



arte

Complete Technical Guidelines

ARTE G.E.I.E.

June 2019

Annexe 2, rules of cooperation in the domain of programmes

The most recent version of these guidelines must be verified on the ARTE website

www.arte.tv/technical-guidelines

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VERSIONS		
VERSION	DATE	UPDATES
V1.0	17/10/2013	
V1.01	17/10/2013	9.1.2 Encoding new media components: Resolutions for HD 16:9 video = 1280 x 720
V1.02	01/04/2014	9.1.2 Details in the encoding table of the New Media elements Naming video files (9.1.3) is removed 9.1.4.2 Instructions for subtitles in SRT format 11.5 Update the table of "ARTE programs satellite Broadcast"
V1.03	24/11/2014	1.3 Modification of the introduction on Loudness 5.6.1 Audio tags et 5.6.3 Language versions (Introduction of the audio versions VDO et VME) 9.1.2 Encoding new media components (1080p) 9.1.3.2 Subtitles files (TC à 00 :00 :00 :00)
V1.04	06/04/2015	2.3.1.4 Respect of the supplement (R128 s1) of the EBU recommendation R128 9.1.4.1 Subtitles of foreign languages for the Web upload (§ 11.9) 9.1.2 New video encoding profile (1920x1080 : AVC, Main@L4 ou Main@L4.1)
V1.05	11/01/2016	Adding in the note page 12 Audio (Changes pages 13, 24 and 25) Subtitling (Changes pages 32, 33, 34, 46, 50 et 88) § 9 Guidelines for New Medias (Adding guidelines Live events in HD, page 86) § 11 Guidelines for Communication, New § 12.1 Safe Area, update § 12.5 ARTE Programme satellite Broadcast, update § 12.10 Guide to the delivery of Communication material, New
V1.06	05/07/2018	Creation of chapters 2 Main changes, 3.2.2.1 MXF file format Updates of chapters 3.6 Subtitling Guidelines, 6.4 RFB delivery by Producers, 6.7 Version Names Deletion of chapter 2.10 S-3D

VERSIONS		
VERSION	DATE	UPDATES
V1-07	09/10/2018	Reformulation du Chapter 6.7 (et 6.8) Removal of Dolby E guidelines
V1-07-1	29/05/2019	Updates of chapters 4.4 and 4.5, a clarification that subtitling versions for the deaf and hard of hearing must be complete. § 12.1 Safe Area, update

Document structure:

The first part of this document discusses production and delivery technical guidelines for all programmes, and the second part contains particular requirements for organising specific ARTE G.E.I.E. operations.

Important:

We have compiled these ARTE G.E.I.E. guidelines here to provide a single document containing them all and to update them more easily and efficiently.

The information in this document is only valid in its entirety. **So do not circulate excerpts of this document.**

These guidelines are subject to change without notice. Before delivery, the most recent version of these guidelines must be verified on the ARTE website www.arte.tv/technical-guidelines

Also, the different specifications and recommendations cited and referenced are subject to changes. Readers are invited to check regularly that they have the most recent version.

1 INTRODUCTION

The guidelines in this document are mandatory for all programme content supplied to ARTE G.E.I.E., and apply to production and broadcast operations alike.

They cover content made in-house as well as outsourced material.

We require TV-compatible versions of all programme video and audio content.

These technical requirements tally with European Broadcasting Union (EBU) recommendations, TPRF-HDTV guidelines (ARD, ZDF, ORF), and CST (FICAM, HD Forum) recommendations, and rules from all stated standard setters.

Particular requirements for ARTE G.E.I.E.'s various operations complete these guidelines.

For an easier reading, the user can refer directly to the specifications that apply to them (using the links to the technical instructions).

1.1 TAPELESS INFRASTRUCTURE

ARTE G.E.I.E.'s in-house technical infrastructure is 100 % engineered to exchange and process MXF-encapsulated AVC-Intra Essence tapeless files. This tapeless infrastructure requires delivery-to-broadcast metadata management.

1.2 CROSS MEDIA

Media delivered to ARTE G.E.I.E. may be used on Broadcast channels as well as on a variety of Broadband-enabled ARTE multimedia platforms (e.g. connected TVs).

ARTE G.E.I.E. uses the same technical and operational systems (Media Asset Management, workflows and tools) to deliver comparable media quality regardless of its destination (Broadcast and/or Broadband).

In other words, always aim for HD quality as defined in these guidelines (See § 3.2.2 [Format](#)), for every medium, as early as the production phase.

2 MAIN CHANGES IN THIS VERSION

2.1 ABANDONMENT OF THE DOLBY E

ARTE G.E.I.E. no longer broadcasts audio versions delivered in Dolby E. Therefore, all instructions relating to Dolby E have been removed from the document.

3 TECHNICAL GUIDELINES

3.1 FILE FORMATS

Programmes and rushes are mostly delivered in files.

Video, audio and metadata content are encapsulated in OP-1a MXF (*.mxf) files (See 3.2.2.1.2 [MXF file format](#)).

- Video files: AVC-Intra 100, 1080i/25, 4.2.2., 10-bit;
- Audio files: Wave stereo, 48 kHz, 24-bit;
- Subtitle files must conform to the exchange format specified by the specification Tech 3264 of the EBU.

3.2 VIDEO

Please avoid cascading and/or converting HD programmes in any way that will downgrade quality during production. Whenever possible, use the same format throughout the production process. Always use formats that match or exceed the ones that ARTE G.E.I.E. accepts (see § 3.2.2 [Format](#)). The use of unacceptable formats must, under no circumstances, be concealed by the delivery media format (AVC-Intra 100 files).

The requirements above apply to all programme purchases unless ARTE G.E.I.E. as agreed to exceptions beforehand.

3.2.1 Standards

Videos must be 1080i/25² 4:2:2, 10-bit according to EBU - Tech 3299 “System 2” “High Definition (HD) Image Formats for Television Production”.

HD video signals must also comply with the following technical guidelines:

- SMPTE 274M: 1920x1080 Image Sample Structure Digital Representation and Digital Timing Reference Sequences for Multiple Picture Rates
- ITU-R BT.709: Parameter values for the HDTV standards for production and international programme exchange
- SMPTE 292M: Bit-Serial Digital Interface for High-Definition Television Systems
- SMPTE 291M: Ancillary Data Packet and Space Formatting
- SMPTE 334M: Vertical Ancillary Data Mapping
- SMPTE 12M-2: Transmission of Timecode in the Ancillary Data Space

² Nomenclature according to EBU Technical Report 005

3.2.2 Format

3.2.2.1 Ready-For-Broadcast formats

3.2.2.1.1 Codecs

ARTE G.E.I.E. uses the AVC-Intra format for its **HD RFB**:

- AVC-Intra 100, 112 Mbps (4.2.2, 1920 x 1080, 10-bit)

However, for some deliveries coming only from ARTE Deutschland, a specific workflow allows to accept the XDCAM format,

- XDCAM HD422, "Long GOP", 50 Mbps (4.2.2, 1920 x 1080, 8-bit)³

3.2.2.1.2 MXF file format

In order to improve interoperability and facilitate all its automated processes, ARTE G.E.I.E. requires that all delivered MXF files conform to the MXF profile below published by the public channels ARD and ZDF in which the appropriate file parameters are clearly defined.

The MXF profile specification can be downloaded from the IRT website (Weblink: [MXF-Profile, irt.de](http://mxf.irt.de/mxfprofiles/applicationspecifications/index.php)).

<http://mxf.irt.de/mxfprofiles/applicationspecifications/index.php>

ARD_ZDF_HDF02b	AVC-I 100, 1080i/25, 16 mono AES3 tracks
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The following rules apply to MXF files:

- Each MXF file must conform to the profile "ARD_ZDF_HDF02b";
- The material must not contain any technical leaders;
- The audio track allocation must comply with the order in which the audio tracks are filled in the delivery interface;
- The MXF file can contain up to 16 audio tracks. These must be managed in AES pairs (For a mono, double this in the AES pair). The program may only be delivered with useful audio pairs. (Unused tracks should not be filled with silence).

3.2.2.1.3 Timecode

See § 3.4.1 [Timecode files](#)

³ Concerns only deliveries from ARTE Deutschland

3.2.2.1.4 File specification

Name	Specification
Container	*.MXF - MXF OP-1a according to SMPTE 377 (Single Item, Single Package) 1080i/25: MXF Profile ARD_ZDF_HDF02b (in the online version at the time of delivery) http://mxf.irt.de/mxfprofiles/applicationspecifications/index.php
Codec	AVC-Intra 100
Resolution	1920 x 1080
Frame Rate	25im/s
Chroma Sampling	4:2:2
Bit Depth	10-bit
Scan Type	Interlaced (1080i/25)
Audio	File can contain up to 16 mono or 8 stereo audio tracks, 24-bit, 48 kHz, PCM – Little-endian
	Note: When mono tracks are delivered, they must be managed in AES pairs (In the case of mono audio version, the version must be delivered in double mono to respect parity). The program must not have a track without content (no track with silence).
Timecode	Start-Timecode (TC In - first frame) is 10:00:00:00 (§ 3.4.1 Timecode files)

3.2.2.2 Production material formats

ARTE G.E.I.E. recommends the following codecs for **new HD productions** (again, in order of preference):

- AVC-Intra 100, 112 Mbps (4.2.2, 1920 x 1080, 10-bit)
- ProRes HQ, 184 Mbps (4.2.2, 1920 x 1080, 10-bit)
- XDCAM HD422, “Long GOP”, 50 Mbps (1920 x 1080, 4.2.2, 8 bit) ⁴
- AVC-Intra, 112 Mbps (1280 x 720, 4.2.2, 10-bit) ⁵

You may use any higher quality formats during production processes. However, if you do, only convert content to the ARTE-requested AVC-Intra 100 delivery format once.

3.2.3 Tolerances

The table below lists the tolerances that broadcasters accept on HD video components.

Measure the variables below in two colour spaces: RGB and YCrCb.

Colour space	RGB	YCrCb (for luminance)
Luminance (Y)	700 mV	700 mV
High (Y max)	+5 % i.e. 735 mV	+3 % i.e. 721 mV
Low (Y min)	- 5 % i.e. -35 mV	-1 % i.e. -7 mV

3.2.3.1 Video levels and gamut (illegal signals)

HD digital signals are assessed in accordance with Recommendation ITU-R BT 709. All programme video signal levels must remain within specified limits, to be used without adjustment. All video signal excursions outside the appropriate colour space are gamut errors.

3.2.3.2 Measuring signal levels

Digital video levels are usually measured using a waveform monitor, which displays a waveform like the ones on traditional oscilloscopes and gauges mV or percentage levels. The boundaries are defined in relation to a level of black and a level of white. The levels of black for R, G and B component are 0 % or 0 mV, and the levels of white for the three components are 100 % or 700 mV.

⁴ Concerns only deliveries from ARTE Deutschland, in order to rest in the original production format.

⁵ Concerns only deliveries from ARTE Deutschland, in order to rest in the original production format.

Each image signal component is allowed to vary between 0 and 100 % (or 0 mV and 700 mV). This equates to digital sample levels between 16 and 235 (8-bit systems) or between 64 and 940 (10-bit systems).

3.2.3.3 Tolerance for out-of-gamut signals

In practice, it is difficult to avoid generating signals that travel slightly outside this range. It is therefore considered reasonable to allow a small degree of tolerance, which EBU Rec 103 defines as follows:

- RGB components must remain between -5 % and 105 % (-35 and 735 mV)

Therefore:

- Luminance (Y) must remain between -1 % and 103 % (-7 mV and 721 mV)

Slight transient overshoots and undershoots are generally filtered out before measuring, and an error will only be displayed where the out-of-gamut signals cover at least 1 % of the image area. Many monitoring devices are designed to detect errors based on this specification.

3.2.4 Telecine transfers

For the transfers of feature films produced for the cinema, the rule is to respect the original work must be respected as far as possible for the framing of the picture.

The table below shows the vertical position of useful lines in relation to the picture format.

Source image format	Pixels/line	Start lines	End lines	Active lines / field
1.33*	1440	21 / 584	560 / 1123	540
1.66*	1800	21 / 584	560 / 1123	540
1.77	1920	21 / 584	560 / 1123	540
1.85*	1920	32 / 595	549 / 1112	518
2.35*	1920	87 / 650	494 / 1057	408

* There are two methods to respect the intentions underlying the original work when fitting it into HD 16:9 screens:

- Keep the original format:
 - Formats lower than 1.77 will have black bars to the left and right of the picture (Pillarbox) on 16:9 screens
 - Formats higher than 1.77 will have black bars above and below the picture (Letterbox) on 16:9 screens
- Reframe the material one shot at a time during post-production to fit it into a 16:9 screen (for example, in the case of productions using archive footage, for example)

3.2.4.1 Subjective image quality

Images must be correctly rendered:

- Telecine transfers must free from any scratches, dust, gelatine stains, due to colour correction errors, etc.
- Pictures must not include excessive noise levels or patterning, or contain defects caused by compression artifacts or the overuse of noise-reduction processes, etc
- Blacks must not be crushed, and details should be perceptible in dark areas
- Closing credits must be legible on video

3.2.5 Upscaling from SD material

The following rules apply to converting SD material for an HD programme:

- 'Narrow' format images (1.33 - 4:3, 1.66) must be centered horizontally (Pillarbox)
- 'Wide' format images (1.85, 2.35, etc.) must be centered vertically (Letterbox)
- Pictures may be zoomed for artistic purposes, as long as you keep the new picture consistent with the original framing and that the original artistic intention is respected.

3.2.6 Safe areas

The goal is to display all titles, fonts and graphics exactly as they were produced, on all devices. The best way to do that is to place them in the recommended title areas.

The requirements are in appendix § 13.1 [Safe Areas](#), and apply to all ARTE G.E.I.E. deliveries and productions.

The green box delimits the area where you can position titles; the red box delimits the area for subtitles.

3.2.7 Safe Logos

As with most television channels, the ARTE's Logo can be located either at the top left or at the top right of the screen.

These two locations must therefore remain free of burn-ins and subtitling.

3.3 AUDIO

Audio files are encoded in stereo Wave format, 48 kHz, 24-bit.

ARTE France RFB deliveries may comprise as many as 8 AES tracks.

ARTE Deutschland RFB deliveries travel via the ARD VFT (Video File Transfer) system, which can handle 4 AES channels pairs (the equivalent of 4 dual mono tracks, 4 stereo tracks or a combination of them).

Deliveries of RFB files relating to the purchase or co-production of ARTE G.E.I.E. via the Partner platform accept up to 8 AES channels pairs, equivalent to 8 double Mono pairs (Mono track duplicated on the left and right channels) or 8 stereo pairs or a combination of these configurations) by video file transfer.

Deliveries of material to Production may comprise a maximum of 16 tracks.

3.3.1 Loudness measurement

The unit of measurement is the LUFS.

LUFS stands for Loudness Unit relative to the Full Scale. A LUFS reading shows a weighted measurement K (Leq(R2LB)) on that Full Scale.

LUFS ranges are calibrated based on 1dB increments. A +1dB increase in the measured signal will add +1dB to the reading on the LUFS scale.

3.3.1.1 Peak levels

The control of the peak levels is measured using a True Peak level meter.

The peak level must not exceed -1dB TP on PCM systems.

The following recommendations apply:

- SMPTE 299M: 24-bit Digital Audio Format for SMPTE 292 M Bit-Serial Interfaces
- ITU-R BS 1770-4 : Algorithms to measure audio programme loudness and true-peak audio level
- EBU R 128: Loudness normalisation and permitted maximum level of audio signals
- EBU R 128 s1: Loudness Parameters for Short-Form Content.

3.3.1.2 Loudness

3.3.1.2.1 Measurement method

The method involves measuring 100 % of the useful content in a programme using a device that runs the algorithm prescribed in EBU R 128 and appended Tech Docs 3341, 3342, 3343 and 3344, and delivers a LUFS/dB reading.

3.3.1.2.2 Current recommendations:

- ITU-R BS.1770-4: Algorithms to measure audio programme loudness and true-peak audio level
- EBU R 128: Loudness normalisation and permitted maximum level of audio signals
- EBU R 128 s1: Loudness Parameters for Short-Form Content
- EBU Tech Doc 3341: Loudness Metering: 'EBU Mode' metering to supplement loudness normalisation in accordance with EBU R 128
- EBU Tech Doc 3342: Loudness Range: A measure to supplement loudness normalisation in accordance with EBU R 128
- EBU Tech Doc 3343: Practical Guidelines for Production and Implementation in accordance with EBU R 128
- EBU Tech Doc 3344: Practical Guidelines for Distribution systems in accordance with EBU R 128
- ITU – RBS 775: Multichannel stereophonic sound system with and without accompanying picture

3.3.1.3 Alignment levels

The alignment level reading on a Full Scale digital peak meter is -18 dBFS when sinusoidal signal frequency is at 1000 Hz.

