



## **Commissioned Programmes**

# **Production and Technical Delivery Specification**

**VERSION 8.7**

**PLEASE CONSULT THE FAQ SECTION AND/OR THE COMMISSIONING PAGES OF OUR WEB SITE [WWW.UKTV.CO.UK](http://WWW.UKTV.CO.UK) TO ENSURE THAT YOU ARE WORKING FROM THE LATEST VERSION OF THIS DOCUMENT.**

**JUNE 2012**

**DOCUMENT REVISION HISTORY**

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3.0.2 draft	07.10.2005	Minor corrections and adjustments to above	Warwick Cross
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3.3	25.08.2006	Rationalisation of Slot and part durations Other minor corrections	Neil Grigson Warwick Cross
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## 1 Introduction

### 1.1 Background

UKTV is jointly owned by BBC Worldwide and Scripps.

UKTV celebrates everything that is great about Britain with its unique sense of humour, its style, good food, intelligence, witty banter and of course, its love of great British telly. UKTV offers real choice with channels playing comedy, drama, lifestyle programmes, documentaries, history and more.

Red Bee Media Ltd.'s expertise provides the transmission playout and on-screen presentation, playout planning, subtitling, audio description, signing and on-screen creative output across all the UKTV network of channels.

TVT provides the compliance viewing and versioning service for UKTV.

### 1.2 Overview

This document sets out the production & technical delivery requirements for programmes that have been commissioned by UKTV.

These requirements have been produced in consultation with Sky, Virgin Media Television, Red Bee Media Ltd and TVT.

Failure to comply fully with the requirements set out below may result in the supplied programme being rejected for transmission, considered as 'non-delivered' and returned for compliance at the programme supplier's expense. In particular, please ensure that the sections dealing with part breaks (section 3.6) and HD content requirements (section 6.1) are strictly adhered to.

In addition, all programme material must meet current OFCOM and other regulatory requirements that may be in force at the time of delivery and BBC editorial and technical requirements where they exceed these requirements.

References in this document to the Production Agreement shall mean the agreement between UKTV and the Producer for the commissioning of the relevant programme(s).

Please check that you have the current version of this specification by checking the FAQ section of [www.uktv.co.uk](http://www.uktv.co.uk).

## 2 Contacts

Details of all the UKTV representatives and TVT delivery address can be found in the 'Producer's Pack' sent to the Producer.

## 3 Production

### 3.1 Compliance

The programme must comply with;

3.1.1 The standard **Ofcom Codes** available from:

<http://www.ofcom.org.uk/tv/ifi/codes/bcode/?a=87101>

Guidance notes that accompany these codes may be obtained from::

<http://www.ofcom.org.uk/tv/ifi/guidance/bguidance/?a=87101>

3.1.2 The BBC Editorial Guidelines available from:

<http://www.bbc.co.uk/guidelines/editorialguidelines/edguide/>

Further advice on these guidelines may be obtained from:

3.1.2.1 <http://www.bbc.co.uk/guidelines/editorialguidelines/advice/>

### 3.2 Programme Numbering

- 3.2.1 All programme numbering will be issued by the relevant UKTV Channel and Scheduling Assistant.
- 3.2.2 Each programme must carry the specific programme number (provided to Producer on request in accordance with 3.2.1. above) as its unique reference. Programmes not matching expected number will be rejected and if the error is located within the Producer's process, the costs of repair will be borne by the Producer.
- 3.2.3 All programme numbering will follow the generic format:  
AAAA999A/99  
i.e. four "alphas", followed by three numerics then one alpha (check digit) after which there will be a Production Code consisting of two numerics  
e.g.. CTOG123F/99.
- 3.2.4 Every different version of a programme edit (e.g. 'signed' version or with different parting) will carry a different production code.
- 3.2.5 Any subsequent production edit to the completed programme **AFTER** it has been delivered **MUST** have a modified programme number/ID carrying a different Version Code. This new version code must be obtained from the relevant UKTV Scheduling and Channel Assistant
- 3.2.6 The entire number is required on **all** programme identification and delivery documentation,, as this is the unique identifier.

**Please note that this unique identification number – which MUST include the Production Code suffix – (99 in the above example) - is referenced by the playout automation system for transmission – any error in its use or transcription is likely to result in the intended programme not being transmitted.**

**3.3 Slots, Break Patterns and Part Duration Rules**

The following table lists UKTV's break numbers and duration requirements. Any exceptions must be specifically agreed with the UKTV Commissioning Department

<b>Slot Duration</b>	<b>Centre Breaks</b>	<b>Minimum Total Delivered Programme Duration</b>	<b>Maximum Total Delivered Programme Duration</b>
5'	0	4'00"	4' 30"
10'	0	8' 30"	9' 00"
15'	0	13' 30"	14' 00"
30'	1	22' 00"	22' 30"
40'	1	29'30"	30' 00"
60'	3	44'30"	45'00"
90'	4	69' 00"	70' 00"
120'	6	91' 00"	92' 00"

Please note that commissioned programmes should ideally be edited to achieve the maximum delivered programme durations in the above table. If this is not possible, then durations between the minimum and maximum times are acceptable.

Commissioned programme editors should aim for part durations to be approximately equal, providing that the breaks do not interrupt the editorial flow of the show. However, in order to accommodate sufficient commercial minutage within UKTVs transmission schedules, the following additional limitations apply:

40 minute slot duration part 1 duration must be 15 minutes or less

60 minute slot duration – parts 1 and 2 combined must be 22 minutes or less

90 minute or above slot duration - parts 1, 2 and 3 combined must be 43 minutes or less

If approximately equal part durations or the above limitations are not editorially achievable, then please contact the Commissioning Executive(s) for advice as to where the breaks should occur.



