copies or original material. A variety of viewing machines for the smaller amateur formats were available for home use and if available, and if well maintained, can be used with extreme care and for archival purposes.

Video viewing equipment: Recording and playback equipment is available for all current formats. Video projectors are also now quite widely available. In some cases (eg. Digibeta) the cost is very high. Equipment still exists for most obsolete formats – however, in many cases only a few machines are still extant and are usually to be found at specialist video and television archives. Often, they require specialist engineering skills to maintain.

Digital viewing: Digital moving images which have been encoded can also be stored, opened and viewed, and can also be distributed, by Internet or Intranet. Encoded moving images can also be put onto DVD and other multi-media artefacts.

Copyright: Physical ownership of moving image artefacts does not in any way imply intellectual property ownership over their moving image contents. Physical owners of material, including heritage institutions, are therefore required to comply with copyright legislation as this applies to moving images (in addition to any contractual arrangements specific to collections donated or deposited with them). This may limit the access that institutions can legally provide to material, particularly in public venues, off-premises and for reuse by third parties. For further information, see:
http://www.copyrightservice.co.uk/ for general advice about UK copyright, including moving image copyright
http://www.bfi.org.uk/facts/legislation/index.html for summary of moving image legislation, including copyright legislation

Some further reading

www.amianet.org/ (website for AMIA: international, US-based, membership organisation for those with moving image archive interests)

www.bufvc.ac.uk/faf/ (website for UK Film Archive Forum: major public sector UK moving image archives)

www.pettarchiv.org.uk/fsg/ (Society of Archivists Film & Sound Group) – see also their publication, *Best Practice Guideline On Film and Sound Archives in non-specialist repositories* (2001), available direct from the Society

http://www.filmpreservation.org/ (basic preservation guidance provided by the National Film Preservation Foundation in the USA)

unesdoc.unesco.org/images/0010/001096/109612eo.pdf (very large PDF file of UNESCO book *Audiovisual Archives: A Practical Reader*)
www.rit.edu (website for Image Permanence Institute)

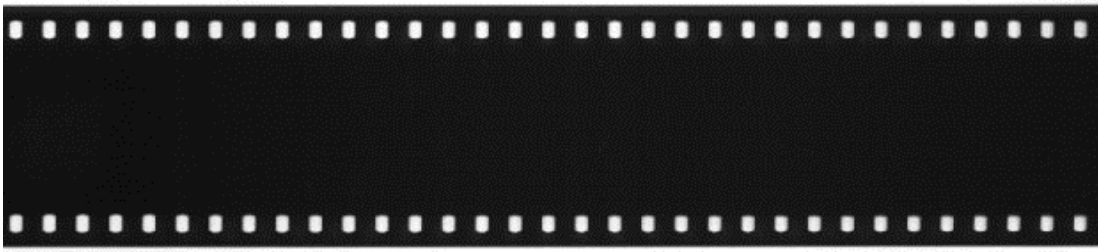
www.filmforever.org/ (website providing advice to those storing films outside specialised archives)

www.hse.gov.uk/pubns/cellulose.pdf (an excellent and clearly presented document on the identification and handling of cellulose nitrate film and photographic negatives stock)

http://www.bksts.com/wall_chart.html (part of the website for The British Kinematograph Sound and Television Society: description and order form for BKSTS' series of wall charts illustrating all significant film and video formats)

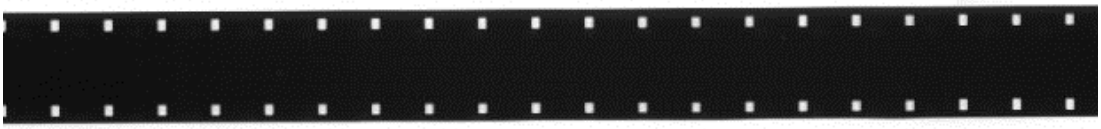
FILM GAUGE IDENTIFICATION

35mm



35mm. Introduced c.1895. Made on nitrate stock until 1952. 1952 - present, produced or safety stock. To identify nitrate you will have to look along the edge markings beside the perforations. Nitrate will either have the word ‘nitrate’ written along the edge, or a small star/explosion symbol will be present. Safety stock will have the word ‘safety’ written aling the edge of a ‘S’ will be present. If there are no markings present and the images appear to date from between 1895 and 1952, presume the film is nitrate and the Archive will conduct tests to confirm whether the film is nitrate or safety stock. For more informati please see: www.hse.gov.uk/spd/dsear.htm

16mm Silent Stock



16mm Silent Stock. B/W introduced 1923. Colour introduced 1935. Always produced on safety stock.

16mm Sound Stock

16mm Sound Stock. B/W introduced 1931. Colour introduced 1935. Always produced on safety stock.

9.5mm

9.5mm. Introduced 1922. Always produced on safety stock

std.8mm

std.8mm. Introduced 1932. Always produced on safety stock

super.8mm

super.8mm. Introduced 1965. Always produced on safety stock

EXAMPLES OF FILM GAUGES ARE TO SCALE: PLACE YOUR FILM BESIDE EXAMPLES TO FIND MATCH