A 1000 Hz alignment signal at -18 dBFS should display Loudness level at -18 LUFS on an EBU-mode measuring device, when the signal is present on the left and right channels of a stereo or 5.1 programme.

Mixes: audio signals should not exceed **-1 dB TP** (True Peak)

3.3.1.4 Target level full programme integrated loudness level

Regardless of the type of mix, the target level full programme integrated loudness level is:

- Programmes that last more than 2'00:
 - **-23 LUFS** (and ± 1 LU is tolerated on live broadcasts)
- Programmes that last 2'00 or less (Trailers, ...):

Two Loudness measurement parameters are to be respected:

- **- 23 LUFS** (± 0.5 LU is tolerated) **in Programme Loudness**
- **Short Term** measurement mandatory which must be less than or equal to **-20 LUFS**.

Except for programmes which, for artistic reasons, target loudness may be lower than -23 LUFS (possibly mute programs), ARTE reserves the right to demand a new corrected delivery.

3.3.1.5 Dynamic profile target values

Loudness excursions are permitted, measured using the method defined in § 3.3.1.5.1 [Short Term measurements](#), as follows:

- Programmes that last more than 2'00:

For the Dialogues:

- **± 7 LU** measured around the Loudness target value using the Short Term mode

Loudness Range (LRA):

- **The value of the LRA must be lower than or equal to 20 LU** (see EBU Tech 3342)

NB: best practice involves keeping LRA between 5 and 15 LU in order to conserve an aeration of the programme.

- Programmes that last 2'00 or less:

For the Full programme duration:

- **+3 LU max** measured in Short Term above the Loudness target value

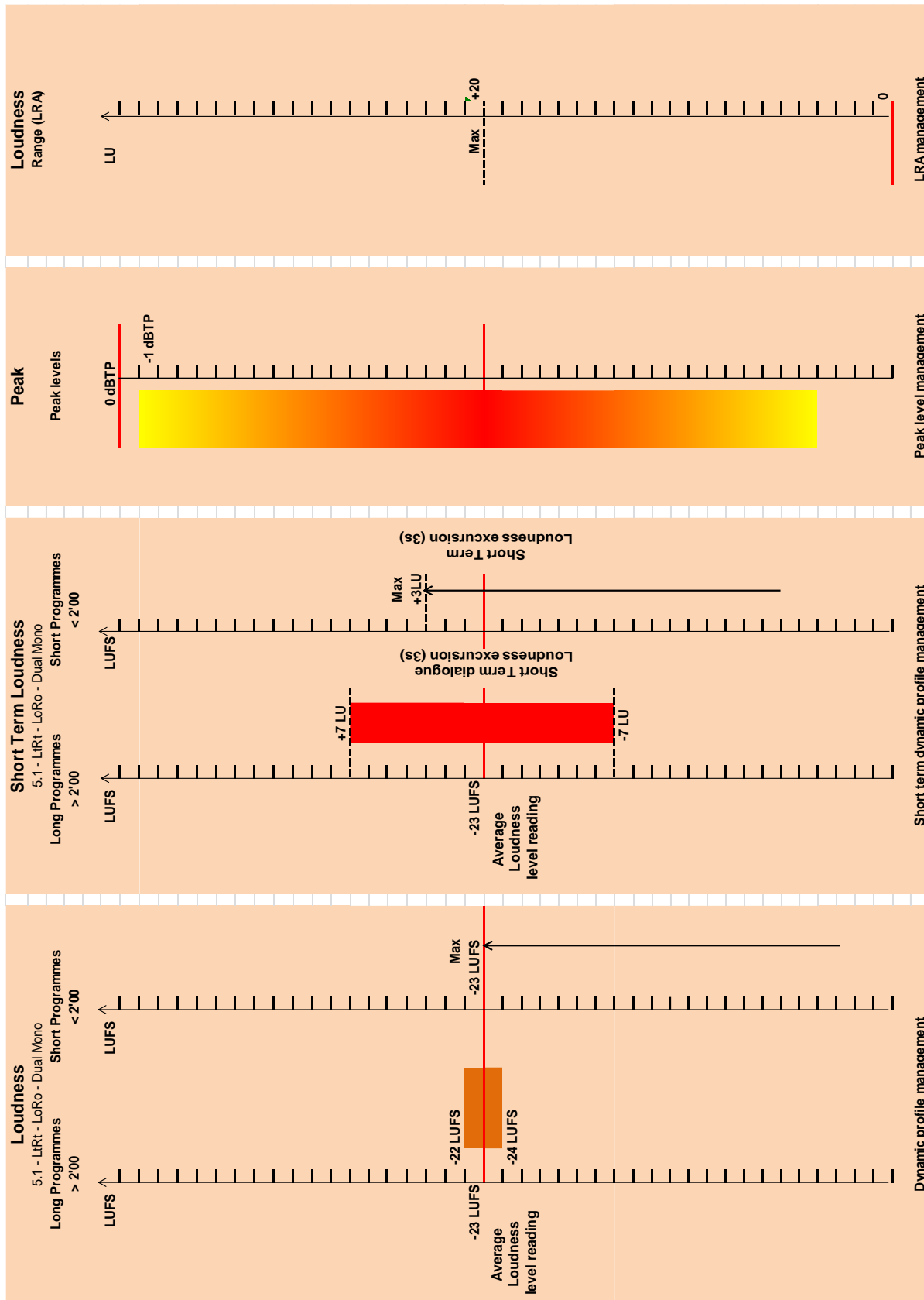
3.3.1.5.1 Short Term measurements

The method to measure short-term dynamic loudness:

Measure a programme's dynamic loudness using devices that display readings in sliding 3-second windows (in LUFS, weighted as per ITU-R BS.1770-2).

Concerning dialogue level measurement, a value measurement will be taken, if the Quality Assurance operator notes a lack of dialogue intelligibility. Spot check measurement will be made on the dialogues in question.

3.3.1.5.1 Loudness Summary Diagram



3.3.2 Synchronisation audio and video

Audio and video signals must be synchronous, and the tolerance levels below tally with EBU R 37:

- either sound \leq 40ms before picture
- or sound \leq 60ms after picture

3.3.3 PCM

PCM is mandatory for all audio versions delivered for broadcast.

RIFF structure and WAV format are also mandatory for file delivery (See Appendice 13.10 [WAV Audio file](#)).

Sampling frequency must be 48 kHz.

Preferably use 24-bit quantisation, especially for native HD programmes. Otherwise, use 16-bit (especially for up-converted SD sources).

For one same programme, the quantisation should be identical for all the tracks.

Always supply 2 channels (stereo or duplicate mono tracks). This also applies to Op-1a MXF file deliveries.

Picture synchronisation: the start of the sound file must always match the programme TC IN. The duration of each audio file must be identical to the duration of the video.

3.3.3.1 Mono

For Mono, always deliver 2 contiguous mono audio tracks (1 AES or 1 WAV stereo file), PCM recorded signals, without bitrate compression.

To ensure they are compatible with stereo signals, the 2 tracks containing the mono signal must be identical and in phase.

3.3.3.2 Stereo

For stereo, always deliver 2 contiguous audio tracks, PCM recorded signals, no bitrate compression.

Use the odd-numbered track for the left channel and the even-numbered track for the right channel.

To ensure mono down mix compatibility, the phase must be dominantly positive.

3.3.3.3 Dolby Surround / Dolby PRO-Logic multichannel sound

Surround (LCRS) to Stereo Lt/Rt down mixes must conserve spatial sound coherence, and must not alter the intelligibility or timbre.

Dolby Surround is a 3.1 system comprising the 3 forward channels and 1 Surround channel (bandwidth-limited), which is reproduced according to the reference playback configuration, via the 2 Surround loudspeakers (LS and RS), See ITU-R BS.775).

Programmes with an original Lt/Rt mix, must not be reconfigured in 5.0 for delivery. Moreover, they must undergo a generation of decoding and Lt/Rt re-mastering.

3.3.4 Mixing technical form

Each programme delivered for mixing requires a mixing form for each language version (see § 13.8 [Mixing technical form](#) for the template).

At ARTE G.E.I.E.'s request, this document may also be sent electronically.

Not supplying this document can lead to misunderstandings about the artistic intention during checks, and in such cases entail content rejection.

3.4 TIMECODE

3.4.1 Files

Timecode on MXF file deliveries must conform to EBU R 122 guidelines.

Always note source Timecode in the MXF container 'Material Package'.

Timecode must be continuous, and no Timecode skips or overlaps are allowed.

Timecode in the video essence is not used as reference, but must tally with the essences.

3.4.2 Tapes

The following rules apply to tape Timecodes:

- Timecodes must meet SMPTE 291M specifications
- LTC and D-VITC (1 and 2) codes must be identical and synchronous
- VITC 1 and 2 codes must comply with SMPTE 12M-2 specifications, i.e. be positioned on lines 9 and 571 in the VANC
- The Timecodes at the start of the programme must be 10:00:00:00
- The Timecodes must be progressive and continuous (on colour bars and run out too)
- The Timecodes must be progressive and continuous from one tape to the next for recordings on consecutive tapes

3.5 COMPLEMENTARY DATA

3.5.1 Programme identification sheets

Programme identification sheets (.pdf files or hard copies) must include:

- The programme's ID
- The lab's/producer's name
- The programme's title
- The programme's subtitle
- Tape order, if and as appropriate
- The list of audio versions and designation
- Clear indication of the audio formats (PCM, Dolby-E)
- Clear indication that it is a Dolby Surround (if that is the case)
- The TC In and TC Out
- The programme's duration
- A full description of delivery encoding

- Information about the various video digital compression systems used, specifying the type of compression and bitrate

3.5.2 P2 metadata

Always fill in the User Clip Names field in P2 metadata, and increment them during shooting.

Clips must always be date and time stamped.

3.6 SUBTITLING

All subtitled versions must comply with EBU specification Tech. 3264:

- EBU Tech Doc 3264 (1991): Specification of the EBU subtitling data exchange format
- ETS 300 706 (05-1997): Enhanced Teletext specification

3.6.1 File header (GSI block)

The GSI block must contain at least:

Information	Symbole STL	Valeur	Explication
Code Page Number	CPN	850	Multilingual Character Set
Disk Format Code	DFC	STL25.01	25 Frames per second
Display Standard Code	DSC	1 ou 2	Level 1 or 2 Teletext Display Standard
Character Code Table	CCT	00	Latin Language Group
Language Code	LC	08 ou 0F	German 08 or French 0F (See 13.2 Subtitling of foreign versions)
Original Programme Title	OPT	To fill	
Maximum Number of Displayable Characters	MNC	40	For each line, 37 useful characters, including spaces (40, controls included)
Number of Displayable Rows	MNR	23	
TimeCode start of Programme	TCP	HHMMSSFF	Strictly identical to the one of the video

Note that subtitle files can now be edited for a Level-2 Teletext display (DSC 2).

...

The use of Level-2 STL files allows the use of accented characters, other than those of each national option Sub-Set (Table 36, Latin National Option Sub-sets, ETSI 300 706) as well as the use of special characters (e.g. ©, ®, ...). See § 3.6.3.2 [EBU-authorised characters](#).

For example:



3.6.2 Subtitle numbering (TTI block)

Number subtitles incrementally and continuously starting with 1.

3.6.3 Technical requirements for subtitling composition

With the exception of subtitle files for manual synchronisation (Live), each TTI block must state the Timecode In (TCI) and Timecode Out (TCO) for each subtitle.

The following guidelines apply:

- The number of characters on each line must be lower than or equal to 37 useful characters⁶, spaces included (40 with the control codes - ETS 300 706);
- Use double-height, single-width characters
- Justification codes to burn in subtitles in the correct position are mandatory. Never use spaces to position text
- For the use of foreign accented characters and/or special characters, STL files must be in Level-2 teletext display (DSC 2);
- Do not place subtitles in the first 10 useful frames of a programme (audio or video). If a programme has more than one consecutive essence file, display each file's first subtitle 10 frames into each file or later
- Allow at least 5 frames between two subtitles
- Remove the last subtitle, at the latest, 1 second before programme TC Out
- TC IN and TC OUT of each subtitle must be coherent (No TC Out < to TC IN, No TC In < TC Out of the previous subtitle);
- Never place a subtitle over the programme Copyright

⁶ 37 useful characters are possible when they are in white colour (with another colour code, for example yellow, 36 useful characters are useable).

- Only include text for broadcast in the subtitle file. Do not fill out any additional fields or create any zero-duration subtitles

3.6.3.1 Blank subtitle

Use the first TTI block for a blank subtitle to synchronise subtitles at the start of the programme.

This blank subtitle encompasses:

- A subtitle number (SN code), see 3.6.2 [Subtitles numbers \(TTI block\)](#)
- The Timecode In (TCI codes) must be the Timecode at the start of the programme.
- Display the TC Out (TCO codes) for at least 5 frames and no longer than 1 second
- Minimal text content (TF codes), such as 0B 0B 0A 8F (8F values complete the block). A Blank subtitle is a declared subtitle but without text.
- Actual position information as per EBU Tech. 3264, but the vertical position (VP code) and horizontal position (JC code) are indifferent

3.6.3.2 Non-authorized characters

The subtitle file must comply with the EBU Tech 3264 and may include the characters from the Latin table in Appendix 2.

However, for technical reasons, the use of the following characters is prohibited for ARTE:

\	^		~	←	↑	→	↓	¶	¹	
⅛	⅜	⅝	⅞	Ω	ª	¸	ij	IJ	¡	¬

Forbidden characters

The use of forbidden characters causes errors during broadcast.

In addition, in some cases, the following characters may be replaced on reception:

Replaced characters	@	[]	`	{	}	'	“	'	”	×
Displayed characters	*	()	'	()	'	”	'	”	x

Replaced characters

3.6.3.3 Ready-for-Broadcast and Production specifications

Please refer to the following chapters for subtitle file production and delivery:

§ 4 [Subtitling Guidelines](#)

§ 8.3.3.3 [Subtitling shows](#)

§ 13.2 [Subtitling of foreign versions](#)

3.7 PHYSICAL SUPPORTS

We only accept physical supports when file-transfer delivery is unfeasible, or for back-up purposes.

HDCAM SR (4.2.2, 1920 x 1080, 10-bit) is required for all content bound for broadcast delivered on physical media to ARTE G.E.I.E.

3.8 SPECIFIC TECHNICAL GUIDELINES FOR RFB CONTENT

3.8.1 File delivery

3.8.1.1 File deliveries from ARTE France

ARTE France sends RFB files via FTP on a server hosted at ARTE G.E.I.E., on a dedicated line. An .MD5 file travels with each data file to verify transfer.

The HiRes files are delivered encapsulated RAW-Format, for the video AVC-Intra at 112 Mb/s, for the audio in Wave format accompanied by a file *.tci, containing the Timecode.

Type	Code	Structure	Example + Comments
HD Broadcast Video	HRV	N°Em-HRV-X	012345-000-A-HRV-1.avc N°Em: ARTE G.E.I.E. programme number HRV: High Resolution Video X: programme part number, starting with 1 (a long programme may comprise several files)
PCM Broadcast Sound	SND	N°Em-SND-X-YY	012345-000-A-SND-1-VO.wav SND: PCM Sound YY: version (see § 6.7 Version Names)
Broadcast Subtitles	SST	N°Em-SST-ZZ-ZZZ	012345-000-A-SST-VO-FRA.stl SST: Subtitle standard ZZ-ZZZ: version (see § 6.7 Version Names)
Timecode	TCI	N°Em-TCI-X	012345-000-A-TCI-1.tci TCI: Timecode
Technical record report	*.pdf	N°EM.pdf + Oracle view (See § 13.9.1)	
Subtitle list	*.doc, *.docx or *.pdf	–	See § 4.2 Subtitle lists

Type	Code	Structure	Example + Comments
Provisional delivery slip	–	Oracle view (See § 13.9.1)	
Original text	*.doc, *.docx or *.pdf	–	
Closing credits transcript (certain programme types)	*.doc, *.docx or *.pdf	–	

3.8.1.2 File deliveries from ARTE Deutschland

Essence components are encapsulated in OP-1a MXF files.

HiRes video format is AVC-Intra, 112 Mb/s, extension (*.avc).

Otherwise, XDCAM HD422, Long-GOP, 50 Mbps may also be accepted.

Type	Code	Structure	Example + Comments
HD Video / Audio Broadcast		N°Em_xxx	012345-000_123.avc N°Em: ARTE G.E.I.E. programme number xxx: unique delivery number
Broadcast Subtitles	SST	N°Em-SST-ZZ-ZZZ	012345-000-A-SST-VO-FRA.stl SST: Subtitle standard ZZ-ZZZ: Version (see § 6.7 Version Names)
Technical record report	*.pdf	Oracle view (See § 13.9.2)	
Subtitle list	*.doc or *.pdf	–	
Provisional delivery slip		Oracle view (See § 13.9.2)	
Original text	*.doc or *.pdf	–	
Closing credits transcript	*.doc or *.pdf	–	By programme type

3.8.2 Timecode

3.8.2.1 Files

If you deliver a file in an MXF container, always note the source Timecode in the 'Material Package'. Timecode need to be incremental and continuous, and no Timecode skips or overlaps are allowed.

