



# NETWORKS

## UK TECHNICAL SPECIFICATIONS

FOR ACQUIRED, CO-PRODUCED & COMMISSIONED PROGRAMMING

*REVISED – June 2026*

*Section*

*1.1 Glossary – New*

*2.5 Ident / Clock / Slate – Clarified*

*2.7 Source (SRC) Content File Delivery Method and Good Practice – Updated*

*4.2 Break Patterns and Continuous Programme Formats – Clarified*

*6.0 Additional Materials – Edited sections*

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## 1.0 INTRODUCTION

The prime objective of the requirements detailed are to deliver content of both a high technical quality and of high production values. As such limitations are specified to ensure such quality thresholds are maintained both at acquisition and throughout the production process.

High Definition (HD) necessitates the highest quality to be captured at the point of creation and initial storage together with the minimisation of transcoding steps within the production chain that have the potential to degrade the content when delivered to the consumer via the transmission facilities utilised by Hearst Networks.

All such programme material acquired for Hearst Networks must be of a high technical standard, with all production equipment meeting appropriate technical specifications and recommendations for broadcast within the UK and other international markets defined by Hearst Networks. Failure to adhere to these guidelines could result in created content being rejected for use or the programme not being categorised as High Definition.

Whilst these technical specifications define specific parameters, it should be noted that advancements in technology will necessitate amendments and where specific technologies can deliver enhanced production values and/or quality these will be considered as exceptions.

All HD programme material acquired for transmission on Hearst Networks channels must be of the highest technical and quality standard, originated and post-produced on equipment that meets UK and international broadcast standards.

It is important that control rooms and viewing rooms used to assess quality during post-production, recording and telecine transfers do not affect subjective impressions of the luminance, resolution and colour attributes of the picture. It is important that viewing conditions must correspond to ITU-BT500-14 and ISO 12608:1996 (e) for vision and EBU publication tech. 3276-e for audio.

To enable the HD programme to retain the highest quality throughout, a minimum of 75% must be native HD footage. Where non HD footage is utilised, it should sit within the editorial context of the program. The upconverted SD footage must not exceed 25% of the total programme with no segments exceeding 5 minutes in any 15 minute period.

Please make time to read this document before attempting to deliver content – any questions should be directed to [Technicaloperations@hearstnetworks.com](mailto:Technicaloperations@hearstnetworks.com)

## 1.2 Glossary

Term	Definition
Commissions	Programmes ordered and produced by Hearst Networks.
Co-Productions	Programmes Hearst has produced in collaboration with other broadcasters/production companies.
Pre-Sales	Programmes which are produced by external companies sometimes with editorial/production input from Hearst.
Third Party Acquisitions	Programmes which are produced by external companies with no production input from Hearst.

## 2.0 TECHNICAL GUIDELINE – VIDEO STANDARDS

In accordance with the Digital Production Partnership (DPP), file-based delivery is mandatory. Content can be accepted on hard drive only under certain circumstances and only with prior permission from Technical Operations.

For file delivery notifications, please email: [ContentManagement@hearstnetworks.com](mailto:ContentManagement@hearstnetworks.com)  
[Technicaloperations@hearstnetworks.com](mailto:Technicaloperations@hearstnetworks.com)

### 2.1 Source (SRC) Content Standard HD File Specifications

File-based video file must be Material Exchange Format (MXF) wrapped and should be encoded as described below.

SD is not an acceptable delivery format. All material deliveries should be delivered in native or upconverted HD.

Description	HD		
Video	Format	XDCAM HD	
	Broadcast Standard	PAL	
	File Wrapper	MXF	
	Resolution	1920x1080	
	MPEG Profile	Profile: 4:2:2 / Level : High	
	GOP Structure	IBBP/GOP length 12	
	Video Bit Rate	50 Mbps CBR	
	Video Frame Rate	25 fps	
	Picture Type	Interlaced	
	Field Dominance / Order	Upper / Top Field First	
	Aspect Ratio	16:9	
	Video Signal	Each primary component should lie between 0 and 100% of the narrow video range between black level and the nominal peak level (R and G and B).	
	Closed Caption	Removed	
Audio	Audio Format	PCM	
	Audio Bit Depth / Rate	16 bit / 24 bit	
	Audio Sample Rate	48kHz AES / EBU standard	
	Max Audio Tracks	8 Tracks	
	Audio Track Layout	Channel 1: Stereo Full English Mix – Left*	Channel 5: Isolated Dialogue (mono)*
		Channel 2: Stereo Full English Mix – Right*	Channel 6: Isolated SFX (mono)
		Channel 3: Stereo Music & Effects - Left	Channel 7: Stereo Full Mix Minus Narration (Stereo Music & Effects & Dialogue) - Left*
Channel 4: Stereo Music & Effects - Right		Channel 8: Stereo Full Mix Minus Narration (Stereo Music & Effects & Dialogue) - Right*	
Audio Stems Formats	If any audio tracks are not wrapped within MXF, please deliver split stereo WAV files electronically		

\*Additional requirements will apply for non-English language deliveries ( see details under section “5.0 ADDITIONAL MATERIALS - Script”)

**NOTE:** Material will need to be delivered with correct Group Of Pictures ( GOP) structure. Details are given on the table above. Due to the high failure rate of this aspect for HD content, please see the specification in detail:

GOP structure for HD content needs to be fixed with the following configuration M=3, N=12 ( IBBPBBPBBPBBPBI).

Material will need to be delivered with valid video signal levels defined by EBU standard 'R 103

VIDEO SIGNAL TOLERANCE IN DIGITAL TELEVISION SYSTEMS VERSION 3.0'. Details are given on the table above. Any material that exceed the defined parameters will be clipped. Such clipping can cause harmonic distortion and alias artefacts in the video. Additionally, When television signals are manipulated in YUV form, it is possible to produce "illegal" combinations that, when de-matrixed, would produce R, G or B signals outside the range 0% - 100%.

If the video / audio files are sent in anything but the above formats it may result in the rejection of the material with replacements being requested at the distributor / suppliers cost. Delivery of content in alternate specifications must be agreed prior to delivery with Acquisitions and Technical Operations.

**All discrepancies with the delivery spec will need to be flagged to the Content Management team (UKJV Content Management [ContentManagement@hearstnetworks.com](mailto:ContentManagement@hearstnetworks.com) ) prior to file delivery.**

#### HD MATERIAL

- XDCam 50 4:2:2 1080/i/25 (1080 active lines/interlaced/25 frames per second) is required for all interlaced produced material and delivered programmes. This must have been sourced directly from the native 1080/i/25 or 1080/i/30 fully graded / final master.
- Quicktime / MOV wrapped or Apple ProRes encoded files are not acceptable and will be rejected unless this has been agreed in advance with Acquisitions and Technical Operations departments.
- HDV is not acceptable at any time and will be rejected immediately.
- NTSC is not acceptable at any time and will be rejected immediately.
- Material that has been converted from the interlaced system to the progressive system is not acceptable.
- Material that has been up-rezed from the 720 line HD format to the 1080 line HD format is not acceptable.
- All HD material shall be full height, full width vision contained within the 1920 X 1080 format which defines the ratio of 16:9

#### 4K / UHD MATERIAL

As far as possible all originated Hearst Networks Programming is to be shot in 4K / UHD and delivered in HD, unless otherwise agreed in writing with the editorial and technical team. For any queries please refer to the Technical Operations team ([Sonibel.Rae@hearstnetworks.com](mailto:Sonibel.Rae@hearstnetworks.com) and / or [Daniel.Anscombe@hearstnetworks.com](mailto:Daniel.Anscombe@hearstnetworks.com))

Best industry practice needs to be followed in production and post-production to maintain highest image quality:

- The camera output must be compliant with the standards set out in EBU R118 for either UHD1 Tier 1 or UHD1 Tier 2
- Productions should capture at a minimum sensor resolution of 2880 x 1620 and comply with EBU R118
- All content should be captured in progressive scan, with 16-bit colour depth raw output (12-bit accepted with pre-approval). File metadata must also be captured.

## 2.2 Action / Graphic Safe Areas

Two safe areas need to be considered in television production; all essential action should be protected inside an Action Safe Area, and all graphics inside a Graphics Safe Area.

The Action Safe Area is 3.5% and the Graphics Safe Area is 5%, at the top, bottom and lateral parts of the video image, so 7% and 10% of the complete video image.

## 2.3 Camera Standards for HD Longform

#### Minimum Camera Requirements

- Resolution: 1920 x 1080
- Compression: minimum 4 Mbits per frame
- Chroma Subsampling: 4:2:2
- Colour bit depth: 10
- OETF: Log or BT. 709
- Colour Gamut / Primaries: BT. 709
- Dynamic Range: >12 stops
- Sensor: ½ inch or more.