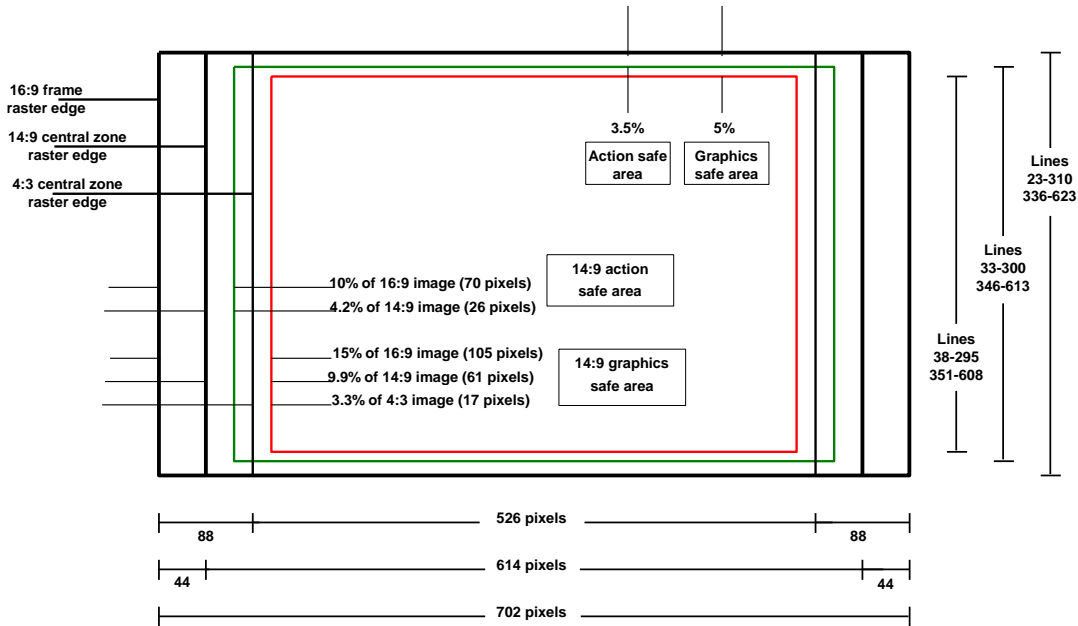
### 3.4 Aspect Ratio, Captioning and Safe Areas

3.4.1 Unless otherwise commissioned, programmes should be originated and edited in 16:9 Full Height Anamorphic

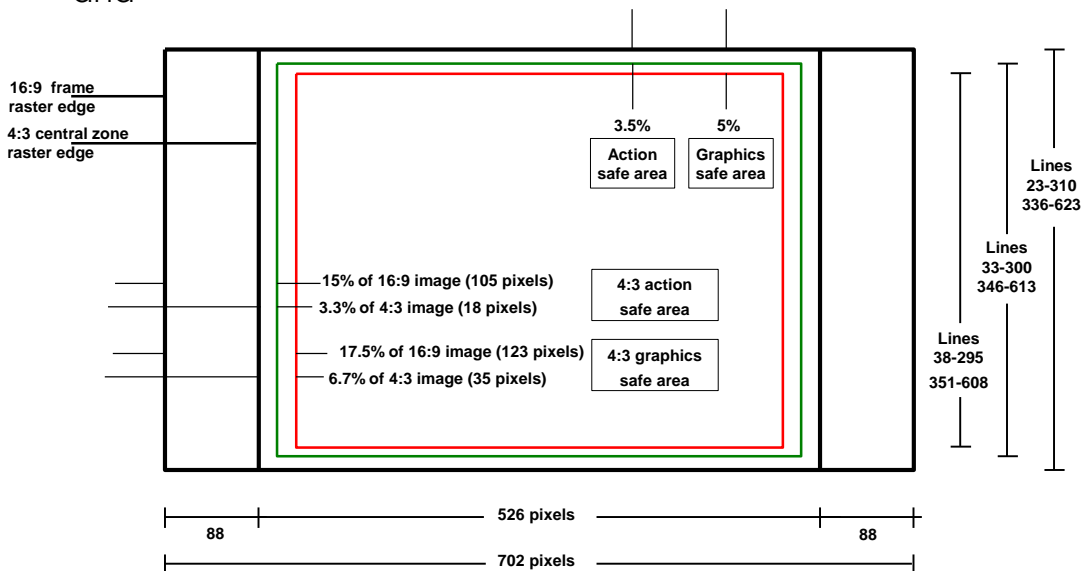
3.4.2 Programmes must be shot and protected for a 14:9-action safe area.

3.4.3 All captioning must be 4:3-safe

3.4.4 Safe areas are defined as:



and



Note: Active Width is 52us / 702 pixels

- 3.4.5 Any captioning on the screen must take account of and avoid the UKTV Channel Branding graphic (DOG) – usually positioned in the top left-hand corner of the active picture.
- 3.4.6 All onscreen graphics are to be 4:3 safe regardless of the aspect ratio of the original or delivered video footage.
- 3.4.7 Commissioned programmes which, by agreement, are originated in any other format must be converted to 16:9 prior to delivery for transmission on UKTV. The cost of this conversion will be borne by the Producer.

**3.5 Line-Up / Lead In / Lead Out**

The first transmittable frame of each programme should be timecode: 10:00:00:00

**Lead In**

The line-up / lead in sequence should conform to the standard UK broadcasting practice specification for stereo programmes as follows:

	<b>Timecode</b>	<b>Video</b>	<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>
Part 1	09:58:00:00	Bars	interrupted tone	tone	interrupted tone	tone
	09:59:20:00	Clock	interrupted tone	tone	interrupted tone	tone
	09:59:30:00	Countdown	silence	silence	silence	silence
	09:59:57:00	Black	silence	silence	silence	silence
	10:00:00:00	Programme	LEFT	RIGHT	M&E Left	M&E Right


Audio and video line-up levels must correspond exactly to those in the programme that follows. If the line up or programme levels for either sound or vision exceed or are lower than those laid down the programme, the tape will be rejected and the costs of repair will be borne by the supplier.

**Bars**

Must meet either 75% or 100% EBU specification. NTSC derived bars are not acceptable in any circumstances.

**Tone**

Tone should be 1kHz recorded at 0dB (-18dBfs) interrupted for 0.25 seconds every 3 seconds on the left channel and continuous on the right channel for stereo programmes.

The same tone should be continuous on both left and right channels for Mono productions.

**Clocks**

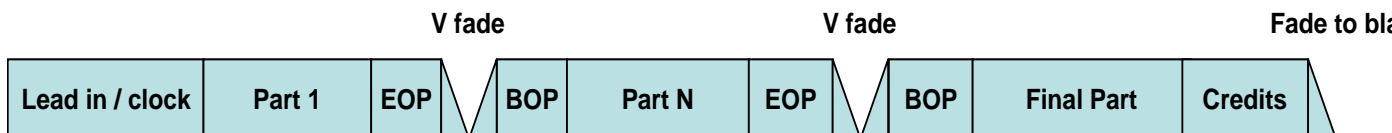
A 16:9 slate/clock should be used for 16:9 programs, such that the clock face appears circular when viewed on a 16:9 display. The slate should occupy the whole screen and not be subject to any DVE process.

The slate should incorporate at least the following:

- 3.5.1 Series / programme title;
- 3.5.2 Episode number;
- 3.5.3 UKTV Programme/clock no. (material ID) – available from Channel Management;
- 3.5.4 Number of parts
- 3.5.5 Stereo/Mono/ 5.1 Surround Audio
- 3.5.6 Recording Date
- 3.5.7 Aspect Ratio / HD
- 3.5.8 Subtitles (if applicable)
- 3.5.9 Audio Described (if applicable)
- 3.5.10 Signed (if applicable)

**3.6 Parts**

Where the program consists of more than one part, the program should be delivered “soft parted” whereby the parts should be separated only by end / beginning of part slides and a 12 frame V fade (6 down, 6 up) as shown below.



