



## TECHNICAL SPECIFICATIONS

### BROADCAST MASTERS

Sony HD Cam 1080i / 59.94, Stereo audio on channels 1 & 2, Dolby 5.1 mix (when available) expressed as Dolby E on channels 3 & 4.

Where facilities exist, the HD master must be accompanied by a closed captioned Betacam SX standard definition down converted dub. This standard definition dub shall contain a 16:9 letterboxed image obtained from the HD master. The program content shall be exactly the same on both versions of the master and the times codes shall match exactly. Audio shall also match for any Lt/Rt or Lo/Ro content but no Dolby E is necessary. Closed captioning shall be on line 21.

**Discovery HD requires programs to be mastered in the 1080i 59.54 signal standard.** Programs may be acquired in the 720P 59.94 signal standard and mastered in 1080i 59.94 for delivery only with prior approval. Programs may be acquired and delivered in 1080 psf 23.98 or 25, or 1080i 50 only with prior permission from Discovery HD.

### AUDIO

#### **Stereo HD Master**

Channel 1 - Program left (Lt or Lo)  
Channel 2 - Program right (Rt or Ro)  
Channel 3 - Mix Minus Narration left  
Channel 4 - Mix Minus Narration right

#### **Surround HD Master**

Channel 1 - Program left (Lt or Lo)  
Channel 2 - Program right (Rt or Ro)  
Channel 3 - Dolby E  
Channel 4 - Dolby E

### TOTAL RUNNING TIME & COMMERCIAL BREAK STRUCTURE

*\* Total Running Time (TRT) for the program includes: opening, bumpers, credit roll; it does **NOT** include commercial break time.*

#### **120-Minute Clock:**

1:31:40 TRT 11 Segments 10x10 second black for commercial breaks  
NB: First Segment: 8-12 minutes content; Last Segment: 4-6 minutes content

#### **60-Minute Clock:**

45:50 TRT 6 Segments 5x10 second black for commercial breaks  
NB: First Segment: 8-12 minutes content; Last Segment: 4-6 minutes content

#### **30-Minute Clock:**

22:20 TRT 4 Segments 3x10 second black for commercial breaks  
NB: First Segment: 5-7 minutes content; Last Segment: 4-6 minutes content

### GRAPHICS

#### **Image Pixel Resolutions:**

For 1080, render at 1920 x 1080  
For 720, render at 1280 x 720

Rendering graphics at 720P resolutions, followed by cross conversion, for usage in 1080i projects is acceptable.



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### SOURCE MATERIAL NOTES

#### **Non-HD Footage Limitations:**

Maximum of 25% non-HD material is allowed in production, with no more than 1 minute of contiguous non-HD footage in any sequence.

#### **Use of HDV Footage:**

1080 line HDV footage may be used in HD programs with the following restrictions:

- Program may not contain any more than 15% HDV footage.
- The combined percentage of HDV and SD upconverted footage is not to exceed 30%.
- Producers wishing to use HDV must submit an approved post production path outlining their handling of the footage in the editing process.

#### **Video Footage:**

Video Footage should be acquired using any of the following formats, taking in the non-HD footage and HDV footage limitations above:

High Definition Formats	Acceptable Up conversion Formats	Film Formats
Sony HDCAM	Sony Digital Betacam	35 mm Film
Sony HDCAM SR	Sony Betacam SP	70 mm Film
Sony XDCAM HD (35 mbps only)	Sony MPEG IMX 50 (tape)	
Panasonic DVC PRO 100mb (HD)	Sony MPEG IMX (XDCAM)	
Panasonic HD-D5 (Film Transfers)	Panasonic DVC PRO 50 (tape)	
HDV at 1080i (with restrictions)	Super 16mm Film (non-HD Guidelines)	
HVX-200 DVC PRO HD 100 (with HDV restrictions)		

#### **720P Camera Masters:**

720P material is acceptable, only with a pre-approved post production path and budget. Delivered Master must be at 1080 resolution. Footage may not be converted from 1080i to 720P for post and converted back to 1080i for mastering. We cannot allow multiple resolution changes on material. If you have an editorial need to use mixed resolutions, please discuss this with us.

#### **Film Footage Transfers:**

- **35mm Material** – High definition datacine transfers of this material produce perfectly acceptable results.
- **Super16mm Material** – High definition datacine transfers of this material do not currently produce results that are acceptable for usage in Discovery HD programs. Usage of this material is limited to non-HD footage guidelines.
- **DVCam and Mini DV** – High definition up conversions from footage acquired using these formats do not produce results that are acceptable for usage in Discovery HD programs (DVCPro HD is acceptable as noted above).

#### **Visual Effects and Footage Treatments:**

Any visual effects that seem to add grain or noise to acquired material require pre-approval by Discovery's Network Presentations Department (sample materials will need to be provided). As with film and lower end digital video formats, any significant video noise or film grain will potentially create complications during distribution.



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### VIEWER ADVISORIES

Disclaimers will count as program content, and will be edited onto the broadcast master by the production company.

#### **Disclaimer Placement:**

*Disclaimers must be placed at the beginning of the program and at the top of each program segment.*

*Discovery's Executive Producer assigned to the program must approve wording of the disclaimer.*

#### **All Disclaimers shall use the following Format:**

Black background, white text

No Discovery logo, no music

Must be voiced (preferably by the narrator)

Minimum: 06 seconds in length

The following are examples of advisories pertaining to sexually explicit material, coarse or offensive language intended for adult audiences, or other subject matter. They are provided as a guide to assist broadcasters in fulfilling their obligations to the *CAB Code of Ethics*, to ensure their viewers are provided with adequate information in making their program selection.

**"The following program contains scenes of coarse language and is not suitable for younger children."**

**"The following program contains sexually explicit material intended for adult audiences. Viewer discretion is advised."**

**"The following program contains sexually explicit material. Viewer discretion is advised."**

**"The following program contains scenes of violence, coarse language and nudity intended for adult audiences. Viewer discretion is advised."**

**"The following program deals with mature subject matter and is intended for adult audiences. Viewer discretion is advised."**

**"The following program deals with mature subject matter and contains scenes of nudity and coarse language. Viewer discretion is advised."**

### TECHNICAL SPECIFICATIONS:

For complete technical specifications, please refer to the **Technical Requirements for High Definition Programming (No. HD-05.3)** master document.

### CONTACT INFORMATION

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