The Timecode inserted into the video essence is not used as a reference, but needs to be incremental, continuous and consistent with the essences and subtitling metadata.

When a programme comprises more than one consecutive essence file, the Timecode needs to be incremental and consistent from one essence file to the next.

For ARTE France, source Timecode is recorded in the ".tci" text files with the essences.

For ARTE Deutschland, source Timecode are extracted from the MXF container and compared to the metadata recorded in the appropriate databases. Any inconsistency will entail file rejection.

3.9 SPECIFIC TECHNICAL GUIDELINES FOR PRODUCTION

Please read about the organisational aspects of various production types in the following chapters:

- § 7 [Guidelines for productions assembled at ARTE G.E.I.E.](#)
- § 8 [Guidelines for external productions](#)

3.9.1 Post-production

Post-production content may encompass rushes, programmes or unfinished programme components, and must comply with the technical requirements in the chapters above.

3.9.1.1 Delivery Media options

We accept deliveries on several media, but please make sure the ones you choose are consistent with the video formats and files, and original file structures. The options follow, in order of preference:

- Memory cards or hard drives
- File transfers

In certain exceptional cases, we can accept deliveries on magnetic media. The formats ARTE G.E.I.E. accepts follow, in order of preference:

- HDCAM SR tapes
- Professional discs

3.9.1.2 Video editing

ARTE G.E.I.E. post-produces video on Avid systems (AVC-Intra 100, 1080i/25). Any Avid project deliveries need to be compatible with the software versions in use.

See also § 3.2.2.2 [Production material formats](#)

3.9.1.3 Graphic processing

Post-production video at ARTE G.E.I.E. is on Autodesk (Flame) and Adobe graphic systems. Any graphic project deliveries need to be compatible with software versions in use.

Preferably, deliver non-compressed TGA components. Any other deliveries require prior file type and format approval.

3.9.1.4 Audio file formats for mixing

Post-production audio at ARTE G.E.I.E. is on Pro-Tools systems. Any Pro-Tools session deliveries need to be compatible with software versions in use.

We accept the following audio file formats:

- WAV
- BWF

We prefer embedded-type Wave files for multichannel sound deliveries. Otherwise, please name each file to identify the type of track (L, R, C, LFE, LS and RS).

Deliver Wave format audio files following the RIFF structure.

The required sampling frequency is 48 KHz and resolution 24-bit PCM. Prior approval is required for 16-bit deliveries.

Video syncing: the start of the file must always tally with the programme's TC In.

See also § 3.3 [Audio](#).

3.9.2 Technical guidelines for live transmission

The choice of suppliers and the transmission systems require ARTE G.E.I.E.'s prior approval.

3.9.2.1 On-site systems

Video signal distribution from the OB vehicle or gallery producing live or time-delayed programmes to the uplink must be doubled (primary/backup) and make use of separate distinct distribution amplifiers and encoding systems (but they should be of the same type, if possible). This doubled distribution must be digital HD and follow the guidelines in § 3.2 [Video](#).

The audio signal must be embedded in the video and follow the guidelines in § 3.3 [Audio](#).

3.9.2.2 Satellite bandwidth

Existing capacity and bandwidth cost limit HD quality. ARTE G.E.I.E. recommends minimum 18 MHz transponders:

- 18 MHz minimum for MPEG-4, 4.2.2
- 24 MHz minimum for MPEG-2, 4.2.2

3.9.2.3 Encoding bitrates

The 'Producer' is required to deliver signals in one of the formats below to the ARTE G.E.I.E. node:

Compression codec:	MPEG-4 (H.264)	MPEG-2
Minimum rates:	32 Mbit/s, 4.2.2.	42 Mbit/s, 4.2.2
Resolution:	1920 x 1080i	
Audio rates:	384 Kbit/s PCM	

3.9.2.4 Encoding latency

Encoding latency on programmes requiring return channels (audio only or audio and video) to the live venue (full duplex, simultaneous translation at ARTE G.E.I.E., etc), must be below 500ms.

3.9.2.5 Securing transmissions

By securing, ARTE G.E.I.E. means a second transmission as follows:

- Same origin, same destination
- Same transmission times
- Same programme content
- Same format
- Different transmission carrier

If the above is impossible, ARTE G.E.I.E. requires at least backup reception in a site outside Strasbourg (Paris or Frankfurt).

3.9.2.6 Transmission information sheet

Reservations must contain the following:

- The programme's title
- The satellite uplink location
- Transmission start and end date(s)
- Test transmission start and end times
- Live broadcast start and end times

- The satellite's name
- Its orbital position
- The transponder's bandwidth
- The transponder and channel(s)
- The uplink/polarisation frequency
- The downlink/polarisation frequency
- Modulation
- FEC
- Symbol Rate
- Roll-off factor
- Total Bitrate
- Audio (1 to 4 AES pairs)
- The uplink provider's name
- The identification (Earth Station Code)
- The operator's and/or uplink's name and telephone number

3.9.2.7 Coordination via talkback networks

Coordination between the teams at the live broadcast venue and the teams at ARTE G.E.I.E. in Strasbourg requires setting up 'Production' and 'Technical' talkback networks via audio codecs backed up by 2 telephone patches in the production vehicle. The equipment that Production teams provide must be configured and be compatible with the equipment at the ARTE G.E.I.E. Transmission Control Room in Strasbourg.

Generally speaking, ARTE G.E.I.E. makes arrangements to reserve ISDN lines. ARTE G.E.I.E. and/or the Producer supervise installation on-lining.

3.9.2.8 Programme return channels

Return channels are required on all live broadcast productions. The table in Appendix § 13.3 [ARTE programme satellite broadcasts](#) provides the satellite reception settings.

Live broadcasts with subtitles in two languages (e.g. opera) require two return channels (German and French) to the subtitling unit.

4 SUBTITLING GUIDELINES

4.1 RFB SUBTITLE FILES

Subtitle files are delivered to servers via a dedicated interface.

- § 6.2 [RFB delivery by ARTE France](#)
- § 6.3 [RFB delivery by ARTE Germany](#)
- § 6.4 [RFB delivery by Producers/Distributors](#)
- § 6.6 [RFB delivery by Multilingual Suppliers](#)

4.2 SUBTITLE LISTS

Attach a Windows-compatible file containing the full list of subtitles (post-correction) to the subtitle file.

Provide the following information in the header:

- Ordered by:
- Supplied by:
- Translated-Subtitled by:
- The title of the original version
- The title of the second language version
- The ARTE G.E.I.E. programme number
- The delivered version date

4.3 ARTE G.E.I.E. GENERAL GUIDELINES

The rules for compositing subtitles apply to all types of subtitles (text, S/T-U/T indications and blank subtitles).

Bear in mind the guidelines for safe areas when you position subtitles. See § 13.1, [Safe Areas](#) (red frame).

4.3.1 Blank subtitles

Place the blank subtitle on the programme's first frame. The blank subtitle's duration must be 5 frames.

4.3.2 Subtitle Indicators (S/T or U/T)

This indication is mandatory on programmes produced live (off ARTE G.E.I.E. sites).

It tells the broadcast control room that the programme contains subtitles in French (S/T) or German (U/T), especially when the first useful subtitles are far from the beginning of the programme.

The requirements for these indications:

- Double height
- Upper case (S/T for French, U/T for German)
- Right-justified on line 22 (16h), precisely 10 seconds after the start of the programme
- Display the subtitle for 3 seconds

4.3.3 The first 'useful' subtitle

Do not place any subtitles in the programme's first 10 useful frames (picture or sound).

4.3.4 The last subtitle

Place the translator's name, supplier's name, etc. in the closing credits, in such a way as to disrupt reading as little as possible.

The last subtitle must always disappear before the programme Copyright appears.

If there is no programme Copyright, the last subtitle must disappear at the latest 1 second before programme's last frame.

4.3.5 Programme title

The ARTE G.E.I.E. editorial staff will provide the title of the 2nd language version.

Display this title for at least 4 seconds (whenever possible).

This title must never cover the original title.

4.3.6 Display times

The guidelines:

- Display subtitles for at least 1 second and at most 10 seconds, depending on subtitle size
- Allow at least 5 frames between the time one subtitle disappears and the time the next one appears

4.3.7 Shot changes

As a general rule, a subtitle should not overlap a shot change.

A subtitle should disappear at least 4 frames before shot changes and, likewise, appear at least 4 frames after shot changes.

If necessary, and if this is permitted by the cut, subtitles may overlap provided they appear at least 1 second before and disappear at least 1 second after the shot change.

4.3.8 Text burned into the picture

Various types of burned-in text may require subtitling, including the programme title, programme subtitle, episode title, contributors' names, their job titles, work titles, dates, subtitles in another language (when there is no International Version (VI) picture), and so forth.

Subtitling must never cover this burned-in text: place subtitles elsewhere in the picture or time-stagger them.

4.3.9 Characters

The following guidelines apply to the characters you use:

- Double height, single width
- Whenever possible, place them in Teletext rows 20 (14h) and 22 (16h)
- Use a maximum of 37⁷ useful characters, including spaces (40 characters per line, including spaces and control characters);
- Fit subtitles on 2 lines maximum

4.3.10 Additional information

The subtitle file must only contain text for broadcast. It may not contain zero-duration subtitles or content in the comments boxes.

4.3.11 Additional guidelines for captioning for the deaf and hard-of-hearing

Captioning intended specifically for people with hearing disabilities must follow these rules:

- Respect the meaning of the speech
- Follow English language spelling and grammar rules
- Respect the picture: captions are limited to 2 lines on recorded programmes and 3 lines on live programmes and, whenever possible, do not cover burned-in text or important areas in the image
- Allow enough time to read, i.e. 1 second for 12 characters, 2 seconds for 20 characters, 3 seconds for 36 characters and 4 seconds for 60 characters (plus or minus a 20 % tolerance margin)
- Always use dash marks to show that the speaker has changed
- Place subtitles as close as possible to the source of sound
- Only one subtitle per line (one line for each sound source / speaker);
- Follow subtitling colour-coding instructions
- Use brackets for whispering or private conversations
- Use upper case when several people are reciting the same text (and use lower case for absolutely everything else except specific abbreviations and acronyms)
- Break down sentences intelligibly. When a sentence spans more than one caption, break it down into units of meaning to help readers to understand the full point. Splitting sentences excessively or in the wrong places will seriously hamper the reader's ability to understand the message. "He hates / young girls" is preferable to "He hates young / girls"
- Respect shot changes: keep captions discreet and work them into the programme's pace as well as possible

⁷ 36 character with yellow colour code

4.4 CAPTIONING FOR THE DEAF AND HARD-OF-HEARING IN FRENCH

The technical specifications in § 3.6 [Subtitling](#) apply (except those relating to the use of character generators to burn in subtitles).

A subtitled version for the deaf and hard-of-hearing must be complete*, i.e., when this is the case, use the subtitles of an existing version in the same language (*dialogues + sound indications).

The following recommendations mirror CSA (Conseil Supérieur de l'Audiovisuel) recommendations.

<http://www.csa.fr/Espace-juridique/Chartes/Charte-relative-a-la-qualite-du-sous-titrage-a-destination-des-personnes-sourdes-ou-malentendantes-Decembre-2011>

<http://www.csa.fr/content/download/20043/334122/file/Chartesoustitrage122011.pdf>

4.4.1 Colour assignment

- White when the speaker is visible (or partly visible) on the screen
- Yellow when the speaker is off-camera or for voiceovers

For documentaries in which a journalist speaks on-camera and narrates off-screen in turn, use yellow for the narration sequences.

- Red indicates sound effects

Use an asterisk (*) for sounds coming from a loudspeaker, radio, television, telephone, etc.

Use the same colour for the asterisk and captions, and leave no space between the asterisk and the caption.

Place the asterisk before the 1st caption, and only use a 2nd asterisk if there is a change of speaker (followed by a dash mark).

- Green indicates a foreign language or indications thereof (e.g. "Indian dialect")

Do not translate this language, and only transcribe it if the foreign words are very well known in the vernacular.

Green is also used for voiceovers in documentaries.

- Cyan indicates unspoken thoughts or flashbacks (viewers hear the character's thoughts but his or her mouth does not move)

Cyan is used for narration sequences in documentaries.

- Magenta is used for music (e.g. the words of a song)

4.4.2 Positioning captions

Position captions in such a way as to allow viewers to situate the speaker. Place captions under the speaker, and keep the 1st line shorter than the others if possible.

When the speaker is in the background surrounded by other people, place the captions above him or her.

Position captions according to the source of sound. If no source is identified, centre subtitles.

For repeated information about music and other sound effects: use three dots, coloured according to the type of sound, and place them by the source of the sound.

4.4.3 Composition of captions

The guidelines below are aimed at compositing captions in such a way as to make reading them easier:

Silence:

When silent sequences last more than 20 seconds, place 3 white dots (no spaces), left-justified on line 22 for the entire duration of that sequence

Sentences:

When sentences run over more than one caption line, add 2 points (..) at the end of one line and at the beginning of the next one (with no space in between).

For example:

When..
..did you arrive?

If a semi-colon or comma separates the lines, use those punctuation marks instead of the two dots.

For example:

You're here;
..how are you?

When a caption ends with a colon, do not place the two dots at the end of that caption or at the beginning of the next one.

Other punctuation:

When indications regarding music or other sound effects form full sentences, punctuate them as such.

For example:

Telephone or The telephone rings.

Only use exclamation marks to indicate anger or a loud voice.

Dialogue:

Use a single-spaced line to separate two double-height lines of captions.

Place a dash mark **with no space in between** when the speaker changes.

When the same person resumes speaking after a silent period, or after music or other sound effects, do not use the dash mark again.

Programme start:

All programmes begin with 3 dots (no spaces) left-justified on line 22 for the entire duration of the opening credits, so the viewer knows that the teletext captioning is working properly.

Programme end:

Indicate the end of the programme's captions with the sign-off signature (supplier or broadcaster) during the closing credits.

Language level:

Transcribe text in its entirety (no abridgement or simplification).

4.5 CAPTIONING FOR THE DEAF AND HARD-OF-HEARING (German version)

All the technical guidelines in § 3.6 [Subtitling](#) apply, with the exception of the ones that involve using character generators to burn in subtitles.

A subtitled version for the deaf and hard-of-hearing must be complete*, i.e., when this is the case, use the subtitles of an existing version in the same language (*dialogues + sound indications).

The following recommendations mirror See those of ARD, ORF, SRF, ZDF:

<http://www.daserste.de/service/kontakt-und-service/barrierefreiheit-im-ersten/untertitel-standards/index.html>

<https://www.zdf.de/barrierefreiheit-im-zdf/untertitel-standards-von-ard-orf-srf-und-zdf-100.html>

4.5.1 Colour assignment

Their specific colours (yellow, cyan, green and magenta) identify the leading roles.

Sounds, music and voiceover are blue.

4.5.2 Positioning captions

Place captions in relation to where each speaker is on the screen.

4.5.3 Syntax and sound illustrations

Follow ARD and ZDF general rules.

Captions should match speech as much as possible. Ideally, subtitle word for word.

To convey dramatic effects and well-known music, indicate the title of the song, and the name of the composer or the artist singing or playing it. Likewise, caption songs in the language in which they are sung. Otherwise, identify the type of music (e.g. classical).

Indicate sounds (e.g. traffic noises, knocking, silence, etc.).

5 AUDIO DESCRIPTION GUIDELINES

Audio description self-explanatorily involves adding descriptions for blind and partially-sighted people.

This means describing visual content in a film, for blind and partially-sighted audiences, to provide them with the essential information they need to understand the work (the backdrop, people, actions and their gestures).

This recording is embedded between dialogue and sound effects, and mixed into the work's original soundtrack.

The audio description of the action should not crossover from the front credits into the programme and nor from the programme into the end credits. The credits can however contain audio description.

The following principles apply:

- Respect the original work, meaning author's style and the film's pace
- Be objective: description should not impose any particular feelings, but rather elicit them. Descriptions must be accurate and contain four main pieces of information:
 - Who
 - Where
 - When
 - What is happening

Audio descriptions should not interpret images: they should convey them without distorting the information or the story that is unfurling.

The delivered files must follow the guidelines in § 3.3 [Audio](#).

<http://www.csa.fr/Television/Le-suivi-des-programmes/L-accessibilite-des-programmes/Pour-les-personnes-aveugles-ou-malvoyantes-l-audiodescription>

La charte

<http://www.csa.fr/content/download/19660/329348/file/Charte%20de%20l'audiodescription.%20Principes%20et%20Orientations.pdf>

6 RFB DELIVERY GUIDELINES

RFB stands for Ready-For-Broadcast, and RFB-M means an RFB programme is Multilingual (after producing exclusively French and/or German language versions).

6.1 GENERAL GUIDELINES FOR THE ARTE GROUP

Delivery date is based on the date and time when files actually reach the FTP server. If the time is after 12.00, APIOS switches the date to the following day.

The first time a video is integrated, ARTE G.E.I.E. retrieves the delivery slip and verification metadata on an ARTE France / ARTE Deutschland Oracle view. (See descriptions § 13.9.1 et 13.9.2)

Delivery slips list all the content pending delivery for a given programme. Fill out delivery slips entirely the first time you deliver a video. No updates are allowed afterwards.

Verification metadata is only retrieved once for each essence file, when it is delivered.

Audio and subtitle files can only be fed into APIOS (MAM ARTE) after the associated video has been delivered and integrated.

6.2 RFB DELIVERY BY ARTE FRANCE

The following content is required for all programmes en route to broadcast on ARTE:

Number	File	Format	Delivery route	See also
N	HiRes video file (1 per programme part)	AVC Intra 100 (*.avc) 1080i/25	FTP via internal link	§ 3.2.2.1 Ready-for-Broadcast formats
1	Technical record metadata	Oracle view (See § 13.9.1)		
N	Audio file (1 per programme part, and 1 per language version)	*.wav	FTP via internal link	
N	Subtitle file (1 per programme part, and 1 per language version)	*.stl	FTP via internal link	
N	Subtitle list	*.docx or *.doc	FTP via internal link	§ 4.2 Subtitle lists
1	Provisional delivery slip	Oracle view (See 13.9.1)		
N	Original text	*.docx or *.doc	FTP via internal link	
1	Closing credits transcript	*.docx or *.doc	FTP via internal link	st-doublage@arte.tv
1	Medium or file for editorial requirements	DVD or files	Physical delivery	§ 6.15 Delivery address

6.3 RFB DELIVERY BY ARTE DEUTSCHLAND

The following content is required for all programmes en route for broadcast on ARTE:

Number	File	Format	Delivery route	See also
N	HiRes video file (1 per programme part)	MXF, AVC intra 100, 1080i/25 (a)	VFT ARTE-D (DAVID system)	§ 3.2.2.1 Ready-for-Broadcast formats
1	Technical record metadata	Oracle view (See 13.9.2)	VFT ARTE-D (DAVID system)	
N	Audio file (1 per programme part, and 1 per language version)	*.wav	VFT ARTE-D (DAVID system)	
N	Subtitle file (1 per programme part, and 1 per language version)	*.stl	VFT ARTE-D (Apax-System)	
N	Subtitle list	*.docx or *.doc	E-Mail	§ 4.2 Subtitle lists
1	Provisional delivery slip	Oracle view (See 13.9.2)		
N	Original text	*.docx or *.doc	E-Mail	st-doublage@arte.tv
1	Closing credits transcript (certain programme boxes)	*.docx or *.doc	E-Mail	st-doublage@arte.tv
1	Medium or file for editorial requirements	DVD	Physical delivery	§ 6.15 Delivery address

(a) Rem.: If this format is unavailable, XD CAM HD422, Long-GOP 50 Mbps is accepted.

Note that the programme must be provided as an MXF file in accordance to the MXF profile defined by the ARD - ZDF, « ARD_ZDF_HDF02b », see § 3.2.2.1.2 [MXF file format](#).

The MXF file is delivered by file transfer (VFT / MFT 2.0).

The metadata required to broadcast the programme, the delivery sheet and the subtitles must be made available via the ARTE APAX tool.

6.4 RFB DELIVERY BY PRODUCERS / DISTRIBUTORS

These specifications concern the delivery of programmes, purchased or co-produced by ARTE G.E.I.E., in the form of files by producers or distributors.

The specificities related to purchases or co-productions are detailed in the § 6.4.1, 6.4.2, **Erreur ! Source du renvoi introuvable.**

A RFB is a Ready for Broadcast programme in one language version. In order for ARTE to constitute a Multilingual RFB, according to what is specified in the contract, versions VI – VS – VMO – VAO – VEO – VME and VDO can be requested (See § § 6.6.3, Versions Linguistiques).

In all cases, ARTE G.E.I.E. technical guidelines must be respected (See § 3 [Technical guidelines](#) and § 6 [RFB delivery guidelines](#)).

For RFB programmes related to purchases or co-productions, the following material is to be delivered:

Number	Support	Format	Delivery mode	Comment
N	Video/audio HiRate File (1 per programme part)	MXF OP-1a ⁸ Video : AVC-Intra 100, 1080i/25, 4.2.2, 10-bit Audios : Wave stéréo, PCM, 48kHz, 24-bit	Delivery via Partner interface	§ 3.2.2.1 Format for RFB § 3.3 Audio § 6.7 Labels for delivered audio and subtitles
1	Ancillary data (Metadata)	Enter in Partner	Enter data in Partner, before RFB delivery	Equivalent of Record Report
N	Subtitle file (1 single file for each language version)	*.stl	Delivery via Partner interface	§ 3.6 Subtitling guidelines
N	Subtitling List with Timecodes	*.docx, *.doc	Delivery via Partner interface	

⁸ Note that the MXF file must conform to the "ARD_ZDF_HDF02b" profile defined by the ARD – ZDF, see 3.2.2.1.2 [MXF file format](#)

Number	Support	Format	Delivery mode	Comment
N	Original text with Timecode in the shooting language(s) (For Co-Productions)	*.docx, *.doc (* .pdf) ⁹	Delivery via Partner interface	Model in Partner
1	Inserts list with Timecode	*.docx, *.doc	Delivery via Partner interface	Model in Partner
1	End credits transcription	*.docx, *.doc	Delivery via Partner interface	Model in Partner
1	Cue Sheet (List of music used)	*.docx, *.doc	Delivery via Partner interface	Model in Partner
1	List of archives	*.docx, *.doc	Delivery via Partner interface	Model in Partner
1	ISAN Number(1 per episode and version)	Entry in Partner	Entry in Partner	See 6.4.3.3 Numéro ISAN
1	Viewing link for editorial purposes	Link by E-Mail		prodmatériel@arte.tv

⁹ *.pdf = PDF file for some original texts not existing in .doc file and for original music score elements, etc.

6.4.1 COMMON SPECIFICITIES FOR PURCHASING - CO-PRODUCTIONS

6.4.1.1 Language Versions

Depending on the programme types concerned, the contracts specify the language versions to be delivered. In order to enable quality multilingual work, working versions may be requested (VI - VS - VMO - VAO - VEO - VME and VDO). See § 6.7.2 [Definition of the Audio versions delivered](#) .

6.4.1.2 Ancillary data

In order to prepare the referencing in the ARTE database, the ancillary data (equivalent to the Record Report - Audio Versions, TC...) will be validated by the Producer / Distributor in the Partner interface at the end of the Upload.

6.4.1.3 Viewing media

In order to allow viewing by ARTE G.E.I.E., before sending the broadband file (AVC-I), the producer sends by E-Mail (prodmateriel@arte.tv) a link to a LowRate viewing file with a burned-in Timecode.

6.4.2 SPECIFICITIES FOR PURCHASING OF PROGRAMMES

6.4.2.1 Subtitling

STL files, and their "listing", are delivered when they exist.

6.4.3 SPECIFICITIES FOR CO-PRODUCTIONS

6.4.3.1 Subtitling

STL files, and their "listing" are delivered when they are specified in the contract.

6.4.3.2 Original text

When the program is delivered with two different versions of durations (For example a 52' version plus a 43' version for "Geo" and "Découvertes") three original texts with Timecode are delivered:

- Long text (52');
- Long text with cutting indications;
- Short Text (43')

6.4.3.3 ISAN Number

ISAN ID is the unique and permanent registration number for audiovisual works of all kinds. It is required for rights declarations made to PROCIREP (private copy rights) and ANGOA (retransmission rights).

See <http://www.isan.org/agencies/appointed.html>

6.4.3.4 Press material

The expected press materials are described in § 12.1, Press Text and 12.3, Press Photos.

6.5 LANGUAGE VERSION PURCHASE DELIVERY

For all language versions purchased by ARTE G.E.I.E., the following material is to be delivered. Each language version must be accompanied by a reference video.

Number	Support	Format	Delivery Mode	Comment
N	Video/audio HiRate File (1 per programme part)	MXF OP-1a Video : AVC-Intra 100, 1080i/25, 4.2.2, 10-bit Audios : Wave stéréo, PCM, 48kHz, 24-bit	Delivery via Partner interface	§ 3.2.2.1 Ready-For-Broadcast formats § 3.3 Audio § 6.7 Labels for delivered audio and subtitles
N	Subtitle file (1 single file for each language version)	*.stl	Delivery via Partner interface	§ 3.6 Subtitling
N	Subtitling List with Timecodes	*.docx, *.doc	Delivery via Partner interface	
N	Dialogues List	*.docx, *.doc	Delivery via Partner interface	

Audio:

For RFB files delivery relating to the purchase or co-production of ARTE G.E.I.E., the Partner platform accepts up to 8 AES channels pairs, equivalent to 8 pairs Dual Mono (Mono track duplicated on the left and right channels) or 8 stereo pairs or a combination of these configurations).

Note that the MXF file must conform to the "ARD_ZDF_HDF02b" profile defined by the ARD – ZDF, see 3.2.2.1.2 [MXF file format](#)

6.6 RFB DELIVERY BY MULTILINGUAL SUPPLIERS

The following content is required for all language versions ordered by ARTE G.E.I.E.:

Number	File	Format	Delivery route	See also
1	Audio file	*.wav	PARTNER	
1	Subtitle file (1 per programme, and 1 per language version)	*.stl	PARTNER	
1	Subtitle list	*.docx or *.doc	PARTNER	
1	Dialogue list	*.docx or *.doc	PARTNER	

ARTE G.E.I.E. provides a file-exchange site for suppliers. This site handles text (used to create the second language version), video, audio and subtitles. The address is <http://partner.arte.tv>.

The ARTE G.E.I.E. Subtitling/Dubbing office will provide each supplier with its individual login ID and password.

The ARTE G.E.I.E. Subtitling/Dubbing office also provides each supplier with a user guide for this exchange server.

The types of files that may travel on this site follow:

- *.mp4 = LoRes programme files containing the picture and all the language versions delivered by the supplier
- *.docx or *.doc = Word-compatible files for original texts, translations and subtitle lists
- *.pdf = PDF files for certain original texts that are not available in .doc formats, and original components such as sheet music and the like
- *.stl = subtitle files (See § 3.6 [Subtitling](#))
- *.wav = uncompressed sound files (See § 3.3 [Audio](#))

6.7 LABELS FOR DELIVERED AUDIO AND SUBTITLES

6.7.1 Labels of the Audio versions delivered

Apios Code	File Code	Description
Broadcast Versions		
VO	VO	Original version neither in French nor German
VOF	VOF	Original version in French
VOA	VOA	Original version in German
VF	VF	Post-Synchro and/or Voice Over in French)
VA	VA	Post-Synchro and/or Voice Over in German
VFAUD	AF	Version with audio description in French
VAAUD	AD	Version with audio description in German
Working versions for documentary		
VS	VS	Version without narration
VME	VME	Music & Effects Version
VDO	VDO	Dialogues Only Version
VMO	VMO	Music Only Version
Working versions for film and fiction		
VI	VI	International Version (Without Commentaries and Dialogues)
VMO	VMO	Music Only Version
VEO	VEO	Effects/Atmos Only Version
Working versions for ARTE Europa		
VOEU	VOEU	Version with Commentaries, without Voice Over
VE	VE	Foreign version (dubbed in a third language, neither French nor German)

6.7.2 Definition of the Audio versions delivered

- VO:** An Original Version (VO) is a language version that was originally produced in neither French nor German.
It may be monolingual, multilingual or musical.
A VO is rarely RFB. The few that are broadcast-ready are musical versions or short programmes requiring no subtitles.
In the musical versions, songs do not define the linguistic version, the version remains VO. A presentation in German or French changes the language version to VOA or VOF.
- VOF:** A VOF is a language Version Originally produced in French. A VOF is RFB when it requires no subtitling. Variants of French, such as Québécois, are considered as distinct languages which may require multilingual work. So a Québécoise version is a VO and not VOF.
- VOA:** A VOA is a language Version Originally produced in German. A VOA is RFB when it requires no subtitling. Variants of German, such as Schwyzerdütsch, are considered as distinct languages which may require multilingual work. So a Schwyzerdütsch version is a VO and not VOF
- VF:** A VF is a Version in French that has been post-produced (lip-dubbed and/or voiced-over)
A VF is RFB when it requires no subtitling.
- VA:** A VA is a Version in German that has been post-produced (lip-dubbed and/or voiced-over).
A VA is RFB when it requires no subtitling.
- VFAUD:** A VFAUD is a VF or VOF with additional voiceover in French providing audio descriptions of the picture for the blind and partially-sighted.
- VAAUD:** A VAAUD is a VA or VOA with additional voiceover in German providing audio descriptions of the picture for the blind and partially-sighted.
- VS :** A Version without narration (VS for Version Sans commentaire) is a working version with music, effects and atmosphere components, with dialogues, and without voiceover.
It is used as the base for post-producing voiced-over versions in French and/or German for documentaries, and is not intended for broadcast.
VS music, effects and atmosphere components need to be mixed linearly.

- VME :** A Music & Effects Version (VME) is a working version with music, effects and atmosphere components but excluding all dialogues or commentary.
VME is used as a base for the post-production of an audio language version (French or German) as Voice Over for documentaries. It cannot be broadcast
The components: music, effects and atmosphere components need to be mixed to a linear level.
It comes in addition to a VDO (Version Dialogue Only).
- VDO :** A Dialogue Only Version (VDO) is a working version with only the original voice elements, excluding all music, effects, atmosphere components or additional commentaries.
VDO is used as a base for the post-production of an audio language version (French or German) as Voice Over for documentaries. It cannot be broadcast
It comes in addition to a VME (Version Musique & Effects).
- VMO :** A Music Only Version (VMO) is a working version with only music
It is used as a base for the post-production of an audio language version. It cannot be broadcast
Music must be mixed at a linear level.
- VI :** An International Version (VI for Version Internationale) is a working version with music, effects and atmosphere components, and without dialogue or voiceover.
It is used as a base for post-production lip-dubbing for Film and Fiction and is not intended for broadcast.
VI music, effects and atmosphere components need to be mixed linearly.
- VEO :** A Effects/Atmos Only Version (VEO) is a working version with effects and ambiances only.
It serves as the basis for the post-production of an audio language version. It cannot be broadcast.
Elle doit être mixée à un niveau linéaire (pas de version dite « pre-dipped »).
- VOEU :** An Original European Version (VOEU) is an ARTE-specific working version with Commentaries (Generally in French or German) without Voice Over.
It serves as the basis for a Sub-Titled version in a language of ARTE's European partners. It cannot be broadcast.
- VE:** A Foreign Version (VE for Version Etrangère) can have audio and/or subtitles in foreign languages. These versions are not VOs, or in German or French (ie: Polish dubbing of a French film).

6.7.3 Labels of the Subtitles delivered

APIOS code and file	Description
VO-FRA	Fully subtitled in French
VO-ALL	Fully subtitled in German
VF-FRA	VF or VOF (see above) partially subtitled in French
VA-ALL	VA or VOA (see above) partially subtitled in German
VF-MAL	Subtitled for the deaf and hard-of-hearing in French
VA-MAL	Subtitled for the deaf and hard-of-hearing in German

6.8 LABELS OF BROADCAST VERSIONS: AUDIO AND SUBTITLES

The following labels refer to ARTE's internal nomenclature for broadcasted versions

6.8.1 Labels of the language versions broadcasted

APIOS code	Description
VO	Original version neither in French nor German, without subtitles
VO-STF	Original version neither in French nor German, with French subtitles (subtitled original version)
VO-STA	Original version neither in French nor German, with German subtitles (subtitled original version)
VO-STMF	Original version neither in French nor German, with French subtitles for the deaf and hard-of-hearing
VO-STMA	Original version neither in French nor German, with German subtitles for the deaf and hard-of-hearing
VOF	Original version in French, without subtitles.
VOF-STF	Original version in French, with partial subtitles in French
VOF-STA	Original version in French, with German subtitles (subtitled original version)
VOF-STMF	Original version in French, with French subtitles for the deaf and hard-of-hearing
VOF-STMA	Original version in French, with German subtitles for the deaf and hard-of-hearing

APIOS code	Description
VOA	Original version in German, without subtitles
VOA-STF	Original version in German, with French subtitles (subtitled original version)
VOA-STA	Original version in German, with partial subtitles in German
VOA-STMF	Original version in German, with French subtitles for the deaf and hard-of-hearing
VOA-STMA	Original version in German, with German subtitles for the deaf and hard-of-hearing
VF	Non-original French version (Post-Synchro and/or Voice Over), without subtitles
VF-STF	Non-original French version (Post-Synchro and/or Voice Over), with partial subtitles in French
VF-STMF	Non-original French version (Post-Synchro and/or Voice Over), with French subtitles for the deaf and hard-of-hearing
VA	Non-original German version (Post-Synchro and/or Voice Over), without subtitles
VA-STA	Non-original German version (Post-Synchro and/or Voice Over), with partial subtitles in German
VA-STMA	Non-original German version (Post-Synchro and/or Voice Over), with German subtitles for the deaf and hard-of-hearing
VFAUD	French version, with audio description
VAAUD	German version, with audio description
VE	Foreign version, dubbed in a third language, neither in French nor German
VE-STE	Foreign version, dubbed in a third language, neither in French nor German, with foreign subtitles neither in French nor German
VO-STE	Original version, fully subtitled in a foreign language (third language)
VOF-STE	Original version in French, fully subtitled in a foreign language (third language)
VOA-STE	Original version in German, fully subtitled in a foreign language (third language)

6.8.2 Definition of the language versions broadcasted

- VO:** An Original Version (VO) is a language version that was originally produced in neither French nor German. It may be monolingual, multilingual or musical. A VO is rarely RFB. The few that are broadcast-ready are musical versions or short programmes requiring no subtitles. In the musical versions, songs do not define the linguistic version, the version remains VO. A presentation in German or French changes the language version to VOA or VOF. Variants of German and French (Alemannic, Québécois, etc) are considered VOs.
- VO-STF:** A VO-STF is a VO with subtitles in French (RFB).
- VO-STA:** A VO-STA is a VO with subtitles in *Allemand* (German) (RFB).
- VO-STMF:** A VO-STMF is a VO with subtitles for Malentendants (deaf and hard-of-hearing) in French (RFB).
- VO-STMA:** A VO-STMA is a VO with Sub Titles for Malentendants in German (RFB).
- VOF:** A VOF is a language Version Originally produced in French. A VOF is RFB when it requires no subtitling. Variants of French, such as Québécois, are considered VOs.
- VOF-STF:** A VOF-STF is a version originally in French with subtitles in French in some parts (RFB).
- VOF-STA:** A VOF-STA is a version originally in French that now has subtitles in German (RFB).
- VOF-STMF:** A VOF-STMF is a version originally in French that now has subtitles in French for the deaf and hard-of-hearing (RFB).
- VOF-STMA:** A VOF-STMA is a version originally in French that now has subtitles in German for the deaf and hard-of-hearing (RFB).
- VOA:** A VOA is a language Version Originally produced in German. A VOA is RFB when it requires no subtitling. Variants of German, such as Alemannic, are considered VOs.
- VOA-STF:** A VOA-STF is a version originally in German that now has subtitles in French (RFB).
- VOA-STA:** A VOA-STA is a version originally in German with subtitles in German in some parts (RFB).
- VOA-STMF:** A VOA-STMF is a version originally in German that now has subtitles in French for the deaf and hard-of-hearing (RFB).
- VOA-STMA:** A VOA-STMA is a version originally in German that now has subtitles in German for the deaf and hard-of-hearing (RFB).
- VF:** A VF is a Version in French that has been post-produced (lip-dubbed and/or voiced-over) A VF is RFB when it requires no subtitling.
- VF-STF:** A VF-STF is a version in French that has been post-produced (lip-dubbed and/or voiced-over) and requires subtitles in French in some parts.
- VF-STMF:** A VF-STMF is a version in French that has been post-produced (lip-dubbed and/or voiced-over) and has subtitles in French for the deaf and hard-of-hearing.

- VA:** A VA is a Version in German that has been post-produced (lip-dubbed and/or voiced-over). A VA is RFB when it requires no subtitling.
- VA-STA:** A VA-STA is a version in German that has been post-produced (lip-dubbed and/or voiced-over) and requires partial subtitles in German.
- VA-STMA:** A VA-STMA is a version in German that has been post-produced (lip-dubbed and/or voiced-over) and has subtitles in German for the deaf and hard-of-hearing.
- VFAUD:** A VFAUD is a VF or VOF with additional voiceover in French providing audio descriptions of the picture for the blind and partially-sighted.
- VAAUD:** A VAAUD is a VA or VOA with additional voiceover in German providing audio descriptions of the picture for the blind and partially-sighted.
- VOEU:** An Original European Version (VOEU) is a version with Commentaries (Generally in French or German) without Voice Over.

It serves as the basis for a Sub-Titled version in a language of ARTE's European partners.

- VE:** A Foreign Version (VE for Version Etrangère) can have audio and/or subtitles in foreign languages. These versions are not VOs, or in German or French. They can be used on ARTE's Web platform.
- VE-STE :** A « VE-STE » is a VE with subtitles in a foreign language (neither in French nor German)
- VO-STE :** A « VO-STE » is a VO with full subtitles in a foreign language.
- VOF-STE :** A « VOF-STE » is a VOF with full subtitles in a foreign language.
- VOA-STE :** A « VOA-STE » is a VOA with full subtitles in a foreign language.

6.9 TIMECODE

See § 3.4 [Timecode](#)

6.10 SUBTITLING

The following chapters discuss requirements pertaining to producing and delivering subtitle files:

- § 3.6 [Subtitling](#) (the technical guidelines)
- § 4 [Subtitling Guidelines](#)
- § 8.3.3.3 [Subtitling shows](#)
- § 10.1.4.1 [Subtitle files](#) nouveaux Médias
- § 13.2 [Subtitling of foreign versions](#)

6.11 RFB PHYSICAL SUPPORTS

RFB physical support delivery guidelines apply for producers/distributors that are unable to deliver files via ARTE dedicated networks.

Units may exceptionally delivery physical support when extraordinary circumstances warrant doing so, or as backups (subject to prior agreement).

In this case, all elements of the program (video and audio) must be delivered on physical supports (Master).

6.11.1 Video

Each tape must:

- Conform to the original (editing, mixing, duration)
- Have no burned-in subtitles
- No overlap (in the case of consecutive tapes) and be cut at suitable points as regards audio and video (e.g. shot change, silence, etc)

6.11.2 Audio

Each tape must include:

- The language version(s) stated in the contract, in stereo mode (PCM)
- The same version(s) in Dolby-E mode, if available
- The working versions for post-production and to produce the language versions to broadcast (See § 7.1.2 [Audio Guidelines](#))

6.11.3 Timecode

Each tape must include:

- LTC = VITC,
- The Timecode at start of programme (10:00:00:00)
- Incremental and continuous Timecode s (on colour bars and run-out too)
- Incremental Timecode s from one tape to the next for recordings on consecutive tapes
- Dub Timecode s must be identical to the master tape Timecode s

6.11.4 Tape labelling

The label on each tape must include:

- The programme's title
- The audio track designations
- The programme's duration
- Tape order, if and as required

Attach labels to the cassette body in the space provided, and on the cassette box.

6.11.5 Identification card

Each tape must include an identification card before the countdown, providing the following information (at least):

- The programme's ID
- The lab's/producer's name
- The programme's title
- The programme's subtitle
- Tape order, if and as appropriate
- The list of audio versions and designations
- Clear indication of the audio formats (PCM,)
- Clear indication that it is a Dolby Surround production if that is the case
- The TC In and TC Out
- The programme's duration

6.11.6 Tape leader and technical specifications

Tape section	Duration	Video	Audio tracks (mono, stereo or Dolby-E)	Observations
Line-up section	Min 60 s	Colour bars 100/0/75/0	PCM Reference tone: ≈ 1KHz at -18 dBfs (-18 LUFS) France: +4 dBu ≡ -18 dBfs Stereo Interruption of the reference tone on the left channel (*)	PCM Reference: 0 dBu = 0,775 V (*) EBU R 49 1999 No reference tone to be recorded in this section in the case of mute broadcasts
Identification section	20 s	Tape order	PCM Mute	
Cue section	Max 8 s	Count-down (10 to 3)	PCM Mute	
Pre-programme section	Min 2 s Max 3 s	Black level	PCM Mute	
Programme		Film to video transfers must conform to the original film format.	Level measured by a Loudness measurement device that complies with EBU R 128 Max level: -1 dB TP	Stereo and PRO-Logic (Dolby Surround) mixes must be coherent in mono
Run-out section	Min 10 s	Black level	PCM Mute	Continuous Timecode

6.11.7 Technical record report

Deliver one report per tape, including at least the following information:

- The Programme's title
- Tape order, if and as appropriate
- The original version language(s)
- The audio track designations
- Audio indications as to:
 - Quantisation (PCM: 24-bit)
 - Mono, stereo, Dolby Surround (PRO-Logic I or II)
- The type of verification for each audio track:
 - Full length
 - Spot check
- If applicable, the indication of additional subtitling to be delivered;
- Shoot format
- Video format
- Post-production formats and data rates
- Film source material format if appropriate (1.33, 1.66, 1.85, 2.35, etc.)
- TC In and TC Out (audio and video)
- Exact programme duration
- Anything noteworthy (e.g. the director decided to omit closing credits for artistic reasons, clean-feed sequences at the end of the tape, sound blanks, etc.)

6.12 DVD

The language version on the DVD from the supplier must be identical to that of the RFB but have burned-in subtitles if appropriate, and burned-in Timecode s (LTC) located in such a way that they do not overlap with possible text burn-in content. Whenever possible, divide the programme into chapters.

6.13 CREDITS

6.13.1 General specifications

The following guidelines apply to opening and closing credits:

- They must comply with legal and regulatory requirements in member countries, i.e. in the programme's country of origin
They must be bilingual in French and German, starting with the supplier's vernacular (opening credits only, excluding programme purchases)
- Mute credits on black backgrounds are proscribed
- They must be legible on a TV screen
- The words "in Zusammenarbeit mit..." or "en collaboration avec..." ("in association with") must be combined with the ARTE logo

6.13.2 Closing credits duration

The following limits apply to closing credits:

- Documentaries and magazines : 30 seconds max.
- Fiction : 60 seconds max.
- Cinema : 2 minutes max.

ARTE G.E.I.E may accelerate or reshuffle closing credits to fit its broadcast schedule. Please submit a Windows-compatible transcript of the credits with RFB delivery (See § 6.15 [Delivery address](#)).

6.14 TEXT

Always submit a complete list of texts (original version) with each programme, and the matching Timecodes:

- A transcript of the programme text (narration and dialogue) in the original language
- A transcript of the programme text (narration and dialogue) translated into the target language
- A list of titles (Burn-ins)
- A transcript of the subtitle file
- If the programme contains literary quotes, please provide the original version of the texts (the author's!) or the references to find the publication in the original language (publisher, title, year and page numbers)
- If programmes deal with flora and fauna, please provide a list of the names it contains in the original language and the associated scientific names (in Latin or Greek)
- An accurate list of languages and dialects spoken in the original version (including geographic location if the dialects are rare or patois)
- A complete and accurate list of the languages in the original version (including songs, film or show excerpts, the names of the places, the contributors' names and job titles, etc) with their own alphabetical characters

6.14.1 Delivery by ARTE units

When ARTE Deutschland and ARTE France deliver a programme comprising two non-aligned language versions, we need the original text for complementary work.

6.15 DELIVERY ADDRESS

ARTE G.E.I.E

Secteur Prédiffusion

4, quai du Chanoine Winterer

CS 20035

F-67080 Strasbourg cedex

France

7 GUIDELINES FOR PRODUCTIONS ASSEMBLED AT ARTE G.E.I.E.

7.1 “RFB” COMPONENTS

All components must conform to the [Technical Guidelines](#) (see § 3)

If complying with any of those technical guidelines is unfeasible, always contact the relevant production team beforehand to agree on an alternative.

7.1.1 Video guidelines

- Subjects must be shot in interlaced HD, see § 3.2.1, [Standards](#)
- Leave 3 seconds of images without any narration at the beginning and end of the subject to allow clean transitions when we assemble the programme
- We only accept subjects delivered with no packaging, burned-in content, subtitles, and with opening and closing credits that have no content burned into the picture

The graphics (maps ...) for programmes assembled at ARTE G.E.I.E. are recreated in Strasbourg, in keeping with the graphic guidelines, using content supplied by the producer.

- ARTE G.E.I.E. creates burned-in and graphic content
- In stories targeting German-speaking and French-speaking audiences, avoid intertitles and any other written content unless it is read by the narrator (and can hence be translated into the other language)

7.1.2 Audio guidelines

Deliver all stories in stereo (or double mono), in keeping with EBU R 128, see § 3.3.1.2 [Loudness](#), and designate content as follows:

- Original version in French or German: Tracks/Channels 1 and 2
- International version or version without narration: Tracks/Channels 3 and 4

Mix international versions linearly: see § 6.7.2 [Definition of the Audio versions delivered](#).

- When you interview people in German or French, always allow them to speak in their mother tongue
- When you voice-over interviews, the voice must be distinct from the narrator's and the same sex as the interviewee.

7.1.3 Delivery

The FTP server address is <ftp://ftp.ec.arte.tv>.

Ask the relevant production team for your Login ID and password.

Please name your files as follows:

- For ARTE Journal: AJ_ Title_ Journalist Name
- For Square: SQ_ Title_ Journalist Name
- For ARTE Reportage: AR_ Title_ Journalist Name
- For ARTE Magazine: AM_ Title_ Journalist Name

Write names as if they were in English, i.e. with no accents, dieresis or other signs.

Do not use any complex characters (.,;:/-+ôêëèçüöàäë, etc).

Use underscores (Shift + (-), to the right of the (0) key on most English keyboards) instead of spaces.

7.2 OTHER DELIVERABLE ELEMENTS

7.2.1 Working audio and/or video components

We may request files containing LoRes RFB components for viewing purposes and/or to post-produce audio and/or subtitles.

Container	Profile	Video	Audio
MPEG 4	Main – 5.1	1920 x 1080i – H264 - CBR Minimum 3 Mbps	MPEG-2 AAC – LC - Stereo Minimum 128 kb/s – 48 kHz – 16-bit

The FTP delivery address is <ftp://ftptec.arte.tv>.

Ask the relevant production team for your Login ID and password.

7.2.2 Other content

Please e-mail the following to the e-mail address provided by the relevant production team:

- The script (in French or German, after final mix)

Provide a transcript including Timecode s to produce subtitles.

Tally the transcript Timecode s with TC In and TC Out at the start and end of each narration and interview, and include information about the interviewees' voices (sex, age or other).

The translator cannot translate a story when interviews are separated from the narration.

Production metadata follows:

- The production's title:
- The list of people on the team, which generally comprises:
 - The author/director
 - The cameraman
 - The sound engineer (recording)
 - The editor
 - The sound engineer (mixing)
 - The production company
- The Copyright
- All other credits as required

The following is also required:

- The list of archive footage sources
- The references for the music and graphics to notify copyright collection societies, and the list of archive footage including the Timecode s and timing (See § 13.6 [Copyright notification form](#))
- High-quality photos (4 Megapixel or higher resolution) via <ftp://ftptec.arte.tv>
- A text for the launch
- A text for the press: TV weeklies require text 10 weeks before broadcast
- The author's CV and ID photo
- Bibliographic references
- Websites related to the story

7.2.2.1 ARTE Journal

In light of the constraints associated with delivering news content, constraints associated with computer network availability, and constraints associated with deadlines, ARTE G.E.I.E. accepts MPEG-4 (CBR H.264 encoding) files at 8 Mbit/s, 1920 x 1080. If 20 Mbit/s is feasible given technical constraints and delivery deadlines, we prefer it.

Uncompressed audio (48 kHz, 24-bit) audio is required, 16-bit is accepted for archive footage.

7.2.2.2 ARTE Reportage

We prefer voiceover rather than subtitling. We only accept subtitles in very exceptional cases and the editorial team's prior agreement is required.

Please provide the list of incrustated text with Timecode s. Keep burned-in texts to a minimum (present speakers in the narration).

In this case, provide a time-coded transcript of the dialogues.

8 GUIDELINES FOR EXTERNAL PRODUCTIONS

8.1 FOREWORD

ARTE G.E.I.E. provides guidelines and recommendations for external organisations producing content for recorded or live broadcast.

8.2 GENERAL RULES

8.2.1 Scope

The guidelines and recommendations in this document cover the preparation and the production of programmes for recorded or live broadcasts, and apply to the 'Producer', which may be an ARTE unit (ARTE France, ARTE Deutschland and members), an executive producer, ARTE G.E.I.E. or an associate member.

8.2.2 Operations

The relevant production units are responsible for all the aspects of programme production that are not mentioned in ARTE G.E.I.E.'s obligations, as soon as a live or slightly time-shifted broadcast project is approved.

8.2.3 ARTE G.E.I.E. obligations

ARTE G.E.I.E. is responsible for producing the 2nd language version (voiceover, dubbing or subtitling).

Insofar as the 'Producer' follows ARTE G.E.I.E. technical guidelines and recommendations, the traffic platform ('Nodal') assumes responsibility for the signal reception, conversion and distribution in the Technical Centre in Strasbourg.

ARTE G.E.I.E. is responsible for preparing the live or slightly time-shifted programme broadcast, and ensuring it rolls out smoothly, on the various networks and vectors that ARTE operates (Broadcast and Broadband).

8.2.4 'Producer' obligations

The 'Producer' is responsible for organising production, providing the technical resources and coordinating with the supplier appointed by the relevant ARTE Unit.

The 'Producer' of the live or time-shifted programme broadcast is responsible for the technical side of operations, from the production venue until content reaches the ARTE G.E.I.E. Nodal in Strasbourg.

The 'Producer' is responsible for supplying and routing the complete language version of the programme (the language version corresponding to the ARTE unit), in keeping with programme acceptance terms and conditions at the programme conference. This encompasses interpretation, voiceover and subtitling.

If the 'Producer' is an ARTE Unit or associate member, it may hand over signal broadcast technical coordination and organisation to ARTE G.E.I.E. If it chooses to do so, the 'Producer' agrees to cover the financial cost of the resulting technical, human and logistics resources.

8.3 PRODUCTION GUIDELINES

8.3.1 'Producer' duties

8.3.1.1 Venue survey

The 'Producer' surveys the venue, liaising with the relevant ARTE G.E.I.E. production unit, and with the ARTE G.E.I.E. staff required to work on the operation (production staff, technical staff running the transmission, staff in charge of subtitling and the member of staff representing the programme Unit). This survey must be coordinated with the person in charge of production at ARTE G.E.I.E.

The 'Producer' provides:

- Venue and/or technical area floor plans, OB vehicle location(s), satellite or SNG vehicle location(s), interpreter booth locations, shooting location(s), and power-supply telephone and network connections
- A list of useful contacts
- A survey report to ensure planning runs smoothly and to make arrangements to book necessary resources

The 'Producer' is responsible for all phases cleared after the survey. This encompasses the following.

8.3.1.2 Logistics

- Passes to access and work in the venue
- Space for all the technical vehicles and mobile kit required to produce the programme
- Premises or self-contained mobile offices with air conditioning and/or heating as appropriate
- Toilets
- Security staff
- Protected dual power supplies:
 - A power supply for the premises or mobile premises (air-con, heating, light, etc)
 - A power supply for the broadcast equipment
 - 30 % more power than the total requirement estimate in the approved technical specs
 - The full power supply system needs to be connected to the same electricity network and earthed together to avoid ground loops. This system needs to be connected to a single point and provide less than 1 Ohm resistance to earth
- Safety plan for staff and material ("plan de prevention des risques")

8.3.1.3 Technical

The 'Producer' sets up the HD transmission:

- Transmitting as per § 3.9.2 [Technical guidelines for live transmission](#)
- Secure signal consolidation circuits
- Signal quality control
- Coordination circuit management
- Compliance tests with the Strasbourg Nodal at the latest 3 hours before the live broadcast

If the 'Producer' is an ARTE Unit or associate member, it may hand over signal broadcast technical coordination and organisation to ARTE G.E.I.E. It if chooses to do so, the 'Producer' agrees to cover the financial cost of the resulting technical, human and logistics resources.

8.3.1.4 Securing transmission

The 'Producer' guarantees signal transmission and continuity from the production venue to ARTE G.E.I.E.

All transmissions need to be secured by systems that carry HD signals on alternative routes. If doing so is technically unfeasible, ARTE G.E.I.E. needs to be informed during preparation meetings.

The 'Producer' covers the associated costs, which will be assessed beforehand, directly or when rebilled by ARTE G.E.I.E.

8.3.1.5 Original Version production

The 'Producer' produces and delivers an RFB signal including one of the two language versions broadcast by ARTE G.E.I.E. as per § 8.3.3. [Guidelines for multilingual content](#).

The 'Producer' is required to provide specific equipment and qualified suppliers to deliver the interpreting, voiceovers and subtitling for its version, as per § 8.3.3 [Guidelines for multilingual content](#), and ensure they all comply with ARTE G.E.I.E. guidelines.

If ARTE G.E.I.E. is already using this equipment to produce the second version at the production venue or in Strasbourg, the 'Producer' may use them too, provided it covers half the associated costs incurred.

If the 'Producer' is an ARTE Unit or associate member, it may hand over signal broadcast technical coordination and organisation to ARTE G.E.I.E. It if chooses to do so, the 'Producer' agrees to cover the financial cost of the resulting technical, human and logistics resources.

8.3.2 ARTE G.E.I.E. duties

The ARTE G.E.I.E. Executive Production office will appoint a production manager to liaise with the 'Producer'.

Production Managers centralise and organise production-related information and document exchanges (cue sheets, transcripts, texts, content for viewing) among everyone working on the project, when and as project development warrant it.

Production Managers circulate a detailed work plan and list of contacts working on the operation, and circulate the fine-tuned and final version of that document at the latest 24 hours before the programme.

Production Managers also make sure financial and technical resources tally, and manage the budget in all the areas within ARTE G.E.I.E.'s scope. They liaise with the person in charge of transmission to clear the technical side of the project.

At the request of the 'Producer', the production unit can provide assistance as regards selecting suitable suppliers and contribute additional resources requested by ARTE G.E.I.E. or the 'Producer' (as a service).

8.3.3 Guidelines for multilingual content

8.3.3.1 Sound

The second language version is mixed by a Sound Engineer under ARTE G.E.I.E.'s responsibility.

8.3.3.1.1 At the production site:

- The Sound Engineer will need the international audio track and the final mix of the 1st language version, for all programme components (live and pre-recorded)
- Each set must be delivered with the ambient sound in the shooting location, without mixing, on one or two dedicated channels
- On-site sound engineers agree on audio track designation
- The sound engineer's workstation must be suitably soundproof and ergonomic. It also requires a monitor displaying the outgoing programme and a monitor displaying the audio and video return channels for the programme he or she is producing

The audio channels for routing the mixed programme back to ARTE G.E.I.E. follow:

Audio channel		Track content
AES1	1	Full German version, Left
	2	Full German version, Right
AES 2	1	Full French version, Left
	2	Full French version, Right

8.3.3.1.2 At the ARTE G.E.I.E. site:

- If the second language version is produced at ARTE G.E.I.E. (interpreting in Strasbourg); audio configuration will vary according to the programme configuration. The basis that ARTE G.E.I.E. needs to ensure language version quality matches after interpretation, follows:

Audio channel		Track content
AES1	1	Stereo music/Left and ambient sound on the set
	2	Stereo music/Right and ambient sound on the set
AES 2	1	All German Version mics
	2	All French Version mics

- The specific configuration for broadcasting pre-produced content in both languages from OB vehicles follows:

Audio channel		Track content
AES1	1	Stereo music/Left and ambient sound on the set
	2	Stereo music/Right and ambient sound on the set
AES 2	1	All German Version mics or Mono German Version content
	2	All French Version mics or Mono French Version content

In these cases, the ARTE G.E.I.E. production manager at the production site will invariably need to update the ARTE G.E.I.E sound engineer on programme rollout through a talkback network.

Particular cases (e.g. third languages) need to be discussed with ARTE G.E.I.E. beforehand.

To ensure the quality of the two language versions matches, the ‘Producer’ should ideally send ARTE G.E.I.E. the ambient sound in the shooting location.

8.3.3.2 Live interpreting on the production site

ARTE G.E.I.E. is responsible for interpreting.

The 'Producer' will provide:

- The audio, video and talkback wiring diagram on the shooting location to the ARTE G.E.I.E. production manager, so that ARTE G.E.I.E. technical teams can ascertain compliance. We need to receive this diagram at least 24 hours before the programme
- One interpreting booth per language
- These booths need ventilation, and heating or cooling depending on conditions and the weather. They must comply with ISO 2603 standard requirements pertaining to acoustic insulation
- One interpreting console (not a narrator one) per interpreter. These consoles adjust volume and tone, and have On/Off switches for interpreters to open/ close their mics
- The channel from each interpreting console, feeding into a dedicated mixing console input channel, to adjust each interpreter's voice
- A low-gain condenser or dynamic mic (medium-low)
- An open audio headset with two earpieces (interpreters in the same booth need to be able to hear each other)
- A video monitor in each booth with a programme return channel
- A talkback network to allow interpreters to communicate with the sound engineer in charge of the second language version and the programme manager/editor in charge of the second language version
- Return channels:
 - Programme video
 - Programme audio (interpreters must not hear themselves in their own earpieces)

At the production site, the sound engineer working on the second language version needs to be able to communicate with the lead sound engineer and programme manager via the talkback network.

Before each live broadcast and/or production, a series of tests will be conducted to verify, synchronise and fine-tune the interpretation, during the transmission tests with the Strasbourg Nodal, at least 3 hours before live broadcasts.

When interpreters translate pre-produced content on-site, the 'Producer' needs to provide a Word document containing the full transcript of the interviews and narration to the ARTE G.E.I.E. production manager, who will forward them to the relevant teams. If possible, the 'Producer' will also provide the LoRes video files via the ARTE G.E.I.E server (the production manager will provide the address).

If the programme is delivered on tape for live interpretation or post-production, HDCAM SR is preferred. In this case, designate audio tracks as follows:

Audio channel		Track content
AES 1	1	RFB-M language version 1/Left
	2	RFB-M language version 1/Right
AES 2	1	Stereo music/Left and ambient sound on the set
	2	Stereo music/Right and ambient sound on the set
AES 3	1	All German Version mics
	2	All French Version mics
AES 4	1	Stereo language version 2/Left
	2	Stereo language version 2/Right
AES 5	1	Language version 3
	2	Language version 4

8.3.3.3 Subtitling shows

See the following guidelines for subtitle production and delivery:

§ 3.6 [Subtitling](#) for the technical guidelines

§ 4 [Subtitling Guidelines](#)

§ 13.2 [Subtitling of foreign versions](#)

8.3.3.3.1 Subtitling equipment

The 'Producer' provides the show-related documents (score, version to adapt, screenplay, etc) in order to allow translators to produce an adequate translation and/or adaptation. If an official translation is available, the Unit or 'Producer' will send it to ARTE G.E.I.E. in time.

The 'Producer' is responsible for producing subtitles in its language version and ARTE G.E.I.E. handles the second version. When and as appropriate, ARTE G.E.I.E. may produce the two versions and the 'Producer' covers the costs associated with its own version. Bills for these services will be based on a prior quote factoring in each production's specific conditions. If the need to incur unforeseen expenses arises during live broadcast preparation, ARTE G.E.I.E. will inform the 'Producer'.

8.3.3.3.2 Subtitling on the production site/in Strasbourg

As a general rule, live subtitles are prepared and broadcast from ARTE G.E.I.E. in Strasbourg. The 'Producer' sends ARTE G.E.I.E. all the available programme audio and video sequences, to prepare subtitles. This includes wide shots, working recordings, rehearsals, run-throughs, etc. The 'Producer' will supply this content via the routes agreed on beforehand with the person in charge of coordinating subtitling and the ARTE G.E.I.E. production manager (the options include recordings on P2 cards, file transfer via a previously determined FTP server, etc).

The files our FTP system can handle follow:

- .wmv
- .mp4
- .mov (please specify the codec used)
- MPEG-2 (please specify the codec used)

ARTE G.E.I.E. will need to liaise with the live broadcast director to discuss subtitle placement based on the shot changes.

Production requirements (timeframe between rehearsals and live broadcast, distance between live broadcast venue and Strasbourg, the complexity of the work, etc) may lead to a decision to produce subtitling on the production site. This decision is made beforehand, during production meetings. If this is the case, the 'Producer' will find equipped workstations matching the descriptions in § 8.3.1.2 [Logistics](#) and § 8.3.3.3.3 [Work spaces](#), and provide audio and video signals of all shots in real time.

Before each live broadcast and/or production, a series of tests will be conducted to verify, synchronise and fine-tune the subtitling, at least 3 hours before live broadcasts.

8.3.3.3.3 Work spaces

The subtitling team that travels to the production venue will require a working area spanning at least 16 sqm.

This area will require heating or air conditioning depending on the season, adequate lighting, a 32A power supply, Internet access, and tables and chairs (the number varies from one production to another).

The team needs to be able to communicate via a talkback network with the technical and production teams in Strasbourg, and with the editor in the BO vehicle via the production network.

8.3.3.3.4 Signal distribution

When subtitles are produced at the production side, the 'Producer' will provide an SD down-converted signal of the recording in the subtitling room with embedded sound, and separate return channels covering the broadcast of the programme in French and the programme in German (§ 13.3 [ARTE programme satellite broadcasts](#)).

8.3.3.3.5 Composing live subtitles

The files for subtitling must conform to EBU N19, the guidelines in this document (see § 3.6 [Subtitling](#) and § 4 [Subtitling Guidelines](#)), and the following:

- Make sure subtitles fit into 2 lines at most, and place them in teletext rows 20 (14h) and 22 (16h)
- Send subtitles manually, with no timecodes
- Always indicate S/T (French) or U/T (German) at the start of the programme, after a blank subtitle
- Place a blank subtitle after intervals
- Include the Copyright in the closing credits, in the spot designated by an ARTE G.E.I.E. representative during live broadcast preparation

8.3.3.4 Broadcast management and coordination

The preliminary cue sheet needs to be sent to the team in charge of broadcast continuity at ARTE G.E.I.E. as soon as it is available.

On the day of the broadcast, the final cue sheet needs to be sent to the team in charge of broadcast continuity and the Playout Manager at ARTE G.E.I.E., at the latest 2 hours before the broadcast starts.

The Playout Manager will need a detailed cue sheet with the programme Em numbers (sets and other components) to sequence the programme on the master control panel as conveniently as possible.

During the live broadcast, the 'Producer' ensures the programme remains within the predetermined timeframe. Any overruns will need to be negotiated with the Playout Manager.

The Playout Manager determines when the programme goes on air and counts down from 10 to 0 to the production vehicle. At the end of the programme, the production vehicle counts down from 10 to 0. The 'take' on the master control panel takes place at -3 seconds to accommodate the pre-roll required for the master control automation.

8.3.3.5 Self-promotion material

Content to produce trailers and preludes for the live broadcast programme must reach ARTE G.E.I.E. 4 weeks before the broadcast date.

The 'Producer' will provide the audio and video components directly associated with the broadcast programme. If that is absolutely impossible, content pertaining to the production site and iconography may be used.

This content is to be sent to the team in charge of production packaging at ARTE G.E.I.E.

8.3.3.6 Credits and inter-titles

The 'Producer' is responsible for the opening and closing credits, and inter-titles (acts, live venues, actors' names, etc).

These credits need to be in French and German.

The 'Producer' is also responsible for spelling and grammar, and the programme manager at ARTE G.E.I.E. will review them.

8.3.3.7 On-site recording

The programme needs to be recorded in the production vehicles on HDCAM SR (vehicle output before transmission). The 'Producer' will use this recording to produce and deliver an RFB version to ARTE G.E.I.E.

8.3.3.8 Sharing costs

An estimate recapping the costs will be sent to the 'Producer' before each production.

The 'Producer' and ARTE G.E.I.E. will discuss arrangements for splitting unusual costs beforehand.

8.3.3.9 Production costs

UNIT – Production costs	ARTE G.E.I.E. – Production costs
Presenter 1 fees	Presenter 2 fees if there are 2 hosts
Presenter 1 travel and accommodation expenses	Presenter 2 travel and accommodation expenses
Stylist/Hairdresser/Assistant	Stylist/Hairdresser/Assistant
Programme shooting equipment	ARTE G.E.I.E. Production Manager (travel, meals, accommodation, telephone, etc)
Equipment transport if required (vehicle, driver, travel and accommodation, etc)	Replacement for Production Manager working off-site
Nodal live uplink technician (travel, meals, accommodation, telephone, etc)	Nodal survey technician (travel, meals, accommodation, telephone, etc)
Transmission (Uplink, connection, technician and associated expenses)	
ISDN line (orders + consumption)	
HD system rental (recording, editing, simultaneous time-delay, broadcasting, LSM-like)	

8.3.3.10 Multilingual versions

UNIT – Multilingual version costs	ARTE G.E.I.E. – Multilingual version costs
Fees and per-diems for interpreters working on language version 1	Fees and per-diems for interpreters working on language version 2
	Programme Manager (travel, meals, accommodation, telephone, etc), for the survey and live broadcast
	Subtitling coordinator (travel, meals, accommodation, telephone, etc), survey and live
Subtitlers and Choir Master for language version 1 (fees and travel, telephone and other expenses)	Subtitlers and Choir Master for language version 2 (fees and travel, telephone and other expenses)
50 % of Nodal Subtitling Technician costs (travel, meals, accommodation, telephone, etc) if programme requires subtitling in both languages	100 % of Nodal Subtitling Technician costs (travel, meals, accommodation, telephone, etc) if programme requires subtitling for language version 2
50 % of Subtitling Production Manager costs (contract and travel, telephone and other expenses) if ARTE G.E.I.E. is in charge of subtitling language versions 1 and 2	100 % of Subtitling Production Manager costs (contract and travel, telephone and other expenses) if ARTE G.E.I.E. is only in charge of subtitling language version 2
50 % of subtitling equipment transport (driver contract, driver fees, telephone, vehicle rental, loading and unloading costs) if Central is in charge of subtitling language versions 1 and 2	100 % of subtitling equipment transport (driver contract, driver fees, telephone, vehicle rental, loading and unloading costs) if ARTE G.E.I.E. is only in charge of subtitling language version 2
50 % of mobile or other subtitling office rental, including cabling, electricity consumption, etc if Central is in charge of subtitling language versions 1 and 2	100 % of mobile or other subtitling office rental, including cabling, electricity consumption, etc if ARTE G.E.I.E. is only in charge of subtitling language version 2
50 % of interpreter booths if interpreting is required for both language versions	100 % of interpreter booths if interpreting is only required for language version 2
50 % of Strasbourg sound team if interpreting is required for both language versions	100 % of Strasbourg sound team if interpreting is only required for language version 2
50 % of meals for Strasbourg sound team if interpreting is required for both language versions	100 % of meals for Strasbourg sound team if interpreting is only required for language version 2

8.3.3.11 Production meeting agendas and work plans

See § 13.4 [Production sheet](#) for a production sheet template.

9 GUIDELINES FOR ARTE JOURNAL

ARTE G.E.I.E. uses specific tools and workflows for ARTE Journal.

The general guidelines in this document apply to ARTE Journal productions.

Under particular conditions (wars, crises, etc), shooting with non-broadcast equipment (e.g. mobile telephones) is authorised provided the ARTE Journal editorial team green-lights them beforehand.

Content deliveries – scheduled and/or news-related – via the ARTE G.E.I.E. FTP site must conform to the formats and data rates stated in § 13.5 [News FTP HD Transmission Sheet](#).

10 GUIDELINES FOR NEW MEDIA

These guidelines principally apply to audiovisual programmes produced exclusively for new media platforms (the Web, mobile telephones, etc).

“Cross Media” programmes (for TV and Web platforms) are considered Broadcast programmes, and must be handled as such. In these cases, all relevant ARTE G.E.I.E. guidelines apply (see § 3 [Technical Guidelines](#), § 6 [RFB delivery guidelines](#), § 7 [Guidelines for productions assembled at ARTE G.E.I.E.](#), and § 8 [Guidelines for external productions](#)).

10.1 AUDIOVISUAL FILES

10.1.1 Shooting

If you are producing programmes exclusively for new media, we advise you to shoot them in **progressive** mode.

If it is necessary to use broadcast production equipment and/or if the production is to be TV broadcast as well as webcast, then the production must be shot in interlaced mode. If you are transcoding Web programmes, always switch to non-interlaced mode.

10.1.2 Encoding new media components

Encode Low Rate files for ARTE’s web platforms (ARTE.TV, ARTE CREATIVE, etc) as follows:

1	Container	MP4
2	Video encoding	H264 – Advanced Video Codec 1280x720 : AVC, Main@L3 ou Main@L3.1 1920x1080 : AVC, Main@L4 ou Main@L4.1
3	Extension	.mp4
4	Resolutions	In progressive mode, de-interlaced: 1280 x 720 or 1920 x 1080 for HD 16:9 video,
5	Frames	25 fps, CFR only (Constant Frame Rate)
6*	Video bitrate	3 Mbit/s : 1280 x 720 6 Mbit/s : 1920 x 1080
7	Broadcast mode	Select “Streamable” in the encoder
8	Audio encoding	AAC
9	Audio bitrate	192 kbit/s, CBR
10	Sampling frequency	48 kHz, 16-bit
11	Audio	1 Stereo per video file encoded

* POINT 6: Generally speaking, 3 Mbps (1280 x 720) or 6 Mbps (1920 x 1080) is mandatory. Use of any other bitrate requires prior approval.

10.1.3 Live Stream Web Encoding

LoRes Stream for the ARTE's Web platforms must be encoded with the characteristics described in the following chapters.

Subsequent to the Live, within a maximum period of 24 hours, the 'producer' will deliver a clean file according to the technical guidelines of ARTE (see § 10.1.2 [Encoding new media components](#))

TECHNICAL GUIDELINES FOR LIVE EVENTS IN HD

1	Video codec	MPEG-4 AVC - Main profile
2	Resolution	1280 x 720
3	Format	16/9 - square pixels No letterbox, no anamorphic
4	Frame rate	25 fps CFR only (Constant Frame Rate)
5	Video bitrate	3 Mbit/s, CBR in progressive mode, de-interlaced
6	Key frame interval (GOP)	Maximum : 4 sec. or 100 frames
7	Audio codec	AAC – 1 stereo audio stream
8	Audio bitrate	192 kbit/s, CBR
9	Sampling rate	48 kHz Stereo, 16-bit

10.1.4 Producing second language versions

The deliverable file versions (subtitled and/or voiced-over) will be stated in the order.

10.1.4.1 Subtitle files

For the delivery to the ARTE Web sites, only 2 formats are accepted (STL and SRT). The STL must be favored. Video Timecode for Web Program must start at 00:00:00:00.

10.1.4.1.1 Editing in STL Format

Submit subtitle files to specification EBU Tech 3264. (See § 3.6 [Subtitling](#) § 4 [Subtitling Guidelines](#)).

Reminder:

- 37 useful characters, including spaces;
- Use double-height, single-width characters
- Justification codes to burn in subtitles in the correct position are mandatory. Never use spaces to position text
- For the use of foreign accented characters and/or special characters, STL files must be edited for Level 2 teletext display (DSC 2);
- Do not place subtitles in the first 10 useful frames of a programme (audio or video).
- Allow at least 5 frames between two subtitles
- Remove the last subtitle, at the latest, 1 second before programme TC Out
- TC IN and TC OUT of each subtitle must be consistent (No TC Out < to TC IN, No TC In < TC Out of the previous subtitle);
- Never place a subtitle over the programme Copyright
- Only include text for broadcast in the subtitle file. Do not fill out any additional fields or create any zero-duration subtitles

EBU-authorized characters

The subtitle file must comply with the EBU Tech 3264 and may include the characters from the Latin table in Appendix 2.

However, for technical reasons, the use of the following characters is prohibited for ARTE:

\	^		~	←	↑	→	↓	¶	¹	
¼	⅓	⅕	⅞	Ω	ª	¸	ij	IJ	¡	¬

Forbidden characters

The use of forbidden characters causes errors during broadcast.

In addition, in some cases, the following characters may be replaced on reception:

Replaced characters	@	[]	`	{	}	'	“	'	”	×
Displayed characters	*	()	'	()	'	”	'	”	X

Replaced characters

10.1.4.1.2 SRT Format

The rules for compositing subtitles in SRT Format follow those for compositing in STL format. (See [Editing in STL Format](#) § 10.1.4.1.1).

SRT Subtitles consist of 4 parts:

- A number identifying each sequential subtitle
- The Timecode that the subtitle should appear on the screen
- Subtitle text
- A blank line containing no text, indicating a new subtitle

Example:

```
1
00:02:17,440 --> 00:02:20.375
Here is an example of SRT file

2
00:02:25,476 --> 00:02:27.501
Well
```

10.1.4.1.3 Subtitling of foreign languages

For the upload of programs on its Web-platform, ARTE can add subtitles in foreign versions (other than in German and French). See § 13.2 [Subtitling of foreign versions](#).

As for other versions of subtitles (G and F) these languages must use only character codes defined for the Latin alphabet (EBU Tech. 3264, Appendix 2 Character code table 00) It is the case for example of the following languages (non-exhaustive list):

- English
- Spanish
- Finnish
- Italian
- Latvian
- Dutch
- Norwegian
- Polish
- Swedish

To use characters, other than those used for the language for which it provides subtitling (Those of the Latin national option Sub-Sets - Table 36, Latin National Option Sub-sets, ETSI 300 706), the provider must ensure that the file is edited for a Teletext Level 2 display (DSC 2). See [File header \(GSI block\)](#) § 3.6.1.

10.1.5 Multilingual versions

Please deliver a file for each version of each programme for new media:

- VO or VOA or VOF
- VA and/or VF
- VS

The deliverable versions will be stated in the order.

10.2 COPYRIGHT NOTICE

Every programme delivered to Strasbourg must include a copyright notification form. See § 13.6 [Copyright notification form](#) for the template.

10.3 CONTACT

For ARTE FUTURE

prodartefuture@arte.tv

For ARTE CREATIVE

prodartecreative@arte.tv

The contacts with the Programme Managers of ARTE G.E.I.E. continue to be at the individual addresses (firstname.name@arte.tv)

10.4 DELIVERY ADDRESS

The delivery address is: <http://productors.arte.tv>

The Login and password should be requested at the Production department of ARTE G.E.I.E.

Postal Address :

ARTE G.E.I.E

Secteur Co-production et acquisition de programmes

4, quai du Chanoine Winterer

CS 20035

F-67080 STRASBOURG cedex

France

11 GUIDELINES FOR MARKETING

11.1 TECHNICAL GUIDELINES

All delivered components must be HD and comply with the [Technical Guidelines](#), § 0 of this document, i.e.:

- § 3 [Technical Guidelines](#)
 - § 3.1 [File formats](#)
 - § 3.2 [Video](#)
 - § 3.3 [Audio](#), 3.3.1 [Loudness measurement](#)

And § 3.9 [Specific technical guidelines for production](#)

11.2 AUDIO CONFIGURATION

The following audio configuration guidelines apply regardless of whether content is delivered in files or on tapes:

- Tracks 1 & 2: VF or VI (Stereo)
- Tracks 3 & 4: VF (Stereo)

11.2.1 Programmes that will only be broadcast in Germany:

- Tracks 1 & 2: VA (Stereo)
- Tracks 3 & 4: VA or VI (Stereo)

11.2.2 Multilingual versions:

- Tracks 1 & 2: VO (Stereo)
- Tracks 3 & 4: VI or VS

See the rules for naming in § 6.7.2 [Definition of the Audio versions delivered](#).

Mix VI music, audio and ambient sound linearly (no pre-mixing)

11.3 FILE DELIVERY

11.3.1 File formats

Deliver digital programmes or rushes encoded as follows (1080i/25):

- AVC Intra 100, 112 Mbps (4.2.2, 1920 x 1080, 10-bit)
- DNxHD 185x, 184 Mbps (4.2.2, 1920 x 1080, 10-bit)
- ProRes HQ, 184 Mbps (4.2.2, 1920 x 1080, 10-bit)
- XDCAM 50, 'Long GOP', 50 Mbps (4.2.2, 1920 x 1080, 8-bit)

Encapsulate video and audio files in OP-1a MXF (*.mxf) or QuickTime formats as appropriate.

- Encode audio files with Wave, with *.wav extensions, PCM, mono, stereo, 48 kHz sampling frequency, 24-bit quantisation.

11.3.2 Naming components

Name files as follows:

- Billboard:
 - VA_BLBD_NOM_IN
 - VA_BLBD_NOM_OUT
 - VF_BLBD_NOM_OUT
 - VF_BLBD_NOM_IN
- Spot:
 - VA_SPOT_NOM
 - VF_SPOT_NOM

11.3.3 File delivery address

The FTP server address is <ftp://ftptec.arte.tv>.

Please ask the production packaging team (ARTE G.E.I.E) you are working with for your ID and password.

11.4 PHYSICAL SUPPORTS DELIVERY

11.4.1 Physical supports deliveries

We only accept physical support delivery if file transfer is unfeasible. In these cases, follow the guidelines in § 0, [RFB physical support](#).

To ensure broadcast is seamless and continuous, keep the first and last second of content free from useful messages (sound and picture).

The media we accept for Billboards and Spots follow:

- HDCAM SR (4.2.2, 1920 x 1080, 10-bit)
- XDCAM HD 422 (4.2.2, 50 Mbps (4.2.2, 1920 x 1080, 8-bit)

11.4.2 Delivery address

ARTE G.E.I.E

Marketing Sponsoring (Billboard)

4, quai du Chanoine Winterer

CS 20035

F-67080 Strasbourg cedex

France

11.5 COPYRIGHT NOTIFICATION FORM

Include a copyright notification form for *every component you deliver*. See § 13.6 [Copyright notification form](#) for a template.

11.6 DELIVERY

To allow enough time to review compliance and multilingual processing for broadcast, please deliver sponsoring, billboard and spot content **7 days before broadcast**.

11.7 CONTACTS

Marketing Sponsoring

Tel: +33 3 88 14 21 38

Tel: +33 3 88 14 21 47

E-Mail: marketing.billboard@arte.tv

12 GUIDELINES FOR COMMUNICATION MATERIAL

12.1 PRESS TEXT

In order to ensure a consistent quality of information provided for programmes, the supplied press texts should arrive on time and meet journalistic standards. Below are the principal criteria for preparation of the texts:

12.1.1 Formats

Each programme must be delivered with two texts of different sizes:

- Short text [ARTE SHORT]: between 380 and 600 characters, spaces included;
- Long text [ARTE LONG]: between 1400 and 1600 characters, spaces included;

12.1.2 Guideline for writing press texts

A [Guide to the delivery of communication material](#) is available in Appendix 13.7

12.1.3 Delivery

The texts are to be delivered 10 weeks before the broadcast of the programme.

12.2 TITLES

12.2.1 Formats

12.2.1.1 Titles

Titles must have no more than 40 characters, spaces included.

12.2.1.2 Subtitles

Subtitles must have a maximum of 65 characters, spaces included.

(we recommend a limit of 40 characters).

12.2.2 Delivery times

Titles are to be delivered 10 weeks before broadcast of the programme concerned.

12.3 PRESS PHOTOS

For each programme, one or more photos are to be delivered.

12.3.1 Photo Files

- Format
 - JPEG files
 - Definition 1920 x 1080 pixels
 - Resolution de 300 dpi
 - Framing in 'landscape' mode is preferred.

12.3.2 Header of JPEG file (IPTC)

The header of the JPEG file must include the following minimum information:

IPTC header with:

- IPTC-Header with:
 - Title
 - Copyright
 - Supplier ("Pôle" ARTE)
 - Copyright Notice
 - Usage
 - Contact (with address and phone number)
- Description of picture
 - 150 characters maximum, including spaces.

12.3.3 Delivery times

Photos are to be delivered 10 weeks before broadcast of the programme concerned.

13 APPENDICES

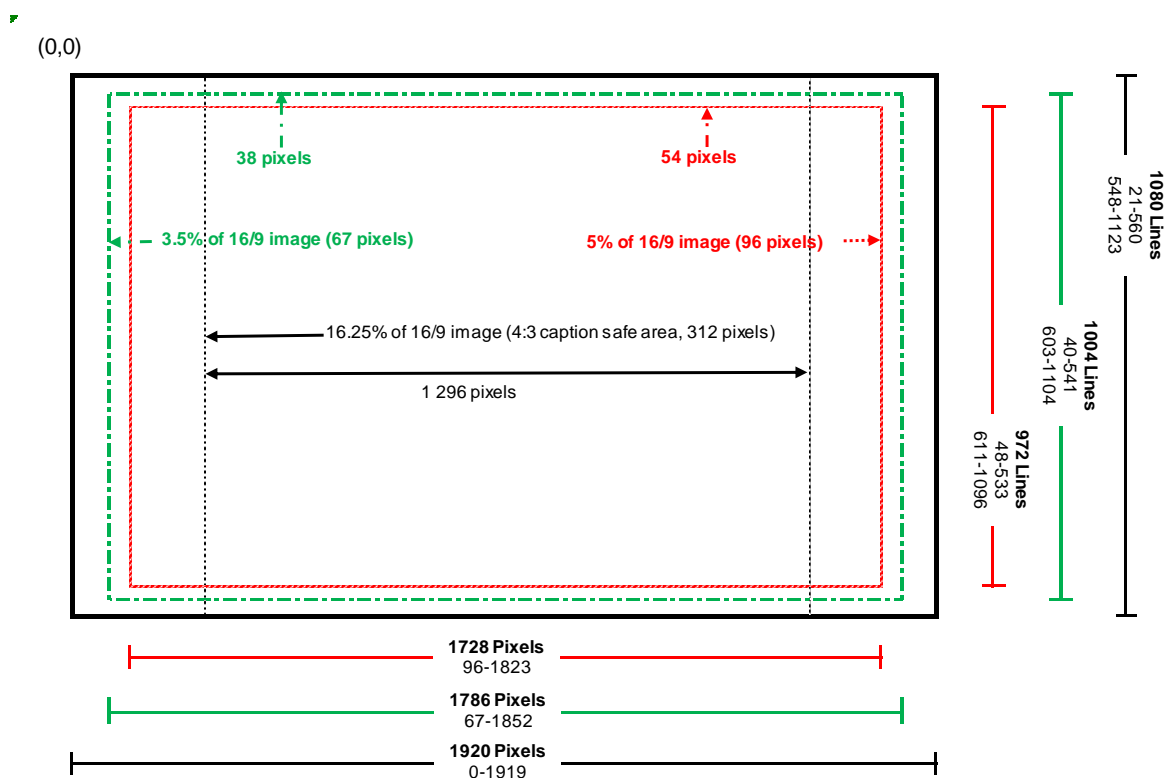
13.1 SAFE AREAS

The goal is that all titles, fonts and graphics look the same as they looked when they were produced, on every receiver. The best way to do this is to place them all in the recommended title area.

R 95 EBU, Safe Area for 16:9 Television Productions:

Scanning raster 1080i and 1080psf 16:9 safe areas for 16:9 presentation

Image format: 16:9 Full Format



The total number of lines is 1125 (active lines from 21 to 560 and 584 to 1123 inclusive = 1080 lines).

The complete digital line comprises 2200 pixels. Of these, the "digital active line" comprises 1920 pixels (numbered from 0 - 1919 inclusive). All active pixels are included in the image active line.

The safe area for subtitling corresponds to image 4/3 (1296 pixels)

13.2 SUBTITLING OF FOREIGN VERSIONS

GSI block

The GSI block must contain at least the following data:

- Code Page Number 850
- Format Code STL 25.01 (25 fps)
- Character Code Table number: 00 Latin
- Language Code (e.g. English =09, Spanish =0A hexa.)
- Original Programme Title:
- Max. Number of Displayable Rows: 23
- Time Code Start-of-Programme:

Page Code	Txt	Characters Code (CCT number)	Language Code (Hex)	Language
850	Multilingual	Niv. 1	00 Latin Alphabet	08 German
850	Multilingual	Niv. 1	00 Latin Alphabet	9 English
850	Multilingual	Niv. 1	00 Latin Alphabet	0A Spanish
850	Multilingual	Niv. 1	00 Latin Alphabet	27 Finnish
850	Multilingual	Niv. 1	00 Latin Alphabet	0F French
850	Multilingual	Niv. 1	00 Latin Alphabet	15 Italian
850	Multilingual	Niv. 1	00 Latin Alphabet	18 Latvian
850	Multilingual	Niv. 1	00 Latin Alphabet	1D Dutch
850	Multilingual	Niv. 1	00 Latin Alphabet	1E Norwegian
850	Multilingual	Niv. 1	00 Latin Alphabet	20 Polish
850	Multilingual	Niv. 1	00 Latin Alphabet	28 Swedish

13.3 ARTE PROGRAMME SATELLITE BROADCASTS



ARTE PROGRAMMES SATELLITE BROADCAST

	HOT BIRD	ASTRA 1	ASTRA 1
Standard	HD MPEG 4 1080i	HD MPEG 4 720P	SD MPEG 2
Position	13° East	19,2° East	19,2° East
Fréquency (MHz)	11681 H	11494 H	10744 H
Data format	27500 ksymb/s FEC 3/4 8PSK (DVB-S2)	22000 ksymb/s FEC 2/3 8PSK (DVB-S2)	22000 ksymb/s FEC 5/6
Sousporteuses audio (MHz)	ServPID 307 VidPID 571 AudPID_fr Dolby 572 AudPID_vo Dolby 573 AudPID_pad Dolby 574 AudPID_all Dolby 577	ServPID 10302 VidPID 5111 AudPID_all 5112 AudPID_fr 5113 AudPID_vo Dolby 5116 AudPID_ad 5117	ServPID 28724 VidPID 401 AudPID_all 402 AudPID_ad 403 AudPID_vo 407 AudPID_fr 408
Languages	French VO AD German	German French VO AD / French / VO	German AD / French / VO VO French
Open subtitle	French	German	German
Teletext		D + F	D + F
Closed captioning	French VO	German (Seite 150) French (Seite 888)	German (Seite 150) French (Seite 888)

AD = Audiodescription

VO (Original version)

ARD-Digital

13.4 PRODUCTION SHEET**German Title – French Title****Date – Place**Live Time Delay Recorded Tape delivery

Production n° [Em]

Production location: Click here to add text.**Pole / Producer:** Click here to add text.**Executive production:** Click here to add text.**ARTE editor:** Click here to add text.**ARTE production manager:** Click here to add text.**Cost centre:** Click here to add text.**BROADCAST****Shooting starts:** Click here to add text.**On air** Click here to add text.BOTH COUNTRIES FRANCE GERMANY **Time delay:** Strasbourg Production venue **Off air:** Click here to add text.BOTH COUNTRIES FRANCE GERMANY **Duration:** Click here to add text.**TRANSMISSION / DELIVERY****Delivery:** Transmission Tape **Format:** Click here to add text.**Supplier:** Click here to add text.**Transmission:** Test: Click here to add text.

Live: Click here to add text.

Audio: AES 1: 1 Music/Ambient sound Left Mono VA 2 Music/Ambient sound Right Mono VF AES 2: 1 VA Presenter VA guests 2 VF Presenter VF guests **Return Programme:** German French

MULTILINGUAL VERSIONS

Live interpreting:	Strasbourg	<input type="checkbox"/>	Production venue	<input type="checkbox"/>	
	Number of booths:	Click here to add text.			
Presenter:	Click here to add text.	VA	<input type="checkbox"/>	VF	<input type="checkbox"/>
Guests:	VA	<input type="checkbox"/>	VF	<input type="checkbox"/>	
	Langue tiers:	<input type="checkbox"/>	Click here to add text.		
N-1 return channel:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	
Subtitling:	Strasbourg	<input type="checkbox"/>	Production venue	<input type="checkbox"/>	
	VA	<input type="checkbox"/>	VF	<input type="checkbox"/>	

Simultaneous:	TV	<input type="checkbox"/>	Click here to add text.	
	Radio	<input type="checkbox"/>	Click here to add text.	
	Other	<input type="checkbox"/>	Click here to add text.	
Web:	Live Streaming	<input type="checkbox"/>	ARTE +7	<input type="checkbox"/>
Logo:	Click here to add text.			
Credits & synth:	Bilingual			

Subjects: Click here to add text.

Provisional cue sheet: Attach

Links:

Back to Strasbourg between live set broadcasts and programmes from the broadcast control room: Yes No Number Click here to add text.

Details:

Click here to add text.

Promotional content delivery:

Click here to add text.

List of backup programmes

Click here to add text.

CONTACT LIST

UNIT: Click here to add text.

PRODUCER: Click here to add text.

EXECUTIVE PRODUCER: Click here to add text.

FESTIVAL CONTACT: Click here to add text.

ARTE G.E.I.E.:

Unit Manager: Click here to add text.

Programme Supervisor: Click here to add text.

Assistant Editor: Click here to add text.

Production Manager: Click here to add text.

Sound Engineer: Click here to add text.

Transmission coordinator: Click here to add text.

Driver + vehicle plate: Click here to add text.

SUBTITLING:

Subtitling Coordinator: Click here to add text.

Subtitling Manager: Click here to add text.

Subtiter 1: Click here to add text.

Choir Master 1: Click here to add text.

Subtiter 2: Click here to add text.

Choir Master 2: Click here to add text.

FTP address: <ftp://ftptec.arte.tv>

Login ID: XXX

Password: xxx

Folder: Create during the project if required

INTERPRETATION

Supervisor: Click here to add text.

Interpreter 1: Click here to add text.

Interpreter 2: Click here to add text.

...

STRASBOURG TRANSMISSION

Transmission coordinator: +33 (0)3 88 14 xx xx
Transmission technician: +33 (0)3 88 14 xx xx / xx xx / xx xx
Central ingest: +33 (0)3 88 14 xx xx

BROADCAST

Master control room Tel: +33 (0)3 88 14 xx xx
E-Mail: realisateur@arte.tv
Production CJI Tel: +33 (0)3 88 14 xx xx
Broadcast CJI Tel: +33 (0)3 88 14 xx xx
Multimedia CJI Tel: +33 (0)3 88 14 xx xx
Supervisor on duty Tel: +33 (0)6 xx xx xx xx
secteurcontinuedantenne@arte.tv

PRESENTERS/GUESTS

Click here to add text.
Click here to add text.
Click here to add text.

SUBJECTS

Click here to add text.
Click here to add text.
Click here to add text.

SUBTITLING

Click here to add text.
Click here to add text.
Click here to add text.

INTERPRETATION

Click here to add text.
Click here to add text.
Click here to add text.

TRANSMISSION DETAILS

Supplier: Name
Contact on location: Name
Mobile phone: [Click here to add text.](#)

STATION ON LOCATION DATES & TIMES

From jj/mm/aaaa 12h00 UTC
To jj/mm/aaaa 22h00 UTC

TRANSMISSION DATES & TIMES

Tests jj/mm/aaaa 18h00 UTC
Live jj/mm/aaaa 21h00 UTC

TRANSMISSION DATA

Destination: [Click here to add text.](#)
Satellite: [Click here to add text.](#)
Sat. Access: [Click here to add text.](#)
U/L Freq.: [Click here to add text.](#)
U/L Polarity: Y
U/L Freq.: 11,135.8300
D/L Polarity: X
FEC: **3/4**
Symbol: [Click here to add text.](#)
Modulation: DVB-S2 8PSK
Standard: HD
Rolloff: 0.25
Audio 1: [Click here to add text.](#)
Audio 2: [Click here to add text.](#)
Audio 3: [Click here to add text.](#)
Audio 4: [Click here to add text.](#)
Line setup location and designation:
[Click here to add text.](#)

Line setup location contact:

Click here to add text.

TIMELINE

Click here to enter a date.

Time Click here to add text.

Click here to enter a date.

Time Click here to add text.

WHO'S WHO

Click here to add text.

TRAVEL/ACCOMMODATION

Click here to add text.

VEHICLE RENTAL

Click here to add text.

ARTE TELEPHONE RENTAL

Click here to add text.

OTHERS

Click here to add text.

13.5 NEWS FTP HD TRANSMISSION SHEET

HD FTP TRANSMISSION SHEET

Send to:

Date:

ARTE FTP server address: <ftp://ftptec.arte.tv>

User ID = xxxxx

Password = xxxxx

File name:

File size:

Ratio: 16:9

Duration: Minutes seconds

Journalist:

Team:

Audio designation:

audio1 audio3

audio2 audio4

Types of files accepted:

IMAGE AND SOUND

MPEG 4 container (*.mpeg 4) or QuickTime (*.mov):

IMAGE: Resolution 1920 x 1080i/25 odd field dominant

Compression codec H264, bitrate: 20 Mbps – Other

SOUND: AAC sampling frequency 48kHz

Quantisation 24-bit 16-bit / Mono Stereo

AAF container (*.aaf):

IMAGE: Resolution 1920 x 1080i/25 odd field dominant

Compression codec DNxHD, bitrate 120 Mbps 185 Mbps

SOUND: Sampling frequency 48kHz

Quantisation 24-bit 16-bit / Mono Stereo

SOUND ALONE

*.wav: Sampling frequency 48kHz Quantisation 24-bit 16-bit Mono Stereo

Important

ARTE broadcasts are 1080i/25, so we only accept that format.

Number of files: 0

N°	File name	Size (Mbit)
Example:	MEYER_SYRIE_DESERTEUR	59.5
1-		0.00
2-		0.00
3-		0.00
4-		0.00

13.6 COPYRIGHT NOTIFICATION FORM

TO: Click here to add text. FAX: Click here to add text.
 TITLE: Click here to add text. PRODUCTION: Click here to add text.
 AUTHOR: Click here to add text. BROADCAST: Click here to add text.

The mentioned programme contains musical sequences: NO YES,

if yes fill in the table below:

TITLE	WRITTEN BY	LABEL	PERFORMED BY	TC IN	TC OUT	DURATION

The mentioned programme contains audio-visual and/or iconographic archive footage:

NO YES, if yes fill in the table below:

SOURCE	PRODUCED BY	RIGHT HOLDER	TC IN	TC OUT	DURATION

13.7 GUIDE TO THE DELIVERY OF COMMUNICATION MATERIAL

13.7.1 Recommendations for the composition of titles

13.7.1.1 Definition of the terms 'title' and 'subtitle'

By 'title' and 'subtitle' we mean the definitive titles indicated by the supplying member such as they appear in the credits of the programme. It therefore does not concern working titles that may evolve during the course of the project.

At 9 weeks before broadcast (at the moment of the press communication of the programme to Germany), the title and subtitles may only contain editorial information. Information related to the programme planning (e.g. "not intended for broadcasting"), the programme version (e.g. "Version B") or editorial remarks (e.g. "unconfirmed working title") must not be specified in these fields.

13.7.1.2 Length of programme title

Title and subtitle fields are limited to 80 characters for technical reasons.

13.7.1.3 Upper and lower case

For French titles

By default, all titles must be written in lower case except the first letter of the title, and unless the existing original title is capitalized (e.g. cinema released films). For proper nouns, only the first letter of the word should be in upper case and the rest in lower case (with exceptions - see spelling and grammatical rules for the use of capital letters).

For German titles

The upper and lower cases must be observed in accordance with the German spelling rules. Exceptions are possible after consultation with the appropriate department of ARTE G.E.I.E

13.7.1.4 Position of the article

The article should be placed at the beginning of the title.

13.7.1.5 Special characters and accented characters

Special characters such as @; %; # ... should, if possible, not be used, in order to avoid printing and character compatibility problems between the Groups databases.

Accented characters and diereses should be used.

Accents and special characters (letters, dieresis etc.) are only supported for languages from the German and Romansh-speaking areas.

In the German titles the "ß" should be used in accordance with spelling rules.

13.7.2 Special rules for certain types of programmes

13.7.2.1 Fictional series comprising several episodes

The title corresponds to the series title and, in brackets, the number of the episode. Where appropriate, the season number is mentioned in the title. Indeed, references to season numbers and episode numbers must be specified in the title, because only this field is used for all broadcast vectors.

The subtitle corresponds to the title of the episode.

Example:

- Title: Borgen - Season 3 (9/10)
- Subtitle: Sense and Sensibility

Concerning series, which are not intended to be aired one after another, the episode number should not be specified.

Example:

- Title: The Last Witness
- Subtitle: The Triangle of Death

13.7.2.2 Documentary series

The title (original title and national title) corresponds to the series title. If the episodes are to be broadcast in a chronological order, the episode number and the total number of episodes must be specified in the title.

If there is an episode title, this should be mentioned in the subtitle.

Example:

- Title: Jews and Muslims. So Far, So Close (3/4)
- Subtitles: The Separation: 1789 - 1945

13.7.2.3 Magazines

The title (original title and national title) indicates only the name of the magazine. The episode number must not be mentioned in the title. The content of the subtitle (original subtitle and national title) varies in relation to each magazine. For most magazines, it contains the topic or main topics of the episode. In some cases, there is no subtitle. In this case, it is recommended that number of the episode and where appropriate, the season number can be specified.

Since each magazine is a special case, the relevant departments of ARTE should agree on the appropriate input mode for the title and subtitle.

For magazines, the title must be available no later than three weeks prior to the broadcast date in order to appear correctly in the TV Guide.

Special cases: "Court-Circuit"

The magazine "Court-Circuit" consists of short films and additional modules. These modules and their titles are created and filled in by the Cinema-Fiction department of ARTE G.E.I.E. However, the titles of the short films remain the responsibility of the supplier.

13.7.2.4 Web programmes

Indications concerning the format or the support must not figure in the title (eg "app", "specific web site" or "Internet version"). The rules for the creation of titles for web series are analogous to the rules applying to series.

13.9 DESCRIPTION DES VUES ORACLES

13.9.1 Description des vues Oracles pour Arte France :

Bon de livraison prévisionnel –

ARTEF_TRANSFERT_G.E.I.E._PREV avec les métadonnées suivantes :

- Numéro de programme ARTE G.E.I.E.
- Remontage
- Type (VIDEO, AUDIO, SOUS-TITRE)
- Label (VOF, VS, ... pour une essence audio ; VF-MAL, VO-FRA, ... pour les sous-titres)
- Langue

Essences vidéo - ARTEF_TRANSFERT_G.E.I.E._PAD_VIDEO avec les métadonnées suivantes :

- Numéro de programme ARTE G.E.I.E.
- Remontage
- Numéro de partie
- Support source
- TC début
- TC fin
- TC image début
- TC image fin
- TC son début
- TC son fin
- Format d'image

Essences audio - ARTEF_TRANSFERT_G.E.I.E._PAD_AUDIO avec les métadonnées suivantes :

- Numéro de programme ARTE G.E.I.E.
- Remontage
- Numéro de partie
- Langue (FRA, ...)
- Version (VOF, ...)
- Type (Stéréo, ...)

Essences sous-titres - ARTEF_TRANSFERT_G.E.I.E._PAD_ST avec les métadonnées suivantes :

- Numéro de programme ARTE G.E.I.E.
- Remontage
- Label (VF-FRA, ...)
- Nombre de sous-titres
- TC premier sous-titre
- TC deuxième sous-titre
- TC dernier sous-titre
- UT
- ST

Commentaires - ARTEF_TRANSFERT_G.E.I.E._NEWCOMM avec les métadonnées suivantes :

- Numéro de programme ARTE G.E.I.E.
- Remontage
- Type de commentaire (VIDEO, AUDIO, