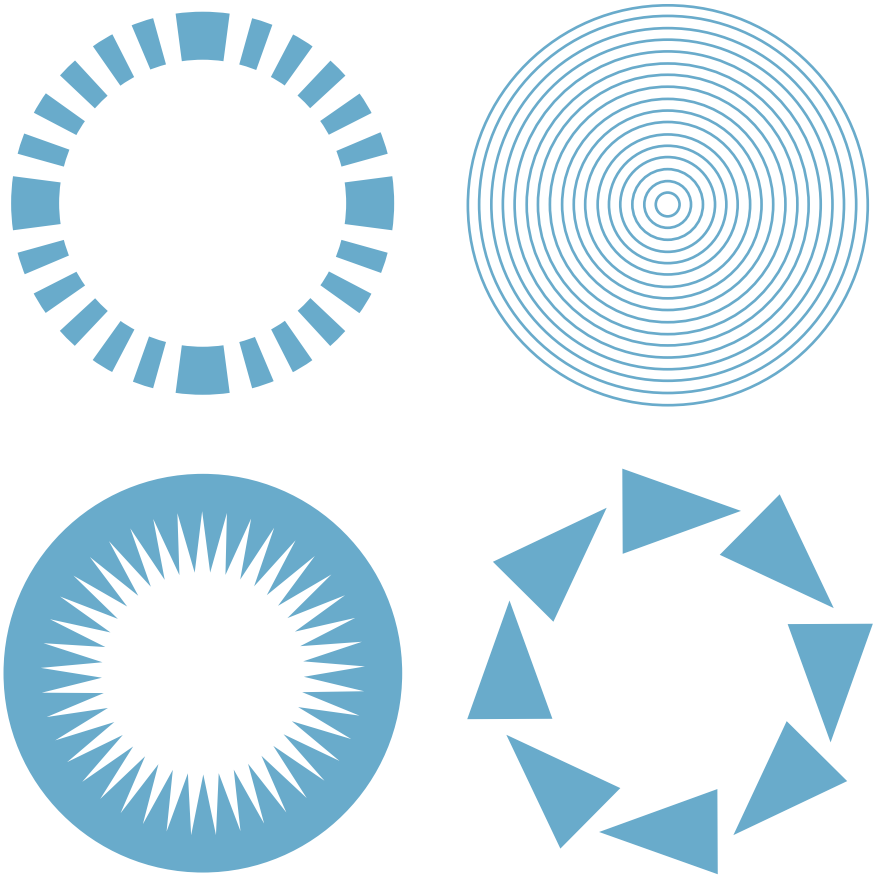
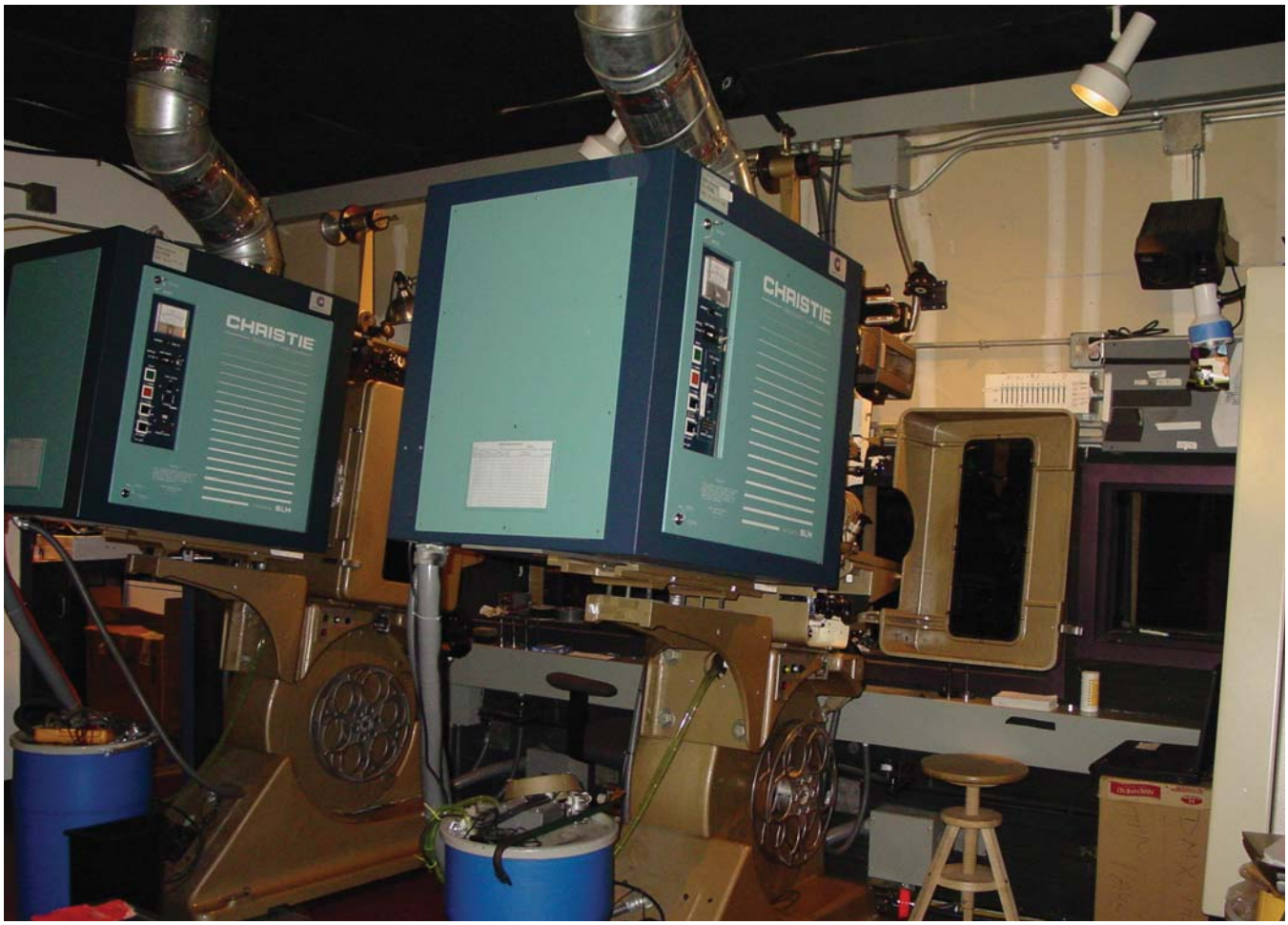


AMIA

THEATER PRESENTATION GUIDELINES

Association of Moving Image Archivists
Projection and Technical Presentation Committee
Published Oct, 2012



Changeover projection, Egyptian Theatre

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Stills from *Beyond the Rocks* (1922) courtesy of Dennis Doros, Milestone Film & Video. Photos of Library of Congress Packard Campus Theater by David March.

Association of Moving Image Archivists (AMIA)

AMIA is a nonprofit international association dedicated to the preservation and use of moving image media. AMIA supports public and professional education and fosters cooperation and communication among the individuals and organizations concerned with the acquisition, preservation, description, exhibition, and use of moving image materials.

The AMIA Projection and Technical Presentation Committee exists to promote, encourage and facilitate the highest possible technical standards in the public presentation of archival moving images and related audio.

The generous support and assistance of the Board of AMIA, and of Dennis Doros, Milestone Film & Video; Theo Gluck, Walt Disney Studios; David March, Library of Congress and Jayson Wall, The Walt Disney Co. in the preparation of these Guidelines is gratefully acknowledged.

AMIA Theater Presentation Guidelines

Equipping Your Theater for Archival Projection

Film archives have a common interest, as described by the International Federation of Film Archives' (FIAF) Declaration on Fair Access, "to preserve the world's motion picture heritage and ensure that it continues to be accessible to future generations in accord with the highest standards of archival practice."

Venues seeking to access archival materials must also uphold these standards in care and presentation. By encouraging venues to meet certain standards, archives can ensure that their film prints will not be damaged, and that the artistic intentions and craftsmanship of the filmmakers will be honored.

The following is a tool to help screening venues understand and meet these expectations.

Part I : Proper Care and Handling of Film

- For the presentation of archival film prints (16mm, 35mm and 70mm), a twin projector changeover installation is ideal, and its provision is essential in the initial design or refurbishment of any theater that is to screen archival prints regularly. The use of a long-play device such as a platter, tower or double MUT is poor practice, as it places prints at greater risk of wear and accidental damage. Many archives will not allow the leaders and tails to be cut from each reel of their print, meaning that a changeover installation is the only way that such prints can be screened without a break between reels.

- 16mm prints should ideally be shown on a projector designed for theatrical use, and not a portable machine intended for classroom or amateur use. 16mm projectors intended for theatres, e.g. the Elmo 2000 series, the Fumeo HL series or Kinoton FP-18, will be lit by a xenon bulb and have a film path based on a Maltese cross intermittent mechanism, like their 35mm equivalents. Most portable projectors will advance the film using a claw-and-cam mechanism, which can cause serious damage to older prints, and be lit by a halogen bulb, which will probably not be bright enough to provide an acceptable level of illumination on a theater-sized screen.

- The 70mm format requires specialist training and consideration. 70mm prints are heavy, expensive and relatively fragile. Depending on the height and build of the projectionist, even a single 3,000-foot reel may be too heavy to lift safely onto a projector's feed spindle or vertical winding head, necessitating the presence of two projectionists whenever these reels are handled.

- Furthermore, no facility in the world for coating magnetic oxide onto 70mm print stock is now believed to remain in existence, meaning that if a magnetic-striped print is damaged, it probably can never be replaced. Special care should be taken to ensure that magnetic heads are degaussed, input gain levels set correctly for each channel and that preamplifiers are maintained and set to the correct format.

- It is easy to make mistakes when converting a dual-gauge projector to 70mm operation and lacing up the film, especially if it is not run very often. The greater mass and running speed of the film requires that extra care is taken to ensure that the film path is correctly laced and that sprockets and gate components are correctly seated and aligned before proceeding. A 70mm practice reel should be kept at the venue to keep film handling skills current.

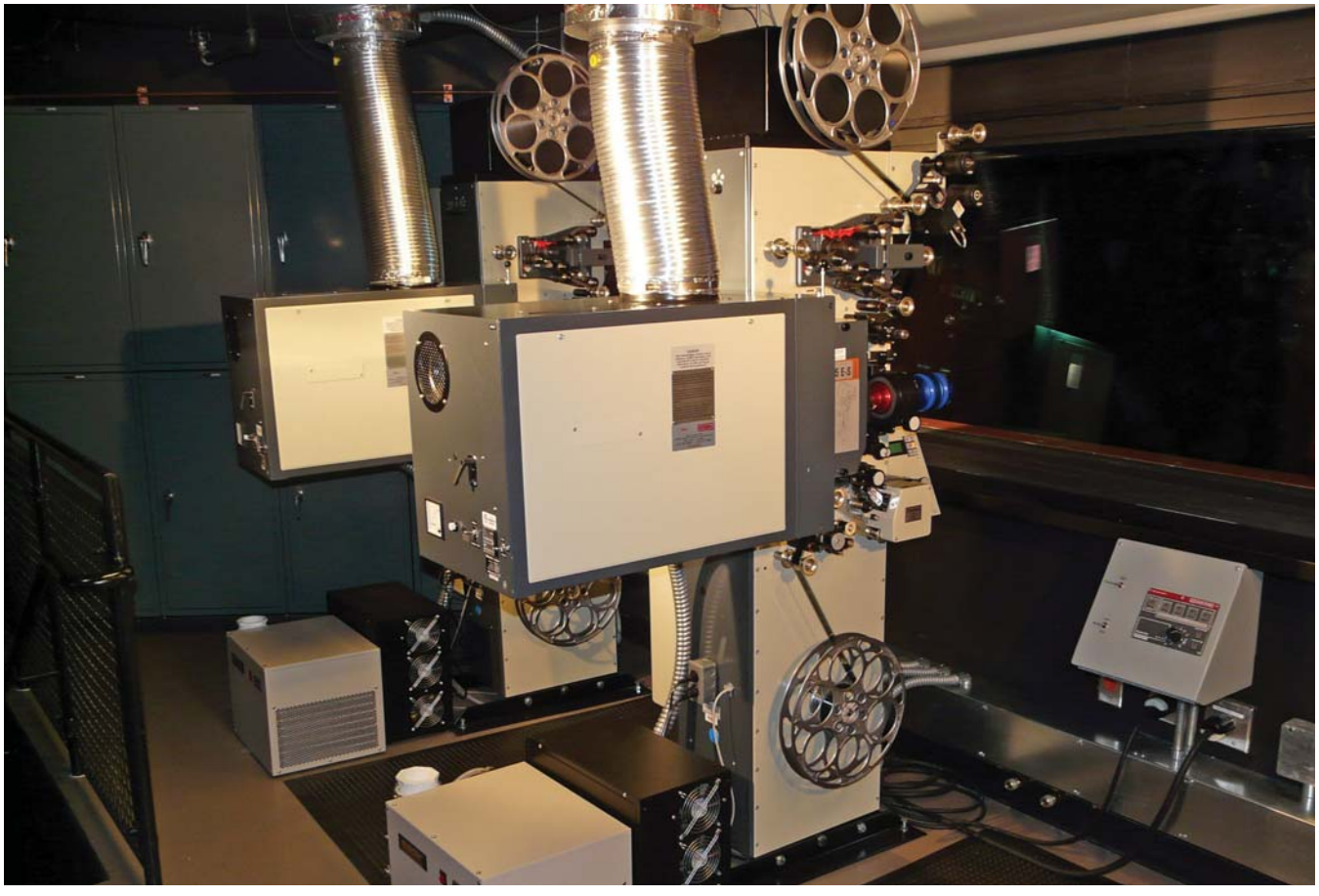
- Projectionists should be properly trained to handle archival films and operate changeover projectors. Particular emphasis should be placed on proper inspection, repair, and where appropriate, correct cleaning of prints. Careful and informed handling practices avoid unnecessary or additional damage, and greatly extend print life.

- The projection booth must be clean, tidy and well-equipped. This means absolutely no dust or debris on the floor or surfaces, a place for everything and an adequate supply of film handling equipment readily at hand. A good quality splicer and rewind table are essential.

- The booth must have split reels that can hold any core size and a properly aligned winding bench with spooling plate. Spools with sharp edges and bent flanges can cause serious edge damage to the film.

- It is vital to invest in the services of a reputable, experienced service technician who will maintain the installation to an adequate standard and who can also act as a useful resource for information and advice on best practices. The technician should visit several times a year as part of an agreed service contract.

- Between service visits, the projectors should be meticulously cleaned and maintained by the projectionist. The film path should be cleaned between screenings, and between reels in a change over setup. Sprockets, runner plates and other components should be replaced when necessary. The lamphouse cooling system and reflector must also be adjusted to prevent any possibility of heat damage.



- It is important to limit heat exposure to the film during projection to avoid spot damage to the film. Lamps larger than 3kW should be fitted with a heat filter between the lamphouse and gate. This is particularly important when screening silent prints at lower speeds, as the shutter is open for longer, exposing the film to more heat build-up.

- The projection booth should be kept within the recommended environment for archival films by way of proper air-conditioning, heating and humidity control. An environment of 68-77 °F/20-25 °C with a relative humidity between 50-60% will reduce static and humidity, which cause film to attract dust and particles, as well as support both acetate and polyester-based films.

- Detailed records of each print's condition, as it was received at the theater, should be kept at all times. These assist in the upkeep of prints and serve as a cross-reference to the archive's print condition records. See page 11 for an example print condition report.

- Venues should budget for shipping via a trackable method using air transport for non-local loans. This is a requirement of many archives, as shipping by ground or other less ideal methods may expose the film to undesirable conditions over longer periods of time.

- Overall, an archive-friendly cinema should be properly resourced and staff should understand that prints are unique and often fragile. It costs relatively little to handle and screen prints properly, making cutbacks or corner-cutting in staffing, equipment, servicing and consumables unacceptable.

High quality, sturdy, washable and uncluttered rewind bench promotes best practice in film handling

Left - 1:1.37 aspect ratio as it appears on 35mm print
Right - 1:1.66 aspect ratio on 35mm print; as viewed on the film, each ratio differs by height as opposed to by width when viewed in the theater

Part II: Proper Presentation of Picture and Sound

- For the widest access to 35mm and 16mm archival films, both projectors should have the ability to show films in the Academy Sound (1:1.37) and European Widescreen (1:1.66) ratios in addition to the more common formats, American Widescreen (1:1.85) and CinemaScope (1:2.39).

