

## TECHNICAL DELIVERY REQUIREMENTS

Please tick the following form and send an [additional copy](#) with the deliverables  
All master videotapes supplied must be ready for exhibition and distribution having had and passed the Quality Assessment Review.

### TRANSMISSION MATERIALS FOR STANDARD DEFINITION DELIVERY:

Summary of materials required as follows:

**1x 625/50i (PAL) Digital Betacam video cassette**  
**1x e digital audio files burnt to DVD or DTRS (DA-88) stereo audio cassette**  
**1x DVD video of completed film, clean (no BITC)**

- 1x 625/50i (PAL) Digital Betacam video cassette** of the programme as completed with opening titles and closing credits. The body of the programme is to contain all captions, translation, subtitles and English language graphics.  
Stereo final mix soundtrack to be recorded on audio channels A1 (left) and A2 (right).  
Stereo, undipped/level music, effects and all dialogue other than commentary, quotes/readings/voiceovers to be recorded on audio channels A3 (left) and A4 (right).
  - Channel 1: Full/Final mix stereo left
  - Channel 2: Full/Final mix stereo right
  - Channel 3: Full/undipped mix Minus Narration, Stereo Left
  - Channel 4: Full/undipped mix Minus Narration, Stereo Right
  
- Programmes **will not be accepted** on any other format, i.e. MiniDV, DVCAM or Betacam SP.  
Please discuss with technical department if you need any advice.
- Aspect Ratios:** Active picture area to be mastered **16:9 Full Height Anamorphic** shot protected for 14:9 Letterbox. *4:3 Full Frame will only be accepted with prior agreement from Electric Sky. No other 'Letterboxed' aspect ratios will be accepted ie. 14:9LBX, 16:9LBX.*
- Programmes **must** be shot and mastered **14:9 Action and Title safe. This is essential as most broadcasters still transmit with automatic aspect ratio change to 14:9.** Therefore all titles and captions must fall inside the 14:9 LBX title and caption safe grid. Please refer to EBU or BBC specifications for more technical details on this.
- Textless Cover Shots:** Clean backgrounds for the opening titles, closing credit sequences, lower thirds, graphics, subtitles and maps synchronous with those used in the actual programme, to be placed after at least one minute of "black level" following the programme material, to and from a "cut point" to facilitate editing.
- Timecode:** Programmes must start at 10:00:00:00 and have identical LTC and VITC timecode tracks.
- Clock / Slate:** Programme must have a clock / slate starting at 09:59:30:00 and cutting to Black at 09:59:57:00 leaving 3 seconds before the programme starts.
- Audio / Video Lineup:** Colour Bars at either 75% or 100% and audio tone of 1KHz at -18dBfs recorded to all channels must come before the clock with a duration of at least 60 seconds. The Audio tone must be intermittent on the left channel for stereo indication.
- **Video Levels and Gamut (illegal signals)** Video levels including any line-up shall be received within the specified limits so that the programme material can be used without adjustment. We require that signals meet the easier EBU Recommendation R103-2000:  
Luminance limits -1% and 103%  
Chrominance 105% max - RGB values to not exceed limits -5% to +105%  
*Illegal levels will result in an immediate QC failure* and masters will be returned to the Producer. Please refer to EBU or BBC specifications for more technical details on this.
  
- All masters should be continuous and **clear of ad breaks.**

- **1x B digital audio files burnt to DVD or DTRS (DA-88) stereo audio cassette** of the completed programme. The DVD or cassette **must** be in sync with matching timecode to final programme master. Except full mix tracks, DVDs or DTRS tapes are to be delivered at Relative Mix Level (i.e. will create final mix, **WITHOUT dips for narration, dialogue or interview**) on separate tracks or as follows:

	<b>DA-88 / AUDIO ASSIGNMENT</b>		<b>Channels</b>
Full Mix	Stereo	Left	1
Full Mix	Stereo	Right	2
Music	Stereo	Left	3
Music	Stereo	Right	4
Effects	Stereo	Left	5
Effects	Stereo	Right	6
Narration	Mono		7
Dialogue/Interviews	Mono		8

DVDs or DTRS (DA-88) cassettes will always be required unless agreed in advance by Electric Sky's technical department.