If the camera used falls below any of the defined requirements please raise with us so we can assess the possible quality issues which may arise as a result and sign off.

Cameras which supersede these requirements (eg. UHD HDR) do not need to be signed off by Tech Ops unless it's a unique scenario where the raw footage is being edited in house. Please alert us as soon as possible if this is the case so we can consult with engineering and make sure we have the necessary software to process and store these files.

### Film/Archive

- 35mm (or greater) film where converted directly to a 1920 by 1080 format for a Frame rate of 25 Frames.
- Hearst Networks uses the ITU standard for defining resolution, thus 1080i/25 means 1080 lines of 50 interlaced fields per second which produce 25 frames per second and 1080p/24 means 1080 lines of 24 frames per second progressively scanned content.

### Alternate Frame Rates

- Any content with an original frame rate of 30 (29.97) / 24 (24.976) must be converted to 25fps prior to delivery.  
**Please see section 5.0 for acceptable modes of conversion.**

## 2.4 Line Up Requirements for HD Source (SRC) Content

1 minute 30 seconds of bars and tone starting at 09:58:00:00, colour bars must have 100% luminance and 100% saturation. 1k tone must be recorded on all 4 tracks at zero dB/PPM4/-18dBFS

• 09:59:30:00	27 seconds of identification clock / slate
• 09:59:57:00	3 seconds of black & mute
• 10:00:00:00	Start of programme, this must be field 1 dominant throughout.

There should be at least a minute of black after the programme has finished unless textless elements are present. In this case, textless elements should appear 10 seconds after the programme has finished ( *more details in section 5.1 TEXTLESS MATERIAL / ELEMENTS*)

## 2.5 Ident / Clock / Slate

A countdown clock or slate clearly displaying the following information must precede the start of programme.

- Programme / Episode title;
- Season / Episode number;

Please avoid using generic Episode titles (eg. Episode 1) where possible and include specific episode titles. Generic information on the slates can cause significant delay in ingest due to the lack of episode specific information increasing the risk of incorrect file association.

The clock or slate may display telephone contact numbers for the post-production facility and production company and may display company / channel branding.

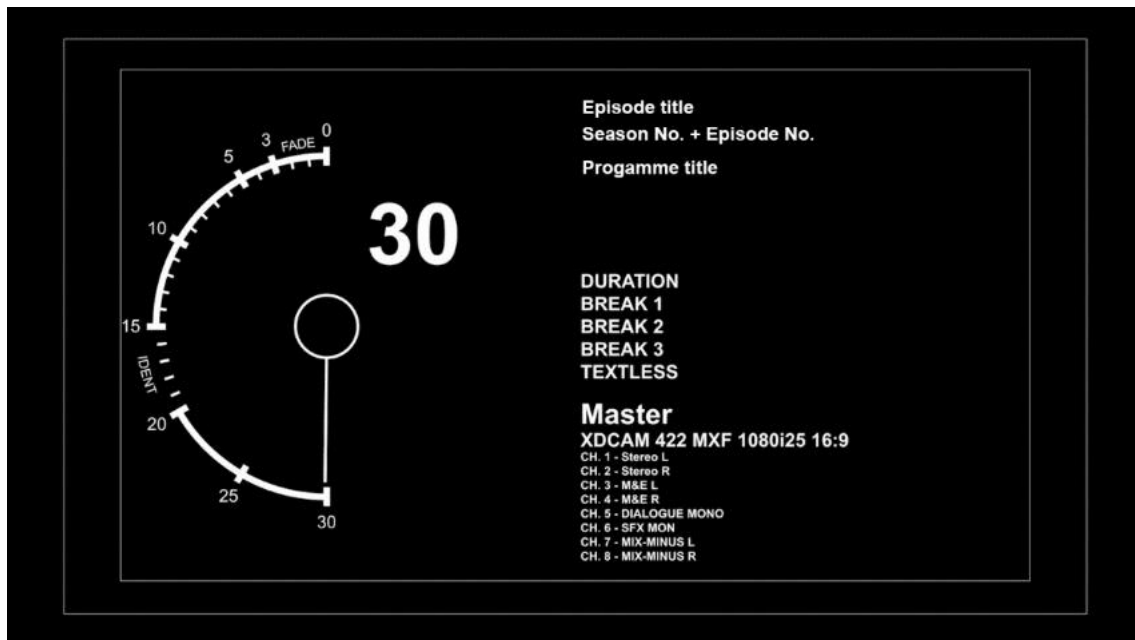
Additionally, the following technical information needs to be included:

- Audio configuration
- File format / Aspect Ratio: e.g. XDCAM 422 MXF / 16:9
- Video resolution / Scanning type: e.g. 1080i/50
- Total duration and timecodes of individual parts

Where a moving clock is used, it must provide a clear countdown of at least 7 seconds, including a hand moving in 1 sec steps (i.e. not smooth motion) around a circular clock face. Clocks with only digital countdown are not acceptable.

- There must be no audio tone or ident over the clock

Ident Clock / slate example:



## 2.6 Source (SRC) Content File Naming for Delivery

Filenames for the MXF wrapped content and XML metadata files must be supplied and should contain the relevant programme identifier information. Filenames should be mixed case, with filename extensions in lower case. Allowable characters are 'A-Z', '0-9', '\_'. No spaces, punctuation or illegal characters must be used.

All files must be clearly named using either the BSS ID for Commissioned and Third Party Content or with the PPL ID if content falls under A+E US Acquisition. Content Management will alert you to the appropriate ID's before delivery.

Example Layout: **SeriesName\_S01E01\_EpisodeName\_BSSID\_SRC**

Example Filename: **SeriesNameS01E01\_EpisodeName\_1819557\_SRC**

For redeliveries, please indicate the redelivery status for an asset clearly in the filename with a relevant suffix such as '\_V2' or '\_V3' depending on the iteration for the redelivery.

Example Filename: **SeriesName\_S01E01\_EpisodeName\_1819557\_SRC\_V2**

When delivering Texted and Textless versions please add TEXTED, TEXTLESS to the end of the file name like below:

**SeriesName\_S01E01\_EpisodeName\_BSSID\_SRC\_TEXTED**

**SeriesName\_S01E01\_EpisodeName\_BSSID\_SRC\_TEXTLESS**

If Episode order/number is not known at time of delivery this can be omitted from the title.

Please address any queries you have about this naming system during the Onboarding process to avoid delays in delivering content or the need for redeliveries.

## 2.7 Source (SRC) Content File Delivery Method and Good Practice

All components for a single episode, including video asset and potentially separate elements such as audio stems / Textless / Graphics, are to be delivered in a single upload.

A single upload / delivery batch should not exceed >350 GB (typically, a single episode bundle would not exceed this limit). Bigger delivery batches are to be split into smaller delivery units spread over multiple days if needed.

We currently use Mediashuttle as our main point of delivery. This is achieved by uploading to our [Mediashuttle Portal](#).

The emails of the users who will be delivering content will need to be provided ahead of the delivery date. Once set up you will receive an email to create a login.

If you are delivering several series, are a frequent supplier and store files in a S3 environment, we encourage the alternative method of delivering directly into our S3 environment. If you think this is something you wish to establish with your next delivery, please raise this at least a month before delivery for us to start the process and be able to test the functionality of this workflow with you before the receipt of full files.

To initiate set up of either method please contact [Technicaloperations@hearstnetworks.com](mailto:Technicaloperations@hearstnetworks.com) and [ContentManagement@hearstnetworks.com](mailto:ContentManagement@hearstnetworks.com).

## 3.0 TECHNICAL GUIDELINE – AUDIO STANDARDS

### 3.1 Audio Specifications

Channels 1 & 2 must be recorded in the correct phase relationship throughout the programme, including the source reference tone signals recorded for the equipment line-up purposes at the start of the tape.

Audio tracks must be as originally recorded i.e. mono transferred as mono, stereo transferred as stereo recordings.

Stereo and surround sound must always be mono compatible. For stereo programmes, audio channels must be accurately matched and correctly balanced.

Where the sound track of the programme is mono, the second audio channel ( Channel 2 ) signal must be derived from an electronically split feed of the first audio channel ( Channel 1 ) signal.

We always require foreign language programmes to be supplied in the original language it was recorded, unless by prior written agreement.

Channels 7 & 8 must be mixed as undipped Stereo Full Mix Minus Narration (MED) consisting of the Stereo Full Mix minus narration. Delivery of the MED track is mandatory as it's the main audio used for the creation of localised programmes.

All recorded tracks must be correctly pre-mixed ready for transmission.