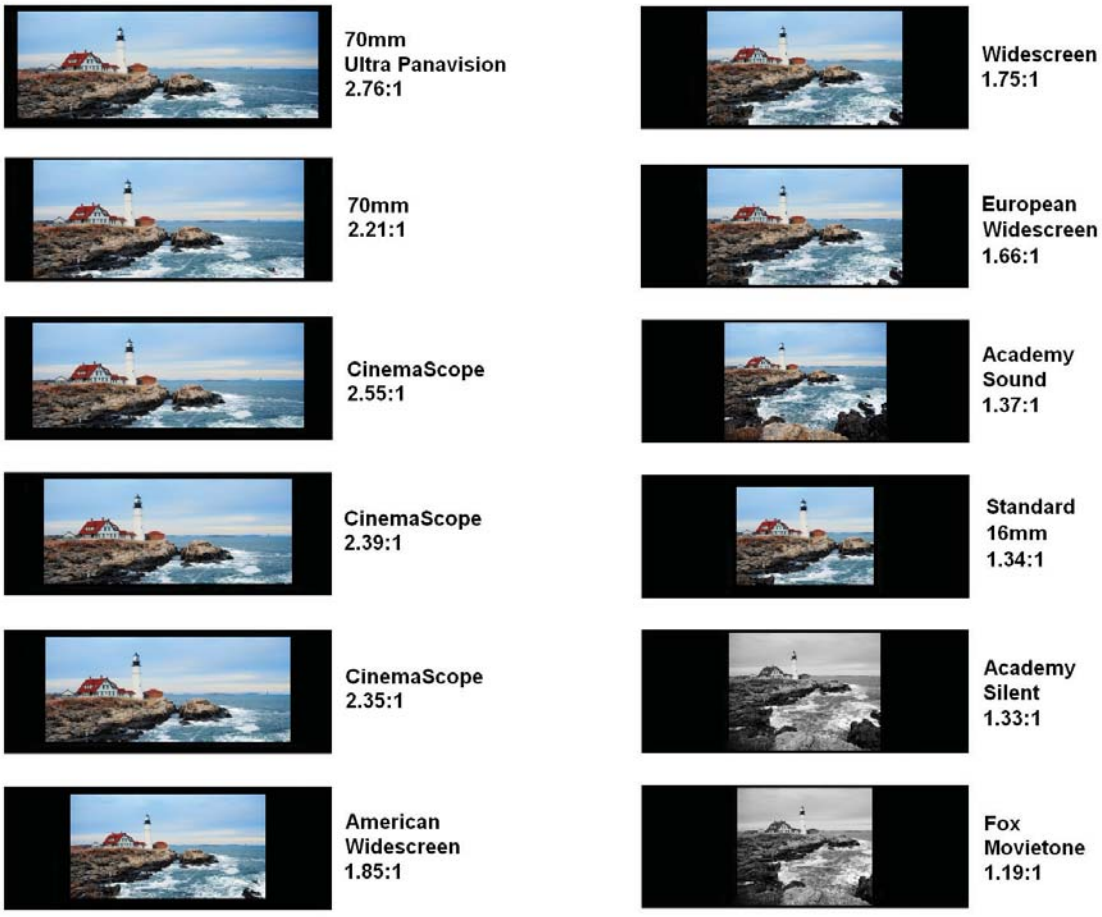
- Care should be taken when screening anamorphic films to ensure that the correct aspect ratio is used. In films from 1957 to 1964 with magnetic soundtracks the correct anamorphic aspect ratio is 1:2.55. In films from 1957 to 1971 with optical soundtracks it is 1:2.35. In modern films since 1971 it is 1:2.39. In all cases the anamorphic 'squeeze' factor is the same, but special aperture plates may be required for a 1:2.55 print.

- Venues seeking to borrow silent films should have projectors capable of running at 16, 18, 20 and 22 fps, as well as lenses and aperture plates for the silent (1:1.33) ratio. A three-bladed shutter in both machines is also optimal to reduce flicker at the lower speeds.