**End of Part**

At the end of each part (except the last part) a programme-specific 'end-of-part' (EOP) slide is required unless specifically requested otherwise by the UKTV

Commissioner. The design of the slide is an editorial decision which should fit the look and feel of the program. It is usually a derivative of the titles, can be animated, can have audio and is typically 3 seconds in length, (but should be no more than 5 seconds in length). At the end of each part (except the last part) the audio must be silent at or before the start of the Vfade. The documented out time of the end of part should be the timecode frame of the bottom of the V fade that follows the end of part slide.

### **Beginning of Part**

At the beginning of each part, a programme-specific 'beginning-of-part' (BOP) slide is required unless specifically requested otherwise by the UKTV Commissioner. The design of the slide is an editorial decision which should fit the look and feel of the program and is usually a derivative of the titles, can be animated, can have audio and is typically 3 seconds in length, (but should be no more than 5 seconds in length).

This should be recorded such that it starts after the V Fade to black following the preceding part. The documented in time of the beginning of part should be the timecode frame of the bottom of the V fade that follows the previous end of part slide.

### **Final part and Lead Out**

After the closing fade to black of the final part, a further two minutes of black should be recorded.

Following this, a set of clean title sequences, opening and closing shots and any other footage that has been overlaid with captions should be recorded to enable overseas versions of the programme to be produced.

There must be no further material recorded on the tape. Black and silence together with continuous and contiguous timecode must be present until the end of the tape.

## **3.7 End Credits**

- 3.7.1 End credit sequences should run between 25" and a maximum of 30".
- 3.7.2 End credit sequences can only exceed 30" by prior written agreement by the UKTV Commissioning Channel.
- 3.7.3 End credit text must be 4:3-safe at all times (see 3.7 above) and must be horizontally aligned to the centre of the screen.

- 3.7.4 End credit visual information must be limited to either cards or a vertical roller.
- 3.7.5 Producers should be aware that End credit sequences are liable to be used for on-screen navigation information and therefore liable to be subjected to DVE resizing and additional continuity audio. Therefore the End credit Sequence must not include action or audio which is editorially critical to the integrity of the programme (this includes production made trails or helpline information).
- 3.7.6 All video manipulation regarding end credit vision 'squeezes', etc is performed live within the transmission playout process. The End credit sequence as delivered should remain full-frame throughout but must be crafted such that text information remains legible when reduced to quarter-frame size.'

### 3.8 UKTV Copyright

The copyright graphics will be provided by UKTVs commissioning department. The copyright line must be static and either cut or mix on and be placed at the foot of the final card.

The copyright line at the end of the last part is dependent upon channel and should appear in the following style:

<b>Channel</b>	<b>Copyright Style</b>
Alibi	© UK CHANNEL MANAGEMENT LTD [year]
Blighty	© UK CHANNEL MANAGEMENT LTD [year]
Eden	© UK CHANNEL MANAGEMENT LTD [year]
Home	© UK CHANNEL MANAGEMENT LTD [year]
Really	© UK CHANNEL MANAGEMENT LTD [year]
Dave	© UK GOLD SERVICES LTD [year]
GOLD	© UK GOLD SERVICES LTD [year]
Watch	© UK GOLD SERVICES LTD [year]
Good Food	© UKTV NEW VENTURES LTD [year]
Yesterday	© UKTV NEW VENTURES LTD [year]

Note that:

- ◆ [year] represents the year of first transmission in Roman numerals
- ◆ all text should be in the UKTV corporate typeface (Century Gothic)

- ◆ the text height should be 16 pixels high for SD delivery, and 32 pixels high for HD delivery

### **3.9 Additional Content**

#### **Titles**

Clean title backgrounds for both opening and closing title sequences must be provided after one minute of black level at the end of the complete programme.

#### **Captioned Footage**

If the programme contains any captioned footage, it is essential to provide a “clean” version for foreign language markets. Where possible clean versions of maps and graphics should also be included.

### **3.10 Production Integrity**

UKTV will not undertake any post production operation such as duplexing, multi-sourcing, audio mixing, caption supering , or aspect ratio conversion either prior to or during the transmission process.

It is the responsibility of the supplier to ensure that the programme material is complete in every way prior to delivery.

### **3.11 Media Deliverables**

- 3.11.1 All programme masters, associated DVD copies and paperwork must, wherever possible, be delivered as specified in the Paperwork Delivery document.
- The duration of the programme should not be more than +/- 10 seconds of that agreed duration.
- If there are any issues over the delivery time-scale, durations, or any other matters that may affect the successful transmission of your programme, it is essential that you call UKTV Commissioning Representative.
- 3.11.2 Additional Copies for Compliance - All programme tapes must be accompanied by one DVD copy - with burnt-in timecode display derived from VITC - also clearly labelled with Programme title, subtitle, series, episode number and Programme Number/Material ID (this is available from UKTV Channel and Scheduling Assistant). This DVD copy must be a complete clone dub of the programme master as delivered for transmission with identical timecodes.
- 3.11.3 All programmes must be accompanied by a completed UKTV TX Compliance Form in the box along with the tape. – (See 4.3 below).
- 3.11.4 All tapes should be addressed to TVT using the address as provided in the supplier’s contract.

- 3.11.5 All tapes must be delivered to the above address no later than 6 business weeks before first transmission date. If there are UK public holidays within this intervening period, the delivery date is advanced accordingly.
- 3.11.6 Where agreed in advance with UKTV, suppliers delivering programme material tapes **AFTER THIS DEADLINE** must first liaise with TVT's **UKTV CO-ORDINATOR** to agree specific delivery arrangements.
- 3.11.7 All tapes must be delivered with a full Programme-as-Completed form (or equivalent) in paper format, This must be delivered within the tape cassette box. The information contained on this report must contain as a minimum:
- ◆ Strand Title (if applicable)
  - ◆ Programme Title
  - ◆ Programme Subtitle (if applicable)
  - ◆ ID of physical tape cassette (if applicable)
  - ◆ HD or SD and Aspect Ratio of tape material
  - ◆ Stereo/Mono/5.1 surround Audio
  - ◆ Unique Material ID of each complete broadcast entity on the tape
  - ◆ Start and finish timecodes of each programme part on the tape
  - ◆ Timecodes for each element of Line-Up and Lead-In sequence on the tape
  - ◆ Timecodes and technical details of any element within the broadcast material which does not meet Grade 4 or above of the ITU/CCIR 5-point impairments grading scale (see 5.2.1 below)
  - ◆ Whether Technically Reviewed and, if so, by [name]/[organisation]
  - ◆ Complies with the latest OFCOM guidelines on Flashing Images and Regular Patterns in Television (e.g. passes 'Harding' test) – see 5.5 below.
  - ◆ All Timecodes are to be frame-accurate.
- 3.11.8 Significant information which may affect the successful transmission must be also noted on the Programme-as-Completed form. Details and frame-accurate Timecode values must be given for all such occurrences which include, for example but not exclusively:
- ◆ the deliberate inclusion of bars and/or tone;
  - ◆ spooling forwards or backwards;
  - ◆ sudden freeze-frames;
  - ◆ periods of black and silence;
  - ◆ channel branding idents (of ANY television contractor)
  - ◆ intense video white noise (shash);
  - ◆ portions of the material which may be in monochrome;
-

- ◆ material originated from news footage;
- ◆ material originated from NTSC or DVC masters;
- ◆ material originated from amateur/domestic/off-line tape standards.