- **1x DVD video disc** of the completed programme, clean (free of BITC)
- **All tapes should be clearly labelled with the following information:**
  - o Title
  - o Duration
  - o Channel Configuration
  - o Texted with textless elements at end (preferred)
  - o Tape Version: Anamorphic or Standard Full Screen , aspect ratio

TRANSMISSION MATERIALS FOR  
HIGH DEFINITION DELIVERY:

**Summary of materials required as follows:**

**1x 1080/50i or 1080/59.94i HDCAM video cassette**  
**1x 625/50i (PAL) Digital Betacam video cassette**  
**2x 5.1 digital audio files burnt to DVD or DTRS (DA-88) audio cassette (full mix 5.1 and mix minus narration 5.1 if available)**  
**1x stereo audio stems digital audio files burnt to DVD or DTRS (DA-88) cassette**  
**1x DVD video disc, clean (free of BITC)**

- **1x 1080/50i or 1080/59.94i HDCAM video cassette** of the programme as completed with opening titles and closing credits. The body of the programme is to contain all captions, translation, subtitles and English language graphics. Stereo final mix soundtrack to be recorded on audio channels A1 (left) and A2 (right). Stereo, undipped/level music, effects and all dialogue other than commentary, quotes/readings/voiceovers to be recorded on audio channels A3 (left) and A4 (right).
  - Channel 1: Full/Final mix stereo left
  - Channel 2: Full/Final mix stereo right
  - Channel 3: Full/undipped mix Minus Narration, Stereo Left
  - Channel 4: Full/undipped mix Minus Narration, Stereo Right

*Programmes will not be accepted on any other format, i.e. HDD5, HDV or DVCPROHD.*  
 Please discuss with technical department if you need any advice.

**Programmes supplied as High Definition should contain a minimum of 75% true HD footage. A maximum of 25% Standard Definition footage within a Hi Def programme is acceptable.**

- **1x 625/50i (PAL) Digital Betacam video cassette** of the programme as completed with opening titles and closing credits. The body of the programme is to contain all captions, translation, subtitles and English language graphics.  
Stereo final mix soundtrack to be recorded on audio channels A1 (left) and A2 (right).  
Stereo, undipped/level music, effects and all dialogue other than commentary, quotes/readings/voiceovers to be recorded on audio channels A3 (left) and A4 (right).

- Channel 1: Full/Final mix stereo left
- Channel 2: Full/Final mix stereo right
- Channel 3: Full/undipped mix Minus Narration, Stereo Left
- Channel 4: Full/undipped mix Minus Narration, Stereo Right

*Programmes will not be accepted on any other format, i.e. MiniDV, DVCAM or BetacamSP.*  
Please discuss with technical department if you need any advice.

- **2x 5.1 e digital audio files burnt to DVD or DTRS (DA-88) audio cassettes** of the completed programme. The cassettes **must** be in sync with matching timecode to final programme master. Assignment as follows:

1. Main Audio

DA-88 AUDIO / DVD ASSIGNMENT	Channels
Full Mix Left	1
Full Mix right	2
Full Mix Centre	3
Full Mix LFE	4
Full Mix Surround Left	5
Full Mix Surround Right	6
Full Mix LeftTotal	7
Full Mix RightTotal	8

2. Music, Effects & Dialogue (M&E) Audio

DA-88 AUDIO / DVD ASSIGNMENT	Channels
Mix Minus Narration Left	1
Mix Minus Narration right	2
Mix Minus Narration Centre	3
Mix Minus Narration LFE	4
Mix Minus Narration Surround Left	5
Mix Minus Narration Surround Right	6
Mix Minus Narration LeftTotal	7
Mix Minus Narration RightTotal	8