- The screen should be masked, especially for the narrower ratios of 1:1.37 and 1:1.33. An ideal screen has a matte white, perforated surface with speakers mounted behind the screen.

- Ensuring the care and safety of the print should be considered top priority, but venues should also strive to show an archival film at its proper speed and aspect ratio, in a darkened theater on a proper screen. Access is the ultimate goal of archives and to ensure continued access to films, the prints must be returned undamaged. For this reason, if compromises must be made, they should be made in presentation, never in care and handling.

- Ultimately, venues should strive for authenticity as part of an ethos of continuous improvement.



Aspect ratios correctly presented in the theater, with adjustable top, bottom and side screen masking. Note how each ratio affects pictorial composition

Part III: Helpful Resources for Continued Learning

Publications

The Advanced Projection Manual
Torkell Saetervadet | Norwegian Film Institute/FIAF, Oslo/Brussels, 2006,
ISBN 2-9600296-1-5

A Technological History of Motion Pictures & Television
Raymond Fielding (Ed.) | University of California Press/SMPTE, 1983, ISBN 0-520-05064-9

Basic Motion Picture Technology
L. Bernard Happé | 2nd Editi on, Focal Press, London, 1978, ISBN 0-240-50891-2

Film Curatorship: Archives, Museums, and the Digital Marketplace
Eds. Paolo Cherchi Usai, David Francis, Alexander Horwath & Michael Loebenstein
Österreichisches Filmmuseum/SYNEMA, 2008, ISBN 978-3-901644-24-5

Film Style and Technology: History and Analysis
Barry Salt | 2nd Edition, Starword, London, 1992, ISBN 978-0-9509066-2-1

Moving Image Technology: From Zoetrope to Digital
Leo Enticknap | Wallflower Press, London, 2005, ISBN 1-904764-06-1

Projectionists' Handbook
BKSTS – The Moving Image Society/Cinema Exhibitors Association/Film Distributors'
Association, London, 2009 | www.bksts.com

Reel People Collection
Eastman Kodak Company, Code H-50, 1984, ISBN 0-87985-346-8

Sound for Film and Television
Tomlinson Holman | 2nd Editi on, Focal Press, 2002, ISBN 0-240-80453-8

Silent Cinema: An Introduction: Revised and Expanded Edition
Paolo Cherchi Usai | BFI Publishing, 2000, ISBN 9-780-851707-46-4

SMPTE Motion Picture Projecti on and Theatre Presentation Manual
Ed. Don V. Kloepfel | Society of Moti on Picture and Television Engineers, 1982,
ISBN 0-940690-01-2

The Essential Reference Guide for Filmmakers
Eastman Kodak Company, Code H-845, 2008

Widescreen Cinema
John Belton | Harvard University Press, 1992, ISBN 978-0-6749526-1-8

Websites

AMIA Listserv
lsv.uky.edu/archives/amia-l.html

AMPAS Science & Technology Council
Pre-eminent resource for overview of motion picture technology and development
www.oscars.org/science-technology/council/index.html

British Kinematograph, Sound & Television Society
Training resource with film handling and format wallcharts for sale
www.bksts.com

Information on Datasat Digital Sound (formerly DTS) sound format
www.datasatdigital.com/support

Information on Dolby sound formats
www.dolby.com/professional/products/cinema/index.html

Essential Film and Digital projection resource
www.film-tech.com

Valuable education and publications sections
motion.kodak.com/motion/index.htm

Rec.Arts.Movies.Tech FAQ
Comprehensive information on film formats, projection and sound
www.redballoon.net/~snorwood/faq2.html

Information on SDDS sound format
www.sdds.com

16mm Information
www.16mmdirectory.org

70mm Information
www.in70mm.com

Periodicals

American Cinematographer | ASC, Monthly
Cinema Technology | BKSTS, Quarterly
In Camera | Eastman Kodak Company, Quarterly

DVD Titles

A Century of Sound – The History of Sound in Motion Pictures: The Beginning 1876-1932
Robert Gitt | UCLA / Chace Audio, 2007
Visions of Light – Arnold Glassman | AFI, 1992