3.11.9 Any programme material delivered without the correct DVD and delivery documentation will be rejected and the cost of redelivery borne by the supplier.

3.11.10 The following elements must also be supplied direct to UKTV:

3.11.10.1 A high-resolution logo that can be used in print. (Illustrator, .EPS, PhotoShop .PSD, .TIF file formats)

3.11.10.2 Clean backgrounds, textures relevant to the programme as a high resolution still if made graphically (for print purposes) and/or moving on Digital Betacam (SD) or HDCam (HD) format tape standard.

3.11.10.3 Additional elements (e.g. straps) as a high resolution still if made graphically (for print purposes) and/or moving on Digital Betacam (SD) or HDCam (HD) format tape standard

3.11.10.4 Publicity materials to be submitted electronically where possible, consisting of :

- a) Programme information and description sheets
- b) Music Cue Sheets:
- c) Photographic materials detailed more specifically in 4.1.3 below

### 3.12 Programme Tape Labelling

#### **Cassette Spine and Spine of tape box**

TVT will allocate a barcode label on arrival of the tape and it will be placed on the front spine of the tape & box.

**NO OTHER LABEL SHOULD BE PLACED ON THE SPINE** (as the automated transmission system will require the above device number to function correctly).

#### **Tape cassette and box labels**

The **top flat surface** of the cassette and box should have a label with the following:-

- ◆ Programme title
- ◆ Episode title
- ◆ Programme number including production code
- ◆ Record date



- ◆ Stereo Y/N
- ◆ Subtitles in the VBI (if applicable) and, if so, on which lines
- ◆ Aspect ratio
- ◆ Audio description (if applicable)
- ◆ Signing (if applicable)

**NB:** Tape or device number will be added to the master TX tape at TVT before it is delivered to Red Bee Media.

### **3.13 As-Live links for Theme Nights, etc.**

- 3.13.1 All “linking” material must be treated like programmes. Each link will be assigned a unique programme number by UKTV and must adhere in all other respects to the requirements set out in this document
- 3.13.2 Red Bee Media Manager, UKTV Operations or his/her representative should be involved at the earliest opportunity in the production process and should be represented at all planning meetings in advance of production to advise on transmission requirements.
- 3.13.3 All ‘Links’ will require an identifying VT Clock preceding each link and paperwork in accordance with regular programming to support them. Links tapes delivered without this support material may be rejected and may be considered as ‘not delivered’.
- 3.13.4 If “theme nights” require multiple numbers of ‘Links’ these should be delivered on one single tape, (see 3.14 below) They should be considered much like short filler programmes and have ident clocks for each link.
- 3.13.5 If “links” are to be scheduled with less than 10 minutes between them, two absolute clone copies of the links tape (inc. identical LTC and VITC) will be required.
- 3.13.6 Technical specifications for Link material are exactly the same as for Programmes. ‘Links’ tapes not meeting this standard will be rejected, and the cost of rectification and redelivery will be borne by the supplier.

### **3.14 Multiple Delivery on one Tape**

If agreed in advance with UKTV, multiple numbers of Theme Night Links or short or filler programmes may be delivered on one tape. Where this is agreed,:

- ◆ this must be explained explicitly on the Video Tape Recording Report delivered within the tape cassette box
- ◆ the tape itself must have continuous and contiguous matching LTC and VITC throughout (see section 5.6.9 - 5.6.11 below).

- ◆ each subsequent self contained item on the tape, should be recorded such that it starts at a timecode having a whole number of minutes
- ◆ each self-contained item on the tape must have full Lead-In sequence and ident clocks as specified in 3.6 .above prior to this start timecode
- ◆ each self-contained item on the tape must have full Lead-Out sequence as specified in 3.6.above.

### 3.15 Deliveries to TVT

#### 3.15.1 Regular Deliveries

#### 3.15.2 The Master Tape should be delivered by **12 noon** on the specified delivery date.Tape deliveries after 12 noon

If sufficient notice is given, tapes can be delivered during business-hours on the specified delivery date: Monday to Friday, 10:00 – 18:00.Delivery address

**All tapes should be addressed to:**

**UKTV Co-ordinator, TVT**

**The Building**

**578 – 586 Chiswick High Road**

**Chiswick W4 5RP**

## 4 Documentation

### 4.1 Commercial

Publicity materials consisting of the following should be provided direct to UKTV electronically wherever possible:

- #### 4.1.1 Programme billings information and description sheets in Microsoft Word format.
- ◆ There is no predefined document format for these.
  - ◆ These should be approximately 50 - 100 words in length and comprise of a generic overview of the series/programme and descriptions of each individual programme episode.
  - ◆ Billings must be delivered electronically to UKTV Press & Publicity Office at [uktvpress@uktv.co.uk](mailto:uktvpress@uktv.co.uk) and to the Commissioning Executive no less than 2 business weeks before contracted delivery date (If there are UK public holidays within this intervening period, the delivery date is advanced accordingly.)
- #### 4.1.2 Music cue sheets
- #### 4.1.3 Photographic materials including not less than 3 (three) colour stills per episode for a series, or 6 (six) for a single episode (on CDrom or DVD, along with a colour contact sheets with min of 300 dpi but no more than 1Mb in size)

#### 4.1.4 Full time-coded post production scripts in word format

Copies of the following should also be provided:

- 4.1.5 Insurance certificates (if not arranged through UKTV).
- 4.1.6 Production contracts for all creative contributions and participants.
- 4.1.7 A breakdown of actual production costs
- 4.1.8 .All the above items shall be delivered in accordance with the Production Agreement to the delivery address specified in the Paperwork Delivery Address Document sent to the Producer within the 'Producer's Pack'.