- **1x Embedded digital audio files burnt to DVD or DTRS (DA-88) stereo audio cassette** of the completed programme. The cassette **must** be in sync with matching timecode to final programme master.  
Except full mix tracks, DA-88 tapes are to be delivered at Relative Mix Level (i.e. will create final mix, **WITHOUT dips for narration, dialogue or interview**) on separate tracks or as follows:

	DA-88 AUDIO / E DVD ASSIGNMENT		Channels
Full Mix	Stereo	Left	1
Full Mix	Stereo	Right	2
Music	Stereo	Left	3
Music	Stereo	Right	4
Effects	Stereo	Left	5
Effects	Stereo	Right	6
Narration	Mono		7
Dialogue/Interviews	Mono		8

DVD or DTRS (DA-88) audio cassettes will always be required unless agreed in advance by Electric Sky's technical department.

- **1x DVD video disc** of the completed programme, clean (free of BITC)
- **Aspect Ratios:** Active picture area to be mastered **16:9 Full Height Anamorphic** shot protected for 14:9 Letterbox. **4:3 Full Frame** will only be accepted with prior agreement from Electric Sky.  
*No other 'Letterboxed' aspect ratios will be accepted ie. 14:9LBX, 16:9LBX.*
- Programmes **must** be shot and mastered **14:9 Action and Title** safe. This is essential because many broadcasters still transmit with automatic aspect ratio change to 14:9 in SD. Therefore all titles and captions must fall inside the 14:9 LBX title and caption safe grid. Please refer to EBU or BBC specifications for more technical details on this.
- **Textless Cover Shots:** Clean backgrounds for the opening titles, closing credit sequences, lower thirds, graphics, subtitles and maps synchronous with those used in the actual programme, to be placed after at least one minute of "black level" following the programme material, to and from a "cut point" to facilitate editing.
- **Timecode:** Programmes must start at 10:00:00:00 and have identical LTC and VITC timecode tracks.
- **Clock / Slate:** Programme must have a clock / slate starting at 09:59:30:00 and cutting to Black at 09:59:57:00 leaving 3 seconds before the programme starts.
- **Audio / Video Lineup:** Colour Bars at either 75% or 100% and audio tone of 1KHz at -18dBfs recorded to all channels must come before the clock with a duration of at least 60 seconds. The Audio tone must be intermittent on the left channel for stereo indication.
- **Video Levels and Gamut (illegal signals)** Video levels including any line-up shall be received within the specified limits so that the programme material can be used without adjustment. We require that signals meet the easier EBU Recommendation R103-2000:  
Luminance limits -1% and 103%  
Chrominance 105% max - RGB values to not exceed limits -5% to +105%  
*Illegal levels will result in an immediate QC failure* and masters will be returned to the Producer. Please refer to EBU or BBC specifications for more technical details on this.
- All masters should be continuous and **clear of ad breaks.**
- **All tapes should be clearly labelled with the following information:**
  - o Title
  - o Duration
  - o Channel Configuration
  - o Texted with textless elements at end
  - o Tape Version: Anamorphic or Standard Full Screen, aspect ratio

TRANSMISSION MATERIALS FOR  
STEREOSCOPIC 3D HIGH DEFINITION DELIVERY:

**Summary of materials required as follows:**

**EITHER:** 1x 1080/23.976psf, 1080/25Psf, 1080/50i or 1080/59.94i 422x2 (Dual Stream) HDCAM SR video cassette containing both Left and Right Eye sequences synchronously recorded onto cassette.  
**OR:** 2x 1x 1080/23.976psf, 1080/25Psf, 1080/50i or 1080/59.94i 422 (Single Stream) HDCAM SR video cassettes containing the Left and Right Eye sequences separately on each cassette.  
 1x 625/50i (PAL) or 525/59.94i (NTSC) Digital Betacam video cassette of the Left eye only.  
 2x 5.1 digital audio files burnt to DVD or DTRS (DA-88) audio cassette (full mix 5.1 and mix minus narration 5.1 if available)  
 1x stereo audio stems digital audio files burnt to DVD or DTRS (DA-88) cassette  
 1x DVD video disc, clean (free of BITC)