XDCAM 8 x mono WAVs @ 16 bit or 24 bit, 48 KHz

- Audio Channel 1 Stereo Full Mix Left
- Audio Channel 2 Stereo Full Mix Right
- Audio Channel 3 Stereo M & E Left (Music and Effects – Undipped)
- Audio Channel 4 Stereo M & E Right (Music and Effects – Undipped)
- Audio Channel 5 Isolated Final Mix Dialogue / Sync - Mono
- Audio Channel 6 Isolated Final Mix SFX - Mono
- Audio Channel 7 Stereo Full Mix Minus Narration (Stereo Music & Effects & Dialogue) Undipped- Left
- Audio Channel 8 Stereo Full Mix Minus Narration (Stereo Music & Effects & Dialogue) Undipped- Right

### 3.2 Separate Audio Stems

When files are delivered outside of our agreed audio specification we will need the remaining tracks to be supplied as separate Audio Stems.

For example if a file is delivered with the following configuration only:

Audio Channel 1	Full Stereo Mix Left
Audio Channel 2	Full Stereo Mix Right
Audio Channel 3	M&E Left
Audio Channel 4	M&E Right

We require the remaining audio tracks to be supplied in the following naming convention utilising the BSS ID (if not sure of the BSS ID, this information can be procured from the Content Management team):

**SeriesName\_S01E01\_EpisodeName\_BSSID\_MED\_L**

or

**SeriesName\_S01E01\_EpisodeName\_BSSID\_DIA**

**SeriesName\_S01E01\_EpisodeName\_BSSID\_MED\_L**

**SeriesName\_S01E01\_EpisodeName\_BSSID\_MED\_R**

**SeriesName\_S01E01\_EpisodeName\_BSSID\_ME\_L**

**SeriesName\_S01E01\_EpisodeName\_BSSID\_ME\_R**

**SeriesName\_S01E01\_EpisodeName\_BSSID\_SFX**

And vice versa if we are supplied with MED on tracks 3 and 4.

Please stick to the above naming for tracks delivered into us for the most efficient processing of your stems in our system.

In the case of redelivery of content, please amend file names accordingly. Eg.

**SeriesName\_S01E01\_EpisodeName\_1819557\_MED\_L\_V2**

If certain tracks listed in our spec are not able to be delivered please communicate this with your Hearst Networks contact point as some tracks such as MED are essential for the Localisation process.

### 3.3 Sound Levels and Quality

Audio line-up level must be recorded at -18dBFS. Line-up at -20dBFS (US standard) is not acceptable.

Audio levels for tracks 1&2 should conform to **EBU R128 loudness specification** with an integrated level of **-23 LUFS +/- 1 LU** and a maximum **True Peak level of -1 dBFS**.

In addition, we require the audio content for the English FULL MIX on tracks 1&2 as follows: (these levels relate to the line-up levels noted above):

- Maximum program Loudness Range (LRA) should not exceed 16 LU
- General conversation levels should range between +/- 8 dB

Other provided stereo tracks at source level (eg. M&E, Mix Minus Narration) must not exceed the specified programme loudness. This will result in rejection as this could introduce issues for other departments which use these tracks (and not the full mix) to create their masters.

Theatrical releases that have too wide a dynamic range may not be suitable for television distribution. These levels must be to our requirements (as above). Great care must be taken not to over-compress the levels / dynamic range, which could result in a rejection.

Sound must be recorded with appropriately placed microphones, giving minimum background noise and without peak distortion. The audio must be free of spurious signals such as clicks, noise, hum, drop out and any analogue distortion.

The audio must be reasonably continuous and smoothly mixed and edited. Audio levels must be appropriate to the scene portrayed and dynamic range must not be excessive. Audio levels must be suitable for the whole range of domestic listening situations.

Stereo audio must be appropriately balanced and free from phase differences, which cause audible cancellation in mono. The audio must not show dynamic and/or frequency response artefacts as a result of the action of noise reduction, pitch correction or low bit rate coding systems.

### 3.4 Noise Reduction in Digital Recordings and Sound / Vision Sync

Digital audio recordings must be supplied without digital noise reduction or pre-emphasis.

Sound and Vision should be delivered fully frame synchronous throughout the programme. In no circumstances may audio and video be out of sync by more than one field (i.e. 20 ms).

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Sound and Vision should be delivered fully frame synchronous throughout the programme. In no circumstances may audio and video be out of sync by more than one field (i.e. 20 ms).

## 4.0 COMMISSIONED & CO-PRODUCTIONS & PRE SALES: PROGRAMME REQUIREMENTS

Commissioned and co-produced programmes should be prepared with clearly defined breaks where commercials may be taken. Programmes for a half hour transmission slot generally run to a maximum of 22:30 minutes, while those for a 60-minute slot should not exceed a total running time of 44:30 minutes.

- On the front of programmes, the programme title (or series plus episode title) only, and major talent as Hearst Networks and its co-partners may agree, is permitted.
- Opening Credits should not exceed 45 seconds. Any Opening credits that are thought to exceed this will need to be queried prior to delivery and signed off on a case-by-case basis.
- End credits on all programmes must include appropriate production company, HEARST NETWORKS UK credits and a copyright, preferably in Roman Numerals.
- HEARST NETWORKS UK logo must appear on all commissioned and co-produced programmes.
- Neither production companies' names (as in "X Productions presents") nor their logos may appear at the start of programmes.
- The maximum total duration for end credits will be 30 seconds unless otherwise stated or agreed by Hearst Networks or its co-producing partner(s).
- All end credits must run on screen at an appropriate speed and be of a typeface which is legible. The timing of the credit duration will run from the moment the first end credit appears on screen.
- If required Executive Producer credits will generally precede the final production company credits. The final credit or end-card will consist of the production company logo or words (for example, "an X Production) and HEARST NETWORKS UK logo. The screen layout of this should take the form of:

**A (X Production) [LOGO]  
For HEARST NETWORKS UK [LOGO]  
Copyright (year in Roman numerals e.g. MMVI)**

- The copyright notice should appear immediately below the final credit. No production company website address should appear on the end credits. No production company credit whether still or animated may remain on screen for more than three seconds (of which no more than 2.5 seconds may be animated) of the total duration of the end credits
- No one shall receive more than one credit on screen and producers should use a combined credit (for example, 'written and directed by...') when an individual has more than one function or contribution. In the event that such a combined credit is difficult to achieve (for instance because of the involvement of another party sharing one of the credited functions) then the format of the credit, and the possibility of a person receiving more than one credit mention on screen will be at the discretion & prior approval of Hearst Networks.
- No 'thanks' credits should be given in lieu of proper payment for a service (such as car hire firms, owners of stately homes or other locations). Such services should always be paid for in the programme budget.

- Outside Broadcast, studios and post-production facilities, suppliers of single-camera units, or VTRs or similar facilities and/or equipment should not be credited, unless otherwise agreed by Hearst Networks.
- Unless otherwise stated, or by particular requirements of Hearst Networks and/or its production partners, it shall be for the producer (acting reasonably) to decide what credits are given within the maximum permitted duration for end credits
- No dialogue or narration is permitted to continue over end credits.

## 4.1 Commissions and Co-Productions: Additional Requirements

For COMMISSIONED and CO-PRODUCED programmes, broadcast quality audio split WAVs of the original mix should be delivered via File Transfer – see section 3.0 *TECHNICAL GUIDELINE – AUDIO STANDARDS* for more details. All audio files must be 48 KHz 16 / 24 Bit Broadcast WAV Files.

The Programming Department of Hearst Networks must be notified and have given their permission for programme running times to exceed 43- 44:30 minutes or 21- 22:30 minutes for a 30-minute on-air slot. If the programme running time should exceed 44:30 mins, then prior written agreement is necessary.

All COMMISSION and CO-PRODUCED programming is to pass Photo Sensitive Epilepsy (PSE) testing before delivery to Hearst Networks. Softcopies of the Pass certificates of all PSE, FPA or Harding tests are to be delivered to [Technicaloperations@hearstnetworks.com](mailto:Technicaloperations@hearstnetworks.com).

PSE and flashing image details are outlined further 6.6 *FLASHING IMAGES (PSE)*.

## 4.2 Break Patterns and Continuous Programme Formats

Commissioned and co-produced programmes should be prepared with clearly defined breaks, where commercials may be taken. A second of black will be left between parts as described below.

Programmes should adhere to the following duration guidelines based on the transmission slots detailed in the table below:

Slot	Minimum programme Duration	Maximum Programme Duration	Programme Parts
30-minute slot	21	22:30	1 break / 2 parts
60-minute slot	43	44:30	3 breaks /4 parts
90-minute slot	64	66	5 breaks / 6 parts
120-minute slot	88	92	6 breaks/ 7 parts

**\*any programme that falls outside of these durations should be queried with Hearst Networks**

- The final part must not be under six minutes.
- Acquired programmes may be continuous with no breaks.
- Only 1 internal break should be taken in a half-hour programme, while 3 internal breaks should be taken in a 1 hour programme.
- Title cards / slates between parts are not required. **Bumpers with GFX for the series are permitted before the second of black between parts. These should be approx 12 frames. If included, bumpers should be included in the total programme duration.**
- No End of Part captions eg. "Part 2" should be added.