## 4.2 Compliance

The following editorial / compliance information must be provided upon final programme delivery. This information is to be:

- a) completed on the TX Compliance Form (see 4.3 below) which was sent to the Producer within the 'Producer's Pack' .
- b) emailed through to: [uktvtxcompliance@uktv.co.uk](mailto:uktvtxcompliance@uktv.co.uk)  
[uktvproducerpack@uktv.co.uk](mailto:uktvproducerpack@uktv.co.uk)  
[uktv@tv.biz](mailto:uktv@tv.biz)

**Please Note:** *It is essential that all information is entered into the appropriate section boxes within the TX Compliance Form. This includes the timecodes and information relating to sections 4.2.1 – 4.2.4 below*

- 4.2.1 Details, (including timecode and proximity to break), of the cast and any famous figures or performers or any current public figures.
- 4.2.2 Details, (including timecode), of any tragic incidents/action, bad language, nudity, violence or disturbing scenes.
- 4.2.3 Detail, (including timecode), of any references, (visual or aural), to commercial products, (e.g. Hoover, Coke)
- 4.2.4 Details (including timecode) of any information, prices, dates, competitions, fact-sheets, Teletext, enhanced TV or internet information, addresses or phone numbers that have been included in the programme.

## 4.3 UKTV TX Compliance Form

**The UKTV TX Compliance form must be completed for all programmes and must accompany the delivered tape. Copies must also be e-mailed to:**

- ◆ [UKTVTXCompliance@uktv.co.uk](mailto:UKTVTXCompliance@uktv.co.uk)

PLEASE NOTE:

- ◆ The accuracy of the information supplied in Part 2 is essential. This data is used in UKTV's automated On Air scheduling and OBS transmission system and is reliant on information imported directly from the form

#### 4.3.1 What is it?

The UKTV TX Compliance form is intended to carry the complete compliance history **and** full technical details of the programme and must be provided upon full programme delivery.

PLEASE NOTE:

- ◆ It is essential that the all relevant information is entered into the appropriate section boxes within the form.
- ◆ All timecodes defining beginning and end of parts in Part 2A of the form will be used by the Playout Automation system and therefore must be entered frame accurately.

In addition, any text entered into the 'Further Information' area of the form WILL NOT be passed on to or used further in our automated scheduling/playout process. It is essential that no transmission-critical information is entered in that section.

#### 4.3.2 Who completes the form?

##### 4.3.2.1 Compliance (Part 1):

4.3.2.2 The compliance sections of the form should be completed for all UKTV programmes by the person responsible for ensuring compliance of the programme in line with the OfCom Broadcasting Code (effective 25<sup>th</sup> July 2005). In the case of commissioned programmes, live or pre-recorded, this will be the producer. In the case of re-versioned acquired programmes it will be the compliance viewer. For commissioned programmes, the "Content advice completed by Compliance" section should be completed by the UKTV Compliance Advisor working on the programme. Please email the completed form to UKTV Compliance Advisor before delivery and submission of the form to ensure that the section is completed.

4.3.2.3 In **all** cases, it should **only** be completed by a person who has watched the programme and in the case of commissioned programmes, by someone familiar with the programme's production history.

##### 4.3.2.4 Technical (Part 2):

4.3.2.5 The technical section of the form should be completed by:

- ◆ the producer on commissioned programmes

- ◆ the Compliance Re-versioning team for re-versions or reviewed programmes

**4.3.3 Technical notes:** Significant information which may affect the successful transmission of the programme and which is noted on the Programme-as-Completed form (see 3.11.7 and 3.11.8 above) must also be noted in the Technical Notes box within Part 2A.

Details and frame-accurate Timecode values must be given for all occurrences which include, for example but not exclusively:

- ◆ the deliberate inclusion of bars and/or tone;
- ◆ spooling forwards or backwards;
- ◆ sudden freeze-frames;
- ◆ periods of black and silence;
- ◆ channel branding idents (of ANY television contractor)
- ◆ intense video white noise (shash);
- ◆ portions of the programme which may be in monochrome;
- ◆ material originated from news footage;
- ◆ material originated from NTSC or DVC masters;
- ◆ material originated from amateur/domestic/off-line tape standards.

**4.3.4** For full guidance on completing all section of the TX Compliance Form, please refer to **Appendix A** at the end of this document.

## **4.4 Product Placement**

**4.4.1** Product Placement is the exposure of goods or services in a programme for payment or valuable consideration. No product placement can be included without UKTV's prior knowledge and written approval .Please email details of what is proposed, including(i) the proposed brand ; (ii) context, number and prominence of exposures; (iii)financial terms, to: your commissioning editor/executive, UKTV compliance (at the address below) and [sally.quick@uktv.co.uk](mailto:sally.quick@uktv.co.uk).

**4.4.2** If your programme has been approved to include product placement, then there is some additional guidance that you should be aware of with regard to specific labelling on the content prior to delivery. Please email UKTV Compliance [uktvtxcompliance@uktv.co.uk](mailto:uktvtxcompliance@uktv.co.uk) so that we can best assist you with this.

## 5 Technical

### 5.1 Overview

The OFCOM codes of practice are designed to ensure a high standard of technical quality and reliability from all Broadcasters under its regulation. UKTV must additionally operate within BBC Technical and Editorial standards.

All Programmes produced for UKTV must meet the ITC Technical Performance Code and also the BBC Technical standards current at the time of delivery - whichever is the more exacting. Programmes must also comply with the Red Bee Media requirements noted in this document.

Copies of the ITC Technical Performance Code are available from:  
[http://www.ofcom.org.uk/tv/ifi/tech/tech\\_perf/tech\\_perf\\_code/](http://www.ofcom.org.uk/tv/ifi/tech/tech_perf/tech_perf_code/)

Copies of the BBC Delivery Technical Specification are available on:  
<http://www.bbc.co.uk/guidelines/dg/contents/television.shtml>  
 under the section headed: **Television Delivery For London**

Any programme failing to meet any aspect of the ITC Technical Performance Codes, BBC Standards and the additional requirements noted in this document without the prior written agreement of UKTV will be in breach of the producer/supplier's contract with UKTV and will be subject to rejection. The contractual responsibility for meeting all the UKTV Technical Requirements (including the ITC Performance Codes) rests with the Programme producer/supplier (not UKTV). Any likelihood of failure to meet these requirements must be notified to the UKTV commissioning contact as soon as possible prior to delivery of master material.