- **HDCAM SR video cassette(s)** of the programme **MUST** be complete with opening titles and closing credits. The body of the programme is to contain all captions, translation, subtitles and English language graphics. Stereo final mix soundtrack to be recorded on audio channels A1 (left) and A2 (right). Stereo, undipped/level music, effects and all dialogue other than commentary, quotes/readings/voiceovers to be recorded on audio channels A3 (left) and A4 (right). 5.1 Surround final mix soundtrack to be recorded on audio channels A5 to A10.

- Channel 1: Full/Final mix stereo left
- Channel 2: Full/Final mix stereo right
- Channel 3: Full/undipped mix Minus Narration, Stereo Left
- Channel 4: Full/undipped mix Minus Narration, Stereo Right
- Channel 5: Full/Final mix 5.1 Left
- Channel 6: Full/Final mix 5.1 Right
- Channel 7: Full/Final mix 5.1 Centre
- Channel 8: Full/Final mix 5.1 Lfe
- Channel 9: Full/Final mix 5.1 Surround Left
- Channel 10: Full/Final mix 5.1 Surround Right

*Programmes will not be accepted on any other format, i.e. HDD5, HDCAM, HDV or DVCPROHD.*  
Please discuss with technical department if you need any advice.

### 3D VIDEO REQUIREMENTS

Video Footage must be acquired using formats acceptable to Electric Sky on professional grade media. Table 1.2 lists the formats that are acceptable for 3D acquisition. NOTE: The list in Table 1.2 applies only to 3D productions.

Material not acquired in one of the acceptable formats must be approved by the Production Manager prior to the commencement of production.

Video program material shall be produced using industry standard and accepted norms for good practice and workmanship. Electric Sky requires that its production partners use only approved codecs and media types (listed in Table 1.2) when working in nonlinear editing systems. Systems that are incapable of using HD-resolution media are not acceptable for online output. If there are questions about the qualifications of a particular editing system or type of media, please contact the technical department.

All acquisition and recording systems must maintain the full frame resolution throughout the production and mastering process. Systems that record “frame compatible” signals with reduced resolution may not be used.

Table 1.2

Acceptable Acquisition Systems	Acceptable Editing Codecs
Sony HDCAM	Uncompressed 8 bit / 10 bit / 12 bit
Sony HDCAM SR	Avid DNxHD 220/185/175
Panasonic DVCPRO HD	Avid DNxHD 145/120/115
Panasonic P2 HD – DVCPRO HD or AVC Intra 100 codecs	Apple Pro Res HQ
Sony XDCAM HD (35 Mbps/ 50 Mb/s)	Apple Pro Res SQ
Silicon Imaging 2K (S1 Raw or Cineform Raw)	Panasonic AVC-Intra 100 Mbps
JPEG2000 systems – 100 Mbps or greater	
Uncompressed recorder systems (8 bits or higher)	

#### Video Acquisition Standards for 3D

All principle film should be with cameras utilizing a three ½” (or greater) sensor array with a native resolution of 1920 by 1080 pixels or greater.

#### Video Levels and Gamma

Video must use standard ITU-R BT.709 gamma curves and colorimetry. This excludes masters created using all other gamma curves, including log curves.

#### View Alignment

The left eye and right eye views must be properly aligned in the vertical axis with minimal vertical offset. The vertical misalignment of the two eye views must not exceed three (3) lines at picture center or seven (7) lines at the picture edges. The two views may not be more than a quarter of a degree out of rotational alignment at any point in the program. The focal length and focus of both views must be aligned, free of any differences in perceived clarity or image size between the eye views.

#### Colorimetric Alignment

The colorimetry of the two eye views must be properly aligned throughout the program, with no perceivable difference in picture gamma, hue, luminance, or chrominance between the two views.

## View Disparity

The disparity between the left and right eye views must not go beyond the point of clear binocular single vision or cause viewing discomfort for the average viewer. Main subject point should nominally be the screen focus point or convergence point of the two images. Positive disparity or image separation at distant points (into the screen) should not exceed 2% for majority of shots. Negative disparity Image separation at close points (Out of Screen) should be used with care and not nominally exceed 1% for shots. Care should be taken for images breaking the frame edges with floating windows utilized where appropriate.

These guidelines aim to deliver managed and comfortable stereoscopic viewing. As such these limits can be exceeded for specific editorial needs, (Such as Graphic Content or Short Term visual impact), managed appropriately and in line with 3D production practice. Such instances should be constrained to 4% Positive (Into Screen) and 2.5% Negative (Out of Screen)

## 2D High Definition content.

**Programmes supplied as stereoscopic 3D should contain a minimum of 90% true stereoscopic footage. A maximum of 10% 2D High Definition footage within a 3D programme is acceptable. Standard definition material is NOT acceptable under any circumstances.**

- **1x 625/50i (PAL) or 525/59.94i (NTSC) Digital Betacam video cassette** of the left eye of the programme as completed with opening titles and closing credits. The body of the programme is to contain all captions, translation, subtitles and English language graphics.  
Stereo final mix soundtrack to be recorded on audio channels A1 (left) and A2 (right).  
Stereo, undipped/level music, effects and all dialogue other than commentary, quotes/readings/voiceovers to be recorded on audio channels A3 (left) and A4 (right).
  - Channel 1: Full/Final mix stereo left
  - Channel 2: Full/Final mix stereo right
  - Channel 3: Full/undipped mix Minus Narration, Stereo Left
  - Channel 4: Full/undipped mix Minus Narration, Stereo Right

*Programmes will not be accepted on any other format, i.e. MiniDV, DVCAM or BetacamSP.*  
Please discuss with technical department if you need any advice.

- **2x 5.1 e digital audio files burnt to DVD or DTRS (DA-88) audio cassettes** of the completed programme. The cassettes **must** be in sync with matching timecode to final programme master. Assignment as follows:

### 1. Main Audio

DA-88 AUDIO / DVD ASSIGNMENT	Channels
Full Mix Left	1
Full Mix right	2
Full Mix Centre	3
Full Mix LFE	4
Full Mix Surround Left	5
Full Mix Surround Right	6
Full Mix LeftTotal	7
Full Mix RightTotal	8

### 2. Music, Effects & Dialogue (M&E) Audio

DA-88 AUDIO / DVD ASSIGNMENT	Channels
Mix Minus Narration Left	1
Mix Minus Narration right	2
Mix Minus Narration Centre	3
Mix Minus Narration LFE	4
Mix Minus Narration Surround Left	5
Mix Minus Narration Surround Right	6
Mix Minus Narration LeftTotal	7
Mix Minus Narration RightTotal	8

- **1x Embedded digital audio files burnt to DVD or DTRS (DA-88) stereo audio cassette** of the completed programme. The cassette **must** be in sync with matching timecode to final programme master. Except full mix tracks, DA-88 tapes are to be delivered at Relative Mix

Level (i.e. will create final mix, **WITHOUT dips for narration, dialogue or interview**) on separate tracks or as follows:

	DA-88 AUDIO / DVD ASSIGNMENT		Channels
Full Mix	Stereo	Left	1
Full Mix	Stereo	Right	2
Music	Stereo	Left	3
Music	Stereo	Right	4
Effects	Stereo	Left	5
Effects	Stereo	Right	6
Narration	Mono		7
Dialogue/Interviews	Mono		8

DVD or DTRS (DA-88) audio cassettes will always be required unless agreed in advance by Electric Sky's technical department.

- **1x DVD video disc** of the completed programme, clean (free of BITC)
- **Aspect Ratios:** Active picture area to be mastered **16:9 Full Height Anamorphic** shot protected for 14:9 Letterbox. **4:3 Full Frame** will only be accepted with prior agreement from Electric Sky. *No other 'Letterboxed' aspect ratios will be accepted ie. 14:9LBX, 16:9LBX.*
- Programmes **must** be shot and mastered **14:9 Action and Title** safe. This is essential because many broadcasters still transmit with automatic aspect ratio change to 14:9 in SD. Therefore all titles and captions must fall inside the 14:9 LBX title and caption safe grid. Please refer to EBU or BBC specifications for more technical details on this.
- **Textless Cover Shots:** Clean backgrounds for the opening titles, closing credit sequences, lower thirds, graphics, subtitles and maps synchronous with those used in the actual programme, to be placed after at least one minute of "black level" following the programme material, to and from a "cut point" to facilitate editing.
- **Timecode:** Programmes must start at 10:00:00:00 and have identical LTC and VITC timecode tracks.
- **Clock / Slate:** Programme must have a clock / slate starting at 09:59:30:00 and cutting to Black at 09:59:57:00 leaving 3 seconds before the programme starts.
- **Audio / Video Lineup:** Colour Bars at either 75% or 100% and audio tone of 1KHz at -18dBfs recorded to all channels must come before the clock with a duration of at least 60 seconds. The Audio tone must be intermittent on the left channel for stereo indication.
- **Video Levels and Gamut (illegal signals)** Video levels including any line-up shall be received within the specified limits so that the programme material can be used without adjustment. We require that signals meet the easier EBU Recommendation R103-2000:  
Luminance limits -1% and 103%  
Chrominance 105% max - RGB values to not exceed limits -5% to +105%  
*Illegal levels will result in an immediate QC failure* and masters will be returned to the Producer. Please refer to EBU or BBC specifications for more technical details on this.
- All masters should be continuous and **clear of ad breaks.**
- **All tapes should be clearly labelled with the following information:**
  - o Title
  - o Duration
  - o Channel Configuration
  - o Texted with textless elements at end
  - o Tape Version: Anamorphic or Standard Full Screen, aspect ratio

OTHER MATERIALS FOR BOTH  
STANDARD DEFINITION & HIGH DEFINITION DELIVERY:

- **Full English language time-coded script** including all narration/interviews/end credit & caption list to be sent on disc or by e-mail (Word Document)
- **Music cue sheet** listing each musical work with the name of the composer, author and publisher including the duration of each musical work and the description of use in each case.
- Such publicity material including at least **five high res images of the film** to be provided on JPEG files and, if applicable, a copy of the Licensor's **logo** on JPEG or on slide. The files must be a minimum of 300dpi.
- The script, music cue sheet, stills, end credit list, pdf or Jpeg files and any additional publicity material shall be **delivered electronically** (via e-mail preferred) to the Licensee.

**Music featured in the programme should be pre-cleared with MCPS for worldwide use.** If music is not cleared, this can be undertaken by Electric Sky at a cost to the producer, with the programme being added to Electric Sky's blanket MCPS license. If music clearance is required, Producer must inform Electric Sky of this before master material is delivered. Costs on request.

- **Producer should also have E&O (Errors & Omissions) insurance already in place for the programme, with worldwide cover.** If this insurance is not already in place, Electric Sky can arrange for E&O cover at a cost to the producer. If E&O insurance is required, Producer must inform Electric Sky of this before master material is delivered. Costs on request.
- **Producers must make available to Electric Sky all audio tracks, textless elements, map/diagram mattes & fills that may be required in order for complete FOREIGN LANGUAGE REVERSIONING.** This is **essential** in order to maximise sales opportunities and is a requirement of most international non-English speaking broadcasters.

**Please note that any delay in the delivery of the material or any inaccuracy will create additional costs that will be deducted as 'Additional Costs' from the first sale.**

**Please ensure that the post-production house that you are using gets a copy of this checklist and that the deliverables have been checked before they are sent out to us.**

**For further information or help please contact Ann Black: [ann.black@electricssky.com](mailto:ann.black@electricssky.com)  
on +441273224240**