End of internal parts should fade to black. One second of black should be left between parts, and start precisely on a full second, not at frames within a second. Where an end of part falls on frames within a second, the out is rounded-up and taken on the point of the next full second. For example at 10:12:03:00, not 10:12:02:16; with the next part starting at 10:12:04:00.

## 5.0 THIRD PARTY ACQUISITIONS

Hearst Networks reserve the right to request test file(s) of new content deliveries from third party suppliers prior to series deliveries, to check and accept technical aspects of the file including the standards conversion methods used to create PAL 1080i25 at 25fps. Conversion using professional broadcast tools such as Alchemist is suggested.

Motion Compensation standards conversion sometimes known as Motion Predictive or Motion Vector Conversion should normally be used in order to prevent image degradation.

Speed change is the preferred method of converting from 24fps (including 23.976fps) to 25fps. Due attention must be given to the audio. Software standards conversion packages should also use Motion Compensation processing. It is not permitted to use simple "timeline" conversion.

Below are the recommended processes for frame rate conversion.

- 24p and 24/1.001p to 25p – speed change is the recommended conversion process.
- 24p and 24/1.001p to 50p – speed change plus frame doubling.
- 30p and 30/1.001p to 25p – Motion Compensated Conversion required.
- 30p and 30/1.001p to 50p – Motion Compensated Conversion required.

- 60p and 60/1.001p to 25p – not recommended, speak to broadcaster if required.
- 60p and 60/1.001p to 50p – Motion Compensated Conversion required.
- HD 25PsF to UHD 25p – no frame rate conversion or de-interlacing required.
- HD 25PsF to UHD 50p – frame doubling, no de-interlacing required.
- HD 25i to UHD 25p – use should be limited, de-interlacing.
- HD 25i to UHD 50p – de-interlacing and frame doubling.

De-interlacing processing should be carried out via a multi-field (five-field or greater) de-interlacer or a motion compensated de-interlacer. Content acquired at 24 (24/1.001) fps which has been converted to 60 (60/1.001) interlace or progressive via the “2:3 pull down” process, should first have the repeated fields/frames removed to produce the original frame rate. The resulting video can then be replayed at 25 fps.

For new suppliers, prior to series delivery, Hearst Networks require advance notice (6 weeks from scheduled delivery) and testing of the following criteria:

- **Technical specifications of file(s)**
- **Proposed delivery method**
- **Overall audio / video quality of content**

Hearst Networks will provide quality control checks on delivered test file(s) and confirm acceptance or rejection within 7 days of delivery.

**Please reference Section 9.0 TECHNICAL QUALITY ASSESSMENT for full details on our technical assessment.**

## 6.0 ADDITIONAL MATERIALS

A fully delivered package of assets (See Hearst Networks Deal Memo) also includes the following components:

### 6.1 Additional materials – Type and Format

*Bolded Material types in Additional Material Type column are optional for Third Party content but Mandatory for Commissions.* Remaining materials are required for both.

<b>Additional Material Type</b> (Where applicable based on production deal type)	<b>Format Details</b>	<b>Delivery</b>	<b>Usage</b>
<b>Auto QC report</b>	MS Word / Non-Protected PDF Mandatory for Commissions	Alongside Broadcast File package	Technical Operations
<b>PSE Test Certificate</b>	Non-Protected PDF / Mandatory for Commissions	Alongside Broadcast File package	Technical Operations
Graphic package / AE projects <u>Logo / Title Graphic ( Lower 3<sup>rd</sup> Captions, Maps etc )</u>	Adobe After Effects Project (.aep), Photoshop Projects (.psd), All associated materials in Adobe Project (png, jpeg, tiff etc), Fonts	Alongside Broadcast File package	Technical Operations/ Language Operations
Photography and imagery for publicity	<b>DELIVER A MINIMUM OF 20 HIGH QUALITY IMAGES PER EPISODE.</b>  <i>Refer to the Hearst Networks Production Photography Guidelines for guidance on what to photograph during your production and additional imagery to supply.</i>  Images should be high-resolution JPGs at a minimum of 300dpi, with a file size of at least 20MB (5MB when compressed) and a minimum dimension of 4000 pixels on the longest side.	<a href="mailto:picturedesk@hearstnetworks.com">picturedesk@hearstnetworks.com</a>	Consumer press, trade press, websites, marketing, social media, on-air, TV listings, EPGs, VOD and FAST platforms.

	<p>It is mandatory that imagery delivered for publicity use are accompanied by a completed Heart Networks Stills Log.</p>		
Key Art	<p>DELIVER KEY ART AS LAYERED PSD FILES IN LANDSCAPE AND PORTRAIT FORMATS.</p> <p>Key Art files should be 300dpi, with a file size of at least 20MB (5MB when compressed) and a minimum dimension of 4000 pixels on the longest side.</p> <p>Landscape artwork should be a 16x9 ratio (recommended size 3840x2160px). Portrait artwork should be a 2x3 ratio (recommended size 2400x3600px).</p>	<p><a href="mailto:picturedesk@hearstnetworks.com">picturedesk@hearstnetworks.com</a></p>	<p>Consumer press, trade press, websites, marketing, social media, on-air, TV listings, EPGs, VOD and FAST platforms.</p>
Title Treatment	<p>DELIVER THE TITLE TREATMENT USED IN THE KEY ART.</p> <p>Deliver the title treatment used in the Key Art (usually the same as the programme logo/graphic) separately as a PSD and as a PNG with a transparent background.</p>	<p><a href="mailto:picturedesk@hearstnetworks.com">picturedesk@hearstnetworks.com</a></p>	<p>Consumer press, trade press, websites, marketing, social media, on-air, TV listings, EPGs, VOD and FAST platforms.</p>
Series Synopsis and / or Programme Description (at least 200 words )	<p><b>Electronic Synopses:</b> Provided in MS Word/non-copy protected PDF format</p> <p>Detailed series synopsis (at least 200 words)</p> <p>Series synopsis should be made available at greenlight and episodic synopses 12 weeks before TX for PR purposes</p>	<p>Via Content Management representative</p>	<p>Programming / Scheduling / Marketing</p>
Episode Synopsis (at least 100 words )	<p><b>Electronic Synopses:</b> Provided in MS Word/non-copy protected PDF format</p> <p>Detailed episodic synopsis (at least 100 words) –</p> <p>Please could these be available 6 weeks before Availability Date</p>	<p>Via Content Management representative</p>	<p>Programming / Scheduling / Marketing</p>
Script	<p>MS Word preferred or any other editable formats. <u>Not</u> PDF.</p> <p>The time-coded script should correspond to the media version received and should include T/C IN &amp; OUT; speaker ID, verbatim speech, burnt-in subtitles, onscreen text).</p> <p>For none-English deliveries/programming, English language scripts are still needed for compliance purposes Please read our full script requirements attached at <b>Appendix A Script Requirements</b></p>	<p>Via Content Management representative</p>	<p>Language Operations / Re-voicing</p>

Full Music Cue Sheets	<p>For a commission please liaise with your contact at Hearst Networks/Sky Music</p> <p>The following applies to 3<sup>rd</sup> Party Content:</p> <p>MS Word / Non-Protected PDF</p> <p>If the music cue sheet is not supplied by the Licensor, Hearst Networks shall have the option, at Hearst Networks's sole discretion, to contract with a music search company to source such music cue sheets at the Licensor's sole cost and expense.</p>	Via Content Management representative	Legal
Onscreen text and non-English dialogue list	<p>Any recognised subtitle formats (a fully time-coded Word/Excel list tolerated)</p> <p>Subtitle file or time-coded list corresponding to the segments with non-English language contributors (whether they have been voiced-over or subtitled) and onscreen text</p>	Via Content Management representative	Language Ops
English subtitle file	<p>Any recognised subtitle formats (a fully time-coded Word or Excel list tolerated)</p> <p>English subtitle file for the full programme - if available.</p>	Via Content Management representative	Language Ops
PasC ( Programming as complete form)	MS Word / Non-Protected PDF	Via Programming	Legal / Programming / various departments
<i>Outtakes* / Bloopers* / Unused Materials*</i>	MXF	Via Programming	Digital / Creative
Talent Biographies	MS Word / Non-Protected PDF	Via Programming	PR / Digital

\*Component is not mandatory for any programmes

## 6.2 Textless Material / Elements

**If there are >20 lower thirds in a programme, a full textless master should be supplied rather than separate elements.**

### **TEXTLESS ELEMENTS GUIDELINES**

All graphics **MUST** have a textless version created. Please note that we define "textless" as follows: without words (in any language), numbers, burnt-in subtitles, abbreviations or graphic mattes/backplates of any kind.