### 5.2 Quality

5.2.1 The Video and Audio output of UKTV may be monitored by OFCOM and graded on the 5 point ITU / CCIR scale.

- 5 -Excellent
- 4 -Good:
- 3-Fair
- 2-Poor
- 1- Bad

For guidance, these 5 points may be interpreted as:

Grade 5	Imperceptible impairment
Grade 4	Perceptible but not annoying impairment
Grade 3	Slightly annoying impairment
Grade 2	Annoying Impairment.
Grade 1	Very annoying impairment

- 5.2.2 All Live studio programmes must achieve grade 5
- 5.2.3 Recorded programme material should meet a level of at least grade 4 on the ITU-R / CCIR 5 point impairments grading scale. It should be free from perceptible noise and distortions. With the exception of deliberate effects, black or white crushing should be avoided and colours, especially flesh tones should appear natural. Any deviation below this point must be agreed in advance with the UKTV and recorded in the technical delivery notes. Note that this an overall grading encompassing both audio and video.
- 5.2.4 Programme material should be produced using professional broadcast equipment, digital storage and tape formats. Material from any other sources (e.g. DV) may only be used where specific production requirements make these unavoidable, e.g. concealed cameras (see 5.3 below). Specific agreement with UKTV should be sought before using such sources.
- 5.2.5 There must be no quality impairment as a result of any digital video effects (DVE) or aspect ratio conversion (ARC) in the overall production process (ITU / CCIR scale grade 5).
- 5.2.6 All commissioned material delivered to UKTV must be technically assessed by the producer/supplier **before** delivery to UKTV to ensure that it complies with this specification and that the levels of both sound and vision are within the parameters laid down. Programmes failing to meet these standards will be rejected. Where any defects are subsequently discovered, the tape will either be returned to the supplying company for repairs or, at the discretion of UKTV, the repair work may be carried out by UKTV and the cost recovered from the producer.

### 5.3 Insert Material

- 5.3.1 If, by prior agreement, edit source material originated in 4:3 or 14:9 on a 4:3 raster is used, it must be ARC'd and zoomed to ensure that the entire 16:9 edit raster is filled both horizontally and vertically.
- 5.3.2 Horizontal black 'curtains' surrounding 4:3 source material are not acceptable.
- 5.3.3 Horizontal 'curtains' surrounding 4:3 source material and consisting of still or animated graphic images may be acceptable but must be agreed with UKTV prior to production commencing.

### 5.4 Use of Non-Broadcast Equipment

- 5.4.1 It is expected that any full spec professional equipment will achieve grade 4.5 or 5.



- 5.4.2 If semi-professional or domestic equipment **needs** to be used, agreement **must** be obtained from UKTV Commissioning Representative (having sought the technical advice of Chief Engineer, UKTV) prior to starting production.
- 5.4.3 Exemption from meeting the ITC Technical Performance Code may be granted by UKTV at its discretion in certain recognised categories. These include:
- ◆ early recordings and archive material; and
  - ◆ where limitations exist on the size of equipment that can be used. e.g. shooting in confined spaces, war zones, hidden cameras etc.
- 5.4.4 Consent for any exemption must be requested from UKTV in advance and the fact noted on the Compliance Form when supplied to the UKTV Media Intake area at the Broadcast Centre.
- For information - the decision about whether a particular method of production is approved depends on the various factors including, but not exclusively:-
- ◆ Whether the production advantage gained, versus the final quality achieved, is worthwhile bearing in mind the context of the programme.
  - ◆ If the audience can see an obvious reason for sub standard pictures. If the reason is not apparent an announcement may be made or caption included to explain that poor quality pictures are being broadcast and OFCOM may be informed.
- 5.4.5 Transfer from non-broadcast sources for an edit must be undertaken in the component video domain avoiding the use of composite video signals.
- 5.4.6 Material sourced from a computer display (e.g. VGA) must be converted using a professional scan converter. Any resizing should be done within the converter to preserve resolution. Care should be taken to avoid the 25Hz interline flicker that can result from the transfer of highly detailed images.

## 5.5 Photoepilepsy Considerations

Programme material containing flashing images at sufficient levels and frequency (triple luminance flashes within a one-second sequence are permitted) has been shown to trigger seizures in some viewers. A typical example of this would be scenes depicting flashguns firing in quick succession or lightning strikes. Scenes containing repetitive / special patterns & red flashes may also act as a trigger. In order to reduce the risk of seizures, it is necessary to restrict the occurrence of such scenes.

To that end, OFCOM have published a set of guidelines on visual content which should be applied when flashing or repetitive / spacial patterns are clearly discernible in normal domestic viewing conditions. All programme material supplied must conform to the latest OFCOM guidelines on Flashing



Images and Regular Patterns in Television, which can be obtained from the OFCOM directly or via the web site [www.ofcom.org.uk](http://www.ofcom.org.uk). Material delivered which does not conform to these guidelines will be rejected by UKTV and the costs of modification for compliance and redelivery will be borne by the supplier.

## **5.6 Specification and Standards**

### **SD Tape Format**

- 5.6.1 All SD broadcast programme material must be delivered on 625-line Digital Betacam videotape and replay to ITU Rec. 656. No other tape format is acceptable.
- 5.6.2 The delivered material must have been recorded on a Digital Betacam transport aligned with the special Sony (broadcast standard) alignment tapes to set up both the servo and RF systems to the Sony standard.
- 5.6.3 The material should delivered on tape stock that was either new at the start of the final edit process or for the TX dub of the final edit for the delivered programme, as applicable.
- 5.6.4 Where the delivered tape is a dub of the TX master, this should be a first generation digital dub. Multi-generation dubs are not acceptable.
- 5.6.5 There should normally only be one programme or episode per tape. (Refer to 3.14 above for requirements surrounding multiple items delivered on one tape).
- 5.6.6 In programmes of over 120 mins where a second tape is necessary, the change from the first tape to the second should be at a commercial break point to be approved by the UKTV commissioning channel. The timecode of the start of the programme part on the second tape should be the timecode frame following the V fade of the previous part on the previous tape, with the lead in (bars, clock, silence) back timed from this timecode instead of 10:00:00:00. This is to ensure that when ingested, the parts on separate tapes can be concatenated into one continuous file. Or
- 5.6.7 Supplied tapes should be packaged to prevent physical and environmental damage during transit and storage.
- 5.6.8 Supplied tapes should be free of physical defects e.g. particle shredding, edge damage, creases, etc.

### **SD Tape Timecodes Standards**

- 5.6.9 All programmes tapes must have continuous and contiguous Linear TimeCode (LTC) and Vertical Interval TimeCode (VITC) throughout the entire tape. VITC should be present on lines 19/332 and 21/334.

5.6.10 LTC and VITC should be identical and must not transition through 00:00:00:00 at any point on the tape.

5.6.11 Timecode signals must be in accordance with EBU specification N12 – 1994, (SMPTE 12M – 1995).

**SD Video (Live and/or tape)**

5.6.12 All broadcast programme material must be based on 625 line, 50Hz field rate.

5.6.13 Video levels should be controlled to ensure that colour signals are legal in PAL, RGB and YUV domains. Luminance levels must be no higher than 3% above peak white level and no lower than 1% below black level.

**Audio**

5.6.14 All Programmes must be delivered with stereo audio unless otherwise agreed in writing by UKTV. The audio track assignment must be as follows:

Audio	Track 1	Track 2	Track 3	Track 4
Stereo	Programme LEFT	Programme RIGHT	M&E LEFT	M&E RIGHT

5.6.15 If the production is in mono this should be continuous dual channel mono. The audio track assignment must be as follows:

Audio	Track 1	Track 2	Track 3	Track 4
Mono	Final MONO MIX	Final MONO MIX	M&E MONO MIX	M&E MONO MIX

5.6.16 Programme material [audio] should meet a level of at least grade 4 on the ITU-R 5 point impairments grading scale (see 5.2.1 above). Any deviation below this point must be agreed in advance with UKTV and recorded in the technical notes. Note that this is an overall grading encompassing both audio and video.

5.6.17 Stereo sources should be recorded with coherent phase to ensure compatibility with mono receivers.

5.6.18 The audio reference level (0dB, 4 on a PPM) should be –18dBFS, i.e. 18dB below full scale/18dB of digital headroom. A reference level of –20dBFS is **not** acceptable –(note that some digital machines may have been supplied set to this standard).

- 5.6.19 Uncompressed peak programme sound levels should not exceed PPM6, (i.e. +8dB)
- 5.6.20 Volume compression, if used must be limited to 6dBs of compression. The onset should not occur below 0dB (4 on a PPM)
- 5.6.21 Audio and video synchronisation should be tightly controlled. Audio must not be in advance of the video. Audio may however lag the video by up to 20mS, (1 frame). Particular care must be taken to ensure that the use of DVEs or ARCs in the video editing/processing does not contravene this requirement (ITU / CCIR scale grade 5).
- 5.6.22 The M&E tracks should be supplied 'undipped'.
- 5.6.23 For all drama and comedy programmes the M&E tracks should contain music and sound effects only, (i.e. excluding dialogue). For documentary programming, the M&E tracks should comprise the full final mix, minus any voice over narration – synchronous dialog to camera should be included on the M&E tracks.
- 5.6.24 Care should be taken with audio levels as the tape will be played back to air under the control of an automation system with no opportunity to adjust playback levels before transmission. Sound loudness levels should be consistent throughout the programme such that it is not necessary for the viewer to adjust the sound during programmes or between parts.

## **5.7 Live Programming**

### **General**

- 5.7.1 Red Bee Media Playout Operations must be alerted at the earliest opportunity regarding any live programming whether Outside Broadcast or Studio based.
- 5.7.2 The costs of lines including communication circuits and all other facilities deemed necessary by Red Bee Media Ltd. for the safe transmission of programmes must be borne by programme supplier.
- 5.7.3 Programmes covering major special events should comply with the BBC's Editorial Guidelines for Major Outside Broadcasts.
- 5.7.4 Live programmes will supply a stand-by programme at the request of UKTV and the programme will bear the associated costs should it be necessary to transmit it.  
The transmission forms for these standby programmes must be sent to Red Bee Media Playout Planning.

5.7.5 Live programmes (or recorded 'as live') should provide a direct telephone number in the studio or OB gallery for the sole purpose of UKTV Compliance Team to contact the Producer.

General contact details should be sent to Red Bee Media Playout Planning as early as possible in the production process.

5.7.6 Where a live programme contains significant content that could be interpreted as a break in - or mis-routing of - the signal, the production must give warning of those programme segments prior to transmission and, where possible, immediately preceding the segment via talkback/telephone. Examples of such material include – but not exclusively:

- ◆ the deliberate inclusion of bars and/or tone;
- ◆ spooling forwards or backwards;
- ◆ sudden freeze-frames;
- ◆ periods of black and/or silence;
- ◆ channel branding idents
- ◆ intense video white noise (shash);
- ◆ portions of the programme which may be in monochrome;

The production should also clearly advise UKTV and Red Bee Media in advance of any intention to include:

- ◆ material originated from news footage;
- ◆ material originated from NTSC or DVC masters;
- ◆ material originated from amateur/domestic/off-line tape standards or any other material that cause the programme fail to meet a level of grade 5 on the ITU-R / CCIR 5 point impairments grading scale.

## Circuits

5.7.7 The programme supplier is responsible for booking all lines incoming to the BBC Television Centre Central Communications Area (CCA) **NB – BT Tower is NOT sufficient**. Onward carriage from the BBC CCA to the Broadcast Centre is internal to the BBC.

Where available, circuits may be booked direct to the Broadcast Centre. In these circumstances, references below to the 'BBC CCA' should read 'Broadcast Centre Engineering Control Area' (ECA).

5.7.8 All information relating to the carriage of the signal should be provided to the Red Bee Media Manager, UKTV Operations prior to event.

5.7.9 The contribution signal must be Serial Digital Video with embedded audio - unless agreed in advance with Red Bee Media by exception.

- 5.7.10 MPEG 2 compression may be used on links, the minimum acceptable specification being a video bit rate of 25Mbits/sec @ MPEG 4:2:2 for SD and 50Mbits/sec long GOP for HD links.
- 5.7.11 DVD delivery mechanisms are **not acceptable** .
- 5.7.12 DSIS audio is **not acceptable** - unless agreed in advance with Red Bee Media.
- 5.7.13 Video and audio circuits with stable continuous line up signals should be available at the BBC CCA at least 30 minutes before the billed transmission time – or the first on-air visit if this is a promotion.

### Talkback

- 5.7.14 A 4-wire talkback circuit is required to be routed to the BBC CCA for use in the Broadcast Centre Presentation area.
- 5.7.15 ISDN circuits using APTX, Systembase compression should be used for these communications, or G722 by prior agreement.
- 5.7.16 This circuit should be established and available 30 minutes prior to first transmission.
- 5.7.17 Telephone Balancing Units (TBUs) for talkback should not normally be used but may be acceptable in exceptional circumstances and by prior agreement.

### Line Up

- 5.7.18 The Studio or O.B. must be able to originate video and audio line up signals. Video line up will consist of either 100% colour bars or 75% colour bars - although the latter are required for satellite contributions.
- 5.7.19 Red Bee Media will want to know in advance of the transmission day if VBI subtitling is present [5.6.26 above] and also if VITC is required to be present for any purpose [5.6.9 above] ).
- 5.7.20 The signal must be stable at all times particularly if the programme path employs a digital MPEG-2 link
- 5.7.21 Audio line up should be reference level 1Khz tone at -18 dBfs. For stereo programmes the left hand channel will have interrupted tone and the right hand channel continuous tone (see 3.6 above).
- 5.7.22 Additional line-up checks will need to be performed with Red Bee prior to transmission. Required checks will include representative moving pictures, synchronous sound and aspect ratio checks. These are in addition to standard "bars and tone" level checks above.

## Sound / Vision Standards

5.7.23 In every respect, vision and audio must meet the standards set out in 5.6 above.

## 6 High Definition Delivery

Programmes commissioned for High Definition delivery must meet all the criteria set out in the body of this specification except where precisely defined below.

### 6.1 Origination Standards

6.1.1 UKTV HD programmes must include no less than 75% (measured by duration) of “native HD” originated material.

6.1.2 In this context, “native HD originated” means material in an HD format with a native resolution of no less than 1080 lines in a 16:9 aspect ratio intended for broadcast at 1080i/25, and has been:

(i) acquired uncompressed; or

(ii) acquired compressed on DVCProHD, AVC-Intra 100, HDCamSR, HDD5, HDCam or DVC Pro 100, in each case at 1080 native resolution and where shot on a three CCD block camera with each CCD being of one half inch or greater; or

(iii) acquired compressed at a bit rate of no less than 50Mb/s on any other medium where shot on a three CCD block camera with each CCD being of one half inch or greater; or

(iv) shot on no less than 35mm film that has been transferred to 1080 at native resolutions, and, in each case, which has been subsequently stored, at all stages prior to transmission, at either:

(a) a bitrate of no less than 50 Mb/s where inter frame coding is utilized; or

(b) a bitrate of no less than 100 Mb/s where frame-based coding is utilized.

### 6.1.3 Up Conversions

Where it's permissible to use standard definition material in a high definition programme in accordance with 7.1.2 above, care must be taken to deliver the best possible quality. This is particularly important when material has to be standards converted as well as up converted.

Use of standard definition material **must** be cleared with the UKTV Commissioning Channel.

Up-converted material must be listed with accurate timecodes on the VTR Recording Report as detailed in 3.11.8.

### 6.1.4 High Definition Standards Conversions

As they become available the use of Motion Compensating HD standards converters is preferred. It is also acceptable to use speed change to transfer between High Definition standards as long as the due attention is given to the audio. Currently speed change is the preferred method of changing between 25 and 24 frame HD standards

## 6.2 Delivery Specification and Standards

### 6.2.1 Programme Numbering

All programme numbering will follow the generic format:

AAA A999A/99

i.e. four "alphas", followed by three numerics then one alpha (check digit) after which there will be a Production Code consisting of two numerics e.g..  
CTO G123F/82

### Tape Format

- 6.2.2 Stereo programmes should be delivered on HDCam format **1080i/25** format tape and shall comply with the SMPTE 274-1998 and SMPTE 295 1997 standards. HD Programmes in Dolby Digital 5.1 must **always** be delivered on HDCAM SR. No other tape format is normally acceptable.
- 6.2.3 During the production process the highest technical standards must be maintained so that the delivered programme achieves the required standards. In all cases the submitted videotape recording must be fully compliant with the manufacturer's technical specification thereby ensuring format compatibility.
- 6.2.4 The material should delivered on tape stock that was either new at the start of the final edit process or for the TX dub of the final edit for the delivered programme, as applicable.
- 6.2.5 There should normally only be one programme or episode per tape. (Refer to 3.14 above for requirements surrounding multiple items delivered on one tape).
- 6.2.6 In programmes of over 135 mins where a second tape is necessary, the change from the first tape to the second should be at a commercial break point to be approved by the UKTV commissioning channel. The timecode of the start of the programme part on the second tape should be the timecode frame following the V fade of the previous part on the previous tape, with the lead in (bars, clock, silence) back timed from this timecode instead of 10:00:00:00. This is to ensure that when ingested, the parts on separate tapes can be concatenated into one continuous file. Supplied tapes should be packaged to prevent physical and environmental damage during transit and storage.



6.2.7 Supplied tapes should be free of physical defects e.g. particle shredding, edge damage, creases, etc.

### 6.3 Video System Standards and Signal Parameters for High Definition Delivery

6.3.1 All material on the tape must be of the 1080i/25 standard.

6.3.2 Video signals must correspond to the reference line-up levels. These include peak sound, maximum luminance & colour difference (Y Cr Cb) component levels, and black levels. Care must be taken to avoid illegal colours (Y Cr Cb component signals exceeding the gamut limit) which may be generated by caption and graphics systems.

6.3.3 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.

6.3.4 Video levels must be compatible with the PAL System which specifies 0 to 100% RGB Limits. 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%

Overshoots can be ignored by the use of a low pass IRE filter. Single lines with larger errors caused by vertical processing such as aperture correction and aspect ratio conversion are permitted if they do not exceed the -1% Luminance limit.

6.3.5 Vertical blanking

V Blanking should fall within SMPTE 274M/295M specifications, as stated in ITU-R specification **BT.709-5 (04/02)**. The vertical blanking interval should equal lines 1-20 and lines 561-563 of the first field and lines 564-583 and lines 1124-1125 in the second field

6.3.6 Horizontal blanking

H blanking should fall within SMPTE 274M/295M specifications, as stated in ITU-R specification BT.709-4. Horizontal blanking should be between 280 clock periods and a maximum of 292 clock periods, creating a blanking width of between 3.775 microseconds and 3.935 microseconds when a clock period is equal to 13.48 nanoseconds.

6.3.7 Video white levels

White level should not exceed 700mV for component signals, and program black levels should not extend below 0V (DC). Neither the program luminance whites nor blacks should be clipped excessively. For colour difference signals R-Y and B-Y, levels shall not exceed 700 mV or fall below 0 mV when set at a 350 mV offset.



**6.4 Audio Standards for non-5.1 High Definition delivery**

6.4.1 Programmes shall be delivered in Stereo Format.

6.4.2 The use of pre-emphasis and/or noise-reduction schemes during acquisition and post production is acceptable. However, the programme for final delivery should have no pre-emphasis or noise reduction scheme applied unless specifically required.

6.4.3 Audio channel allocation is as follows:

Channel 1	Channel 2	Channel 3	Channel 4
Stereo Final Mix LEFT	Stereo Final Mix RIGHT	Stereo M&E LEFT	Stereo M&E RIGHT

Please note that Channels 3&4 will be replaced by Dolby D encoded data during the transmission process

Channels 5-12 inc are unused.

6.4.4 Stereo Balance and Phase

The two stereo legs, when sending identical programme (Mono), shall match within 0.5dB and be phase coherent to less than 15 degrees at 10kHz ( -20 dB for an “S” reading meter / 4us delay ). Note: one sample of 48 kHz is 75 degrees at 10 kHz.

**6.5 Audio Standards for 5.1 Surround Sound High Definition delivery**

Channel 1	Channel 2	Channel 3	Channel 4	Channel 5
Left Total	Right Total	M&E Left	M&E Right	Left Front

Channel 6	Channel 7	Channel 8	Channel 9	Channel 10
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Right Front	Centre	LFE	Left Surround	Right Surround
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### 6.6 Tape Timecodes Standards

If ancillary timecodes are used then they must be identical to the LTC and VITC.