SAMPLE PRINT REPORT

MOVIE INFORMATION DATA REPORT -- Film print / d-cinema PROJ. INSP. DETAILS - (Condition as Received at the Theatre)

TITLE:_____ Year of PROD =
(a/k/a):

Screening Date:_____
Series:_____

NOTE >>> **ADD IN COUNTRY** of production, if not USA, and known > > >

SOURCE:_____
PRINT or I.D. NUMBER:_____ REEL #1-Barcode / Master ID:_____
No. OF ROLLS:____ # Reels ____ # Cores____ # Cans____ Contained in: ____ **OFF**Cores?____

MEDIUM:

FILM:
35mm
16mm
70mm

Leaders upon receipt: ☐ DSS=Good ☐ SSS=Med ☐ MaskTape=BAD! ☐ Not attached=BAD!

DIGITAL TRACKS (LIST ALL on print)
Dolby Digital SR.D
SR.D "EX" ?
DTS
DTS discs? Y or N
SDDS

Mag Sound
35mm 4 Trk
70mm 6Trk-conv
70mm 6Trk-"A"
70mm 6Trk-"SR"
split surround

OPTICAL ANALOG SOUND
Cyan Dye track
"High Magenta" track
Variable Density track
(01) MONO
(04) DOLBY "A"
(05) DOLBY "SR"
OTHER:
(02) Dolbyized MONO
(03) stereo - no surr.
(04) (non-Dolby "A")
(05) (non-Dolby "SR")

ASPECT RATIO
Full-Aperture Silent
1.19 *(Movietone)*
1.33 *(16mm)*
1.37
1.66
1.75
1.78 / 16: 9
1.85
2.00
2.21
2.35 / 2.40
2.55
Letterboxed video

PRINT STOCK:
AGFA-GEVAERT
FUJI
ORWO
UNKNOWN or N/A
EASTMAN KODAK
Dye Transfer /IB
ACETATE
POLYESTER
YEAR PRINT STOCK MADE _____

LANGUAGE
English
_____
(other language)

SUBTITLES:
English
Other:_____

SOUND PLAYED AT FADER #:
_____
Audio Processor
Exciter = Red White
(circle one)

VINEGAR ODOR?
YES NO
MINOR

Film stock edge codes:

Dolby Digital (SR.D) QC readings, if avail. (average) _____

Venue Name and city:

Print Status:
VERY GOOD
GOOD
OK
Beg. & Ends WORN
WARPED (see "Edges")
MARGINAL
VERY BAD
UNPROJECTABLE
Special notes
"Wet Gate"
"Show Print"
Print History:
R-to-R only
Plattered - 1 or 2 x
Multiple Platters

SCRATCHES
None seen
Minimal
Moderate
Severe
Extra comments if checked ->
some reels
all reels
vertical
horizontal
diagonals

"Platter Burns"
Pic - diagonals
Track - audible

IMAGE
Color:
Good ("A")
Slight Fade ("B")
Med. Fade ("C")
BAD Fade ! ("D")
Black & White
PHYSICAL COND.
Embossed
Burned
Dry / Brittle
Shrunken

C/O CUES on frames # _____

Perforations
Okay
Some Damaged
Stressed/Pulled
Gaps in edges
Occasional tear
(we made repairs)
EDGES
Okay
Spots w/ Damage
Medium Dam.
Severe Damage
WARPING: none
Minor – mod - severe

SPLICES
LabOnly or None
Few (1 or 2)
Several (3-5)
Numerous
Excessive
CONTINUITY
100%
Insignificant
Small Gap(s)
Med. Gap(s)
Long Gap(s)

HEAD LEADERS
Lab Original
Good
Mistimed
Replacement
Missing
Many Splices
Repairs Req.
SURFACE
Okay
Dusty
Very Dusty
Oily
Very Oily

Tail LEADERS
Lab Original
Good
Replacement
Too Short - missing
Repairs Req.
CUES
lab dots
lab circles
scribed circles
existing – marker
Asian - punchholes
Multiple - mess
We put on - Marker
We put on -Scribed

End of Last Reel: ____ Cuts to Black
____ Fades out
____ "RETROS" *

Last Image(s) on roll:

NOTES:_____

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Published July, 2012

A project of the AMIA Projection and Technical Presentation Committee

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