This includes (but is not limited to) maps, charts, diagrams, timelines and recreations of manuscripts or documents.

Textless materials must be **COMPLETELY** free of all text, words or letters (in any language), numbers, abbreviations, units of measure, dates/times, lower thirds, fonts or graphic mattes/backplates of any kind.

Clean versions of all footage must be included on the textless delivery: do not leave a black hole in lieu of textless graphics or footage. This specification includes but is not limited to: program titles and show opens, graphics, maps, charts, timelines, lower thirds/straps, graphic backplates and **ANY** other texted elements within your program.

**Footage of newspapers, street signs, etc., or other shots containing embedded text are, of course, exempt from this restriction.** However, if print materials (headlines, text) are superimposed on top of video as an additional layer, they should be removed in the textless delivery.

**This does not apply to archival footage. If textless is not available please flag to Content Management prior to content delivery stage.**

### **TEXTLESS SEQUENCE ON THE FILE DELIVERY**

The textless sequence should be created as follows:

Textless elements should appear 10 seconds after the programme has finished

- The textless section should begin with a slate and end with a slate
- You should combine the textless elements into one sequence. There should be no black in between individual textless clips within the same program segment. Please include 2 seconds of black between each Segment/Act in the textless section.
- Each textless clip must include the entire sequence from/to the previous/next cut point, plus the 2 seconds of pad on either side of the clip.
- The time-codes provided on the log, should include the entire section that has been provided, including the 2 second pad, not just the time-code of the actual text.
- The textless sequence should include reference audio if possible: two channel full-mix stereo left/right.
- Textless should be provided for all teases, bumpers and all textless elements described in this section of the production packet including the show open.
- Include in the textless sequence anything that would typically have been included on a separate texted /textless version e.g. unblurred profanity
- If text resides over black, don't include the black in the textless sequence, but please note the time-codes and the actual text within the document.

## 6.3 International Reversioning

Note, that the content we acquire, co-produce and commission is broadcast in many international territories. Depending on the rights we clear for the content, we can create up to 22 language versions - subtitles or localised audio tracks. Our international viewers can only relate positively to the content if we create the localisation tracks with the correct materials:

- A full-mix minus narration track (MED/mix minus).
- As an absolute minimum, we expect to receive a separate, accurately time-coded subtitle file for the texted sections, matching the media supplied, so that we can quickly identify these segments and process the additional media versions required.
- An accurate, verbatim time-coded script corresponding to the media version we receive (no PDFs – editable format only).
- A separate time-coded list of all onscreen text if not already fully captured in the script. Please refer to contract.

In addition, please notify Hearst Networks immediately and well ahead of the delivery:

- If the content features non-English language contributors (whether they have been voiced-over in English or subtitled)
- If the content has English subtitles burnt on the media (i.e. to translate foreign contributions or inaudible/muffled/accented speech, etc.)

Any such elements in the content will require that we have a texted version for the UK channels in the case foreign contributions were voiced-over in English, or a semi-textless version for the International channels if subtitles were burnt on the media. All these versions require planning.

Please note that Hearst Networks creates Semi Textless versions from received materials. Therefore, delivery of Texted and Textless versions are essential in facilitating the smooth creation of these versions. You do not need to deliver a Semi-Textless version in addition to the Texted and Textless versions of assets.

These are hard requirements, not nice-to-have.

## 6.4 Metadata / Sidecar XML

You can create an XML by using a link to our [Squared Paper XML Generator](#). To be onboarded and receive a link please contact [technicaloperations@hearstnetworks.com](mailto:technicaloperations@hearstnetworks.com). **This is optional and will be discussed with you prior to delivery if necessary.**

Once onboarded, you will be provided with a guide in order to use the XML Generator confidently.

Below are some templates for different types of files. SRC is an abbreviation for Source content.

## TEXTED WITH TEXTLESS ELEMENTS

```
<file_information>
<asset_data>
<asset_type>SRC</asset_type>
<file_format>XDCAM50</file_format>
<category>Distribution-Global</category>
<network>History</network>
<format_type>High Definition</format_type>
<frame_rate>25.00</frame_rate>
<lines>1080</lines>
<scanning_format>interlaced</scanning_format>
<captioning>N</captioning>
<DisplayAspectRatio>16:9 fullframe</DisplayAspectRatio>
<audio_track>
<label>CHANNEL1</label>
<track_name>SFM L</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL2</label>
<track_name>SFM R</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL3</label>
<track_name>M&E L</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL4</label>
<language>English</language>
<track_name>M&E R</track_name>
</audio_track>
<audio_track>
<label>CHANNEL5</label>
<track_name>DIALOG</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL6</label>
<track_name>FX&SOT</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL7</label>
<track_name>MED L</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL8</label>
<track_name>MED R</track_name>
<language>English</language>
</audio_track>
<file_name>BSSID_SRC</file_name>
<program_id>BSSID</program_id>
<series_name>Series Title</series_name>
<episode_title>Episode Title</episode_title>
<season_number>1</season_number>
<episode_number>1</episode_number>
<program_length>60</program_length>
<producer>Hearst Networks</producer>
<segment>
<sequence>1</sequence>
<tc_in>01:00:00:00</tc_in>
<tc_out>01:07:52:15</tc_out>
<trt>00:07:52:15</trt>
</segment>
<segment>
<sequence>2</sequence>
<tc_in>01:07:53:15</tc_in>
<tc_out>01:14:11:09</tc_out>
<trt>00:06:17:19</trt>
</segment>
</segment>
```

```
<sequence>3</sequence>
<tc_in>01:14:12:10</tc_in>
<tc_out>01:21:55:18</tc_out>
<trt>00:07:43:08</trt>
</segment>
<textlessblock>
<tc_in>01:22:10:19</tc_in>
<tc_out>01:30:40:00</tc_out>
<trt>00:08:29:06</trt>
</textlessblock>
</asset_data>
</file_information>
```

## TEXTED

```
<file_information>
<asset_data>
<asset_type>SRC</asset_type>
<file_format>XDCAM50</file_format>
<category>Distribution-Global</category>
<network>History</network>
<format_type>High Definition</format_type>
<frame_rate>25.00</frame_rate>
<lines>1080</lines>
<scanning_format>interlaced</scanning_format>
<captioning>N</captioning>
<DisplayAspectRatio>16:9 fullframe</DisplayAspectRatio>
<audio_track>
<label>CHANNEL1</label>
<track_name>SFM L</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL2</label>
<track_name>SFM R</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL3</label>
<track_name>M&E L</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL4</label>
<language>English</language>
<track_name>M&E R</track_name>
</audio_track>
<audio_track>
<label>CHANNEL5</label>
<track_name>DIALOG</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL6</label>
<track_name>FX&SOT</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL7</label>
<track_name>MED L</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL8</label>
<track_name>MED R</track_name>
<language>English</language>
</audio_track>
<file_name>BSSID_SRC</file_name>
<program_id>BSSID</program_id>
<series_name>Series Title</series_name>
<episode_title>Episode Title</episode_title>
<season_number>1</season_number>
<episode_number>1</episode_number>
<program_length>60</program_length>
```

```
<producer>Hearst Networks</producer>
<textlessblock>
<tc_in>00:00:00:00</tc_in>
<tc_out>00:00:00:00</tc_out>
<trt>00:00:00:00</trt>
</textlessblock>
<segment>
<sequence>1</sequence>
<tc_in>09:58:00:00</tc_in>
<tc_out>10:53:00:00</tc_out>
<trt>00:55:00:00</trt>
</segment>
</asset_data>
</file_information>
```

## TEXTLESS

```
<file_information>
<asset_data>
<asset_type>SRC</asset_type>
<file_format>XDCAM50</file_format>
<category>Distribution-Global</category>
<network>History</network>
<format_type>High Definition</format_type>
<frame_rate>25.00</frame_rate>
<lines>1080</lines>
<scanning_format>interlaced</scanning_format>
<captioning>N</captioning>
<DisplayAspectRatio>16:9 fullframe</DisplayAspectRatio>
<audio_track>
<label>CHANNEL1</label>
<track_name>SFM L</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL2</label>
<track_name>SFM R</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL3</label>
<track_name>M&E L</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL4</label>
<language>English</language>
<track_name>M&E R</track_name>
</audio_track>
<audio_track>
<label>CHANNEL5</label>
<track_name>DIALOG</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL6</label>
<track_name>FX&SOT</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL7</label>
<track_name>MED L</track_name>
<language>English</language>
</audio_track>
<audio_track>
<label>CHANNEL8</label>
<track_name>MED R</track_name>
<language>English</language>
</audio_track>
<file_name>BSSID_SRC</file_name>
<program_id>BSSID</program_id>
<series_name>Series Title</series_name>
<episode_title>Episode Title</episode_title>
<season_number>1</season_number>
```

```

<episode_number>1</episode_number>
<program_length>60</program_length>
<producer>Hearst Networks</producer>
<textlessblock>
<tc_in>09:58:00:00</tc_in>
<tc_out>10:52:00:00</tc_out>
<trt>00:54:00:00</trt>
</textlessblock>
</asset_data>
</file_information>

```

**NOTE :** Please send the appropriate sequence data, depending on whether the programme is formatted for 2, 4 or 6 parts.

## 6.5 Flashing Images (PSE / FPA)

To avoid causing problems to viewers with photosensitive epilepsy (PSE) Ofcom has issued guidelines for the assessment of flashing images and patterning (Flash Pattern Analysis – FPA) in TV advertisements and programmes.

The factors that need to be taken into account are Prominence and Image Position, Flashing lights, Flickering Images, Rapidly Changing Images, Static Patterns, Moving Patterns, Inter-line Flicker.

There should be no more than 3 flashes or intensity changes per second or 6 flashes in any second period. Changing images should be present for at least 8 frames. Flashing colours should also be avoided.

Static patterns which resemble a dart board, circular sectors, whirling wheels or swirls should be completely avoided.

Interline flicker can be produced when a computerised graphic is displayed with fine lines that are alternatively black and white or high contrast ratio. This can cause a flicker rate of 25 times per second even though the caption is static. Computer screens that are part of a television shot can cause a flicker on the finished programme due to the different scanning rates of the 2 systems.

- Please see the latest guidance notes from OFCOM. Any breach of the OFCOM Guidelines on flashing images will result in the programme being rejected.
- All COMMISSION, CO-PRODUCED and A+E US ACQUIRED programming is to pass Flash Pattern Analysis before delivery to Hearst Networks. Softcopies of the Pass certificates of all FPA or Harding tests are to be delivered to [TechnicalOperations@hearstnetworks.com](mailto:TechnicalOperations@hearstnetworks.com) .
- When sending the required PDF PSE pass certificate, please ensure they conform to the file naming convention. For example:

**SeriesName\_S01E01\_EpisodeName\_BSSID\_SRC\_PSE\_PASS\_CERTIFICATE**

- All delivered Third Party Content is subject to FPA / PSE and may be rejected if it fails.

As mentioned above, the PSE check need to be compliant with the latest industry / OFCOM standard. Please see the table below for a comprehensive overview of the latest compliant versions:

Company	Product Version(s)	PSE Current Version	PSE BT.1702-1 Version Required from 01/01/19	Comments
Cambridge Research Systems	FPA Desktop V6 or later	FPA V3.5	Current versions are compliant	Note: Cambridge Research devices can also be used to test Live (or as Live) programmes using the Legacy Mode
	FPA Server V6.0.0 or later	FPA V3.5		
	FPA UK Digital V.0110 or later	FPA V3.4		
Interra	Baton V4.2 – V7.3	Interra PSE V1.0	No longer supported in the UK Update to V7.4 is required	
	Baton V7.4 or later	Interra PSE V1.0 (Low sensitivity)	ITU-R BT.1702 2018 (V1.0)	Available now

		Interra PSE V1.0 (High sensitivity)		
<b>Cel-Soft</b>	PSE-Check V2.410 or later	<i>Cel-soft PSE V2.0</i>	Current version is compliant	Available now
	Reel-Check Solo V1.410 or later			
	Reel-Check SE V3.410 or later			
<b>Venera</b>	Pulsar V7.2 and higher	FPA V3.5.0	Current version is compliant	Pulsar uses a licensed Cambridge Research Systems algorithm
<b>Telestream</b>	Vidchecker – Version 8.2.2	5.1 Telestream Proprietary PSE	Current versions are compliant	Vidchecker is perpetual license Windows platform software
	Qualify – QC Engine: Version 2023.7.2	5.1 Telestream Proprietary PSE V.3.0.0.1 Harding		This is a SaaS product provided by Telestream Cloud
	Aurora Version 6.8.8	FPA V3.4.0		Aurora is perpetual license Windows platform software

## 7.0 MIDFORM

### 7.1 UK, CEE, AFRICA AND MIDDLE EAST MIDFORM SPECIFICATIONS

For further details about the delivery process, title safety, textless elements, stems and our naming convention please refer to the latest full 'Hearst Networks - UK Full Technical Specifications' document.

### 7.2 File Formats

Hearst Networks request delivery of Midform to the following specifications:

Description		HD
<b>Video</b>	<b>Format</b>	XDCAM HD
	<b>Broadcast Standard</b>	PAL
	<b>File Wrapper</b>	MXF
	<b>Resolution</b>	1920 x 1080
	<b>Bitrate</b>	50mbps CBR
	<b>MPEG Profile</b>	Profile : 4:2:2 / Level : High
	<b>GOP Structure</b>	IBBP / GOP length 12
	<b>Video Frame Rate</b>	25 fps
	<b>Picture Type</b>	Interlaced
	<b>Field Dominance / Order</b>	Upper / Top Field First
	<b>Aspect Ratio</b>	16:9
	<b>Line Up</b>	09:58:00:00 – PAL Bars and Tone 09:59:30:00 – Slate 09:59:57:00 – Black 10:00:00:00 - Start of Programme

<b>Audio</b>	<b>Audio Format</b>	PCM
	<b>Audio Bit Depth / Rate</b>	24 bit
	<b>Audio Sample Rate</b>	48 kHz AES / EBU standard
	<b>Max Audio Tracks</b>	8 Tracks
	<b>Audio Track Layout / Configuration</b>	Channel 1 : Stereo Full English Mix - Left
		Channel 2 : Stereo Full English Mix - Right
		Channel 3 : Stereo Music & Effects - Left
		Channel 4 : Stereo Music & Effects - Right
		Channel 5 : Isolated Dialogue (mono)
		Channel 6 : Isolated SFX (mono)
Channel 7 : Stereo Music & Effects & Dialogue (Mix Minus) Left		
Channel 8 : Stereo Music & Effects & Dialogue (Mix Minus) Right		

NOTE: Material will need to be delivered with correct Group Of Pictures ( GOP) structure. Details are given on the table above. Please see the specification in detail:

GOP structure for HD content needs to be fixed with the following configuration M=3, N=12 ( IBBPBBPBBPBB).

Material will need to be delivered with valid video signal levels defined by EBU standard 'R 103 VIDEO SIGNAL TOLERANCE IN DIGITAL TELEVISION SYSTEMS VERSION 3.0'.

Any material that exceed the defined parameters will be clipped. Such clipping can cause harmonic distortion and alias artefacts in the video. Additionally, When television signals are manipulated in YUV form, it is possible to produce "illegal" combinations that, when de-matrixed, would produce R, G or B signals outside the range 0% - 100%.

If the video / audio files are sent in anything but the above formats it may result in the rejection of the material with replacements being requested at the distributor / suppliers cost. Delivery of content in alternate specifications must be agreed prior to delivery with Hearst Networks Technical Operations team.

## 7.3 Editorial Standards and Creative Quality

All branded shortform should be 8-10 minutes in duration, including any endboards, unless otherwise agreed. The length of space left for the addition of an endboard and/or opener after delivery should be agreed with Hearst Networks project owner.

No part breaks are required for ad insertion. If runtime exceeds 20 minutes please refer to longform spec for guidance on part breaks.

Besides the technical specifications regarding required file format and file layout (see above), please be aware that all deliveries need to meet Hearst Networks editorial standards and creative quality.

If in doubt please contact the Technical Operations department for further information prior to delivery.

## 7.4 Sound Levels and Quality

Audio line-up level must be recorded at -18dBFS. Line-up at -20dBFS (US standard) is not acceptable.

Audio levels for tracks 1&2 should conform to **EBU R128 loudness specification** with an integrated level of **-23 LUFS +/- 1 LU** and a maximum **True Peak level of -1 dBFS**.

In addition, we require the audio content for the FULL MIX on tracks 1&2 as follows: (these levels relate to the line-up levels noted above):

- Maximum program Loudness Range (LRA) should not exceed 16 LU
- General conversation levels should range between +/- 8 dB
- The first 6 frames of the audio must be mute

Theatrical releases that have too wide a dynamic range may not be suitable for television distribution. These levels must be to our requirements (as above). Great care must be taken not to over-compress the levels / dynamic range, which could result in a rejection.

Sound must be recorded with appropriately placed microphones, giving minimum background noise and without peak distortion. The audio must be free of spurious signals such as clicks, noise, hum, drop out and any analogue distortion.

The audio must be reasonably continuous and smoothly mixed and edited. Audio levels must be appropriate to the scene portrayed and dynamic range must not be excessive. They must be suitable for the whole range of domestic listening situations.

Stereo audio must be appropriately balanced and free from phase differences, which cause audible cancellation in mono. The audio must not show dynamic and/or frequency response artefacts as a result of the action of noise reduction, pitch correction or low bit rate coding systems.

## 7.5 GERMANY MIDFORM SPECIFICATIONS

Hearst Networks request delivery of Germany Midform to the following specifications

Description	HD	
Format	XDCAM HD	
Broadcast Standard	PAL	
File Wrapper	MXF	
Resolution	1920 x 1080	
Bitrate	50mbps CBR	
MPEG Profile	Profile : 4:2:2 / Level : High	
GOP Structure	IBBP / GOP length 12	
Video Frame Rate	25 fps	
Picture Type	Interlaced	
Field Dominance / Order	Upper / Top Field First	
Aspect Ratio	16:9	
TC Start	10:00:00:00 (no bars and tone / slate prior to content start)	
Audio Format	PCM	
Audio Bit Depth / Rate	24 bit	
Audio Sample Rate	48 kHz AES / EBU standard	
Max Audio Tracks	8 Tracks	
Audio Track Layout / Configuration	Channel 1 : German Stereo Stereo Full Mix - Left	Channel 5 : German Isolated Dialogue – Left (mono)
	Channel 2 : German Stereo Stereo Full Mix - Right	Channel 6 : Original Isolated Dialogue – Right (mono)
	Channel 3 : Original Language Stereo Full Mix - Left	Channel 7 : Stereo Music & Effects Left (undipped) - Left
	Channel 4 : Original Language Stereo Full Mix - Right	Channel 8 : Stereo Music & Effects Left (undipped) - Right
	or	
	Channel 1 : German Stereo Full Mix - Left	Channel 5 : MOS
	Channel 2 : German Stereo Full Mix - Right	Channel 6 : MOS
	Channel 3 : German Stereo Full Mix - Left	Channel 7 : MOS
	Channel 4 : German Stereo Full Mix - Right	Channel 8 : MOS

NOTE: Material will need to be delivered with correct Group Of Pictures ( GOP) structure. Details are given on the table above. Due to the high failure rate of this aspect for HD content, please see the specification in detail:

GOP structure for HD content needs to be fixed with the following configuration M=3, N=12 ( IBBPBBPBBPBBI).

Material will need to be delivered with valid video signal levels defined by EBU standard 'R 103 VIDEO SIGNAL TOLERANCE IN DIGITAL TELEVISION SYSTEMS VERSION 3.0'.

Any material that exceed the defined parameters will be clipped. Such clipping can cause harmonic distortion and alias artefacts in the video. Additionally, when television signals are manipulated in YUV form, it is possible to produce "illegal" combinations that, when de-matrixed, would produce R, G or B signals outside the range 0% - 100%.

If the video / audio files are sent in anything but the above formats it may result in the rejection of the material with replacements being requested at the distributor / suppliers cost. Delivery of content in alternate specifications must be agreed prior to delivery with Technical Operations.

## 7.6 ITALY MIDFORM SPECIFICATIONS

Hearst Networks request delivery of Italy Midform to the following specifications:

Description	HD	
Format	XDCAM HD	
Broadcast Standard	PAL	
File Wrapper	MXF	
Resolution	1920 x 1080	
Bitrate	50mbps CBR	
MPEG Profile	Profile : 4:2:2 / Level : High	
GOP Structure	IBBP / GOP length 12	
Video Frame Rate	25 fps	
Picture Type	Interlaced	
Field Dominance / Order	Upper / Top Field First	
Aspect Ratio	16:9	
TC Start	10:00:00:00 (no bars and tone / slate prior to content start)	
Audio Format	PCM	
Audio Bit Depth / Rate	24 bit	
Audio Sample Rate	48 kHz AES / EBU standard	
Max Audio Tracks	8 Tracks	
Audio Track Layout / Configuration	Channel 1 : Italian Stereo Full Mix - Left	Channel 5 : Italian Stereo Full Mix - Left
	Channel 2 : Italian Stereo Full Mix - Right	Channel 6 : Italian Stereo Full Mix - Right
	Channel 3 : English Stereo Full Mix - Left	Channel 7 : English Stereo Full Mix - Left
	Channel 4 : English Stereo Full Mix - Right	Channel 8 : English Stereo Full Mix - Right
	or	
	Channel 1 : Italian Stereo Full Mix - Left	Channel 5 : Italian Stereo Full Mix - Left
	Channel 2 : Italian Stereo Full Mix - Right	Channel 6 : Italian Stereo Full Mix - Right
	Channel 3 : Italian Stereo Full Mix - Left	Channel 7 : Italian Stereo Full Mix - Left
	Channel 4 : Italian Stereo Full Mix - Right	Channel 8 : Italian Stereo Full Mix - Right

NOTE: Material will need to be delivered with correct Group Of Pictures ( GOP) structure. Details are given on the table above. Due to the high failure rate of this aspect for HD content, please see the specification in detail:

GOP structure for HD content needs to be fixed with the following configuration M=3, N=12 ( IBBPBBPBBPBBI).

Material will need to be delivered with valid video signal levels defined by EBU standard 'R 103 VIDEO SIGNAL TOLERANCE IN DIGITAL TELEVISION SYSTEMS VERSION 3.0'.

Any material that exceed the defined parameters will be clipped. Such clipping can cause harmonic distortion and alias artefacts in the video. Additionally, when television signals are manipulated in YUV form, it is possible to produce "illegal" combinations that, when de-matrixed, would produce R, G or B signals outside the range 0% - 100%.

If the video / audio files are sent in anything but the above formats it may result in the rejection of the material with replacements being requested at the distributor / suppliers cost. Delivery of content in alternate specifications must be agreed prior to delivery with Technical Operations.

## 8.0 SHORTFORM

The following section details an overview for Shortform delivery requirements only. Please refer to further sections of Technical Specifications for more detail into other specific file requirements.

### 8.1 File Format

Description	HD		
Video	Format	XDCAM HD	
	Broadcast Standard	PAL	
	File Wrapper	MXF	
	Resolution	1920x1080	
	MPEG Profile	Profile: 4:2:2 / Level : High	
	GOP Structure	IBBP/GOP length 12	
	Video Bit Rate	50 Mbps CBR	
	Video Frame Rate	25 fps	
	Picture Type	Interlaced	
	Field Dominance / Order	Upper / Top Field First	
	Aspect Ratio	16:9	
	Video Signal	Each primary component should lie between 0 and 100% of the narrow video range between black level and the nominal peak level (R and G and B).	
	SOM Timecode	10:00:00:00	
Audio	Audio Format	PCM	
	Audio Bit Depth / Rate	16 bit / 24 bit	
	Audio Sample Rate	48kHz AES / EBU standard	
	Max Audio Tracks	8 Tracks	
	Audio Track Layout	Channel 1: Stereo Full English Mix – Left	Channel 3: Stereo Music & Effects & Dialogue Left
		Channel 2: Stereo Full English Mix – Right	Channel 4: Stereo Music & Effects & Dialogue Right
Audio Stems Formats	Please see section below for <b>externally produced Shortform</b>		

NOTE: Material will need to be delivered with correct Group Of Pictures ( GOP) structure. Details are given on the table above. Due to the high failure rate of this aspect for HD content, please see the specification in detail:

GOP structure for HD content needs to be fixed with the following configuration M=3, N=12 ( IBBPBBPBBPBBI).

Material will need to be delivered with valid video signal levels defined by EBU standard 'R 103 VIDEO SIGNAL TOLERANCE IN DIGITAL TELEVISION SYSTEMS VERSION 3.0'. Details are given on the table above.

Any material that exceed the defined parameters will be clipped. Such clipping can cause harmonic distortion and alias artefacts in the video. Additionally, When television signals are manipulated in YUV form, it is possible to produce "illegal" combinations that, when de-matrixed, would produce R, G or B signals outside the range 0% - 100%.

If the video / audio files are sent in anything but the above formats it may result in the rejection of the material with replacements being requested at the distributor / suppliers cost. Delivery of content in alternate specifications must be agreed prior to delivery with Technical Operations.

*Additionally, please note that Sponsorships fall under the above Shortform specification, not Externally Produced Shortform below.*

## EXTERNALLY PRODUCED SHORTFORM

If externally produced, the supplier need to deliver additionally the following audio stems as wav files:

Full Mix (stereo left & right)	Music (stereo left & right)
DME - Dialogue, Music & Effects (stereo left & right)	SFX (stereo left & right)
Dialogue (mono)	VO/Narrator (mono)

For the master stems, the generic VO tag with promo title and channel name only must be used.

The Full Mix stem must conform to **EBU R128 loudness specification** with an integrated level of **-23 LUFS +/- 1 LU** and a maximum **True Peak level of -1 dBFS** and the Dialogue, Music, SFX and VO/Narrator stems must sum to **-23 LUFS +/- 1 LU**.

Bit Depth: 16/24 bit  
Sample Rate: 48kHz

## 8.2 Rushes

**Delivery of Rushes is only needed upon request from Hearst Networks and is not a default delivery requirement.**

Please coordinate the delivery of Rushes with Technical Operations at least two weeks prior to delivery to discuss all necessary requirements including:

- The delivery method ( via hard drive / file transfer / camera cards )
- The file format
- And the delivery size ( estimate) in GBs

Currently, we can support the following camera formats in our postproduction workflow:**Panasonic P2 (DV, AVC-Intra, Ultra)**

- **Sony (IMX, XDCAM, HD/EX, XAVC)**
- **Canon 5/C/XF series (MOV and MXF)**
- **GoPro (H.264 codec/ .MP4 file format)**
- **RED Digial Cinema Redcode RAW ( ProRes)**

## 9.0 TECHNICAL QUALITY ASSESSMENT

All materials undergo a technical quality assessment which ensures conformity with the current edition of the EBU – TECH 3299 - E, which defines High Definition formats and SMPTE 274M-2003 which details the 1080i25 format and includes an automated and manual QC stage. There are numerous quality and / or technical faults for which a programme can be rejected. If a title is rejected then full details will be given.

All programme levels must not exceed the following when correctly lined up to bars & tone.

- Luminance must not exceed 1v (100%) or go below sub black (.3v)
- Chroma must be legal in all domains i.e. RGB, YUV and must not exceed the gamut limit. Reference should be made to EBU r103-2020 "tolerances on 'illegal' colours in television." Relative timings of luminance and chrominance must not exceed +/- 20ns.
- Audio levels must conform to our requirements.
- All replacement material must have all previous fail points fixed correctly.

Any content with an original frame rate of 30 (29.97) / 24 (24.976) must be converted to 25fps prior to delivery.

Hearst Networks reserve the right to request test file(s) of new content deliveries from third party suppliers prior to series deliveries, to check and accept technical aspects of the file including the standards conversion methods used to create PAL 1080i25 at 25fps. Conversion using professional broadcast tools such as Alchemist is suggested.

For new suppliers, prior to series delivery, Hearst Networks require advance notice (6 weeks from scheduled delivery) and testing of the following criteria:

- **Technical specifications of file(s)**
- **Proposed delivery method**
- **Overall audio / video quality of content**

Hearst Networks will provide quality control checks on delivered test file(s) and confirm acceptance or rejection within 7 days of delivery.

Please note when processing the full file will pass through 3 QC checks:

- **Tech Validation:** This assesses the files adhere to our basic spec in terms of track count, frame rate, GOP structure etc.
- **Baton AQC:** Files will be assessed for audio loudness as well as Gamut and Luma errors.
- **Manual QC:** This is where the spot check QC will take place where operators assess the file on audio and video and go through noncritical errors flagged by Baton.

Feedback received in the first two stages will not note issues which can only be assessed when viewing files in the last stage. In order to reduce need for deliveries please note any discrepancies to our spec as early as possible and utilise an AQC check prior to delivery if possible.

## 10.0 CONTACT DETAILS

For any file format or technical queries with this document, please contact the Hearst Networks Technical Operations team at: [Technicaloperations@hearstnetworks.com](mailto:Technicaloperations@hearstnetworks.com)

For file delivery notifications, please email: [ContentManagement@hearstnetworks.com](mailto:ContentManagement@hearstnetworks.com)  
[Technicaloperations@hearstnetworks.com](mailto:Technicaloperations@hearstnetworks.com)

For updates and queries to delivery dates, please contact the Hearst Networks Content Management team at: [ContentManagement@hearstnetworks.com](mailto:ContentManagement@hearstnetworks.com)

If further assistance is required, please contact: [Daniel.Anscombe@hearstnetworks.com](mailto:Daniel.Anscombe@hearstnetworks.com) (Head of Technical Operations)

Company Address: Hearst Networks  
1 Queen Caroline Street  
Hammersmith, London  
W6 9YN

## 11.0 APPENDIX A – SCRIPT REQUIREMENTS

### Delivering to Hearst Networks – Script requirements

A. Scripts delivered to Hearst Networks must be in an editable format and include as a minimum the following:

1. File name:
  - a. Clearly identifiable (not first initial of words)
  - b. Consistent file naming throughout the series
  
2. A cover page with:
  - a. Script type (postproduction/as-recorded/as-broadcast, etc.)
  - a. Series name
  - b. Season number
  - c. Episode name
  - d. Episode number
  - e. Run time of media asset
  - f. Full name of media asset (which cut/edit version; texted, textless)
  
3. The main script must include in separate fields:
  - a. Timecode (T/C IN, T/C OUT, and start and end T/C of each video segment/part if relevant)
  - b. Speaker ID
  - c. Dialogue (verbatim speech, incl. non-English contributions)
  - d. Burnt-in subtitles (identifying language of the audio if different from main source audio)
  - e. Onscreen text (incl. main start/end credits and any warning slates/end slates)

PELE, ARGENTINA AND THE DICTATORS (1970 & 1978)				
TIMECODE	SPEAKER	DIALOGUE	SUBTITLES	ON SCREEN GRAPHICS
<b>START OF PART 1</b>				
01.00.00.03 - 01.00.07.11				The World Cup of 1970 and 1978 were both won by South American countries in the grip of right-wing military regimes
01.00.08.20 - 01.00.12.93	Luis Fernandes	Yes we have political prisoners in Brazil, a lot of them are being killed.		
01.00.15.15 - 01.00.18.05	Crowd	Argentina, Argentina		
01.00.17.21 - 01.00.21.08	David Wood	The nature of the military regime in Argentina was brutal.		
01.00.21.17 - 01.00.23.22	Brian Clough	There was a lot of question marks out there in their country.		
01.00.24.16 - 1.00.29.00	Ricardo Porto	Football was very much associated with the success of the regime		
01.00.26.15 - 01.00.28.14				General Emilio Medici
01.00.30.03 - 01.00.35.16	Lady in the Plaza de Mayo		Please help us. Please help us. This is our last hope	

## B. We recommend that all scripts include below features:

1. A consistent, clearly identifiable file name (not initials of words)
2. A cover page with:
  - b. Script type (postproduction/as-recorded/as-broadcast, etc.)
  - c. Series name
  - d. Season number
  - e. Episode name
  - f. Episode number
  - g. Run time of media asset
  - h. Full name of media asset (which cut/edit version; texted, textless)
  - i. First frame of picture & last frame of picture
  - j. First dialogue occurrence (T/C IN) & last dialogue occurrence (T/C OUT)
  - k. Full media asset name (which cut/edit version; texted, textless)
  - l. Audio type (5.1, 2.0, mono, split M&E or mix minus narration)
  - m. Main language of the source audio
  - n. Presence of other languages (indicate if foreign audio is translated/untranslated)
  - o. Presence of burnt-in subtitles
  - p. Presence of OST (onscreen text)
  - q. Presence of plot-relevant songs
  - r. Production year (if not available on source script, write "Not available")
  - s. Production company (if not available on source script, write "Not available")
  - t. Short episode synopsis (100 words)
  - u. Glossary of Terms (key names and places, recurrent idioms or expressions worth incl. in a glossary for continuity purposes when localising content into different languages). This can be provided as an appendix to the main script.
3. The main script must include in separate fields:
  - a. Timecode (T/C IN, T/C OUT, and start and end T/C of video segments/parts if relevant)
  - b. Speaker ID
  - c. Dialogue (verbatim speech, all human utterances [coughs, laughs, etc], non-English contributions)
    - i. Flag if the narration is not on a separate audio track (mix minus narration)
  - d. Burnt-in subtitles (identifying language of the audio if different from main source audio)

e. Onscreen text (incl. main start/end credits and warning slates/end slates)

4. Must be supplied in an editable format (.doc, .docx, etc. Not PDFs) AND .xml

NOTE: Once the content has been released to broadcasters, very few people get to view the content until the Language Service Providers send it to translators, by the time it is often too late to find out that a piece of content has foreign dialogue, lots of OST, plot-relevant songs, etc. Capturing this information upfront really helps with timelines and briefing translation teams, all factors contributing to ensuring we maintain the quality and original creative intent. We recommend you use Take 1 who understand our script requirements. Please contact Claire Brown to ensure our HEARST NETWORKS script template is used: [claire.brown@take1.tv](mailto:claire.brown@take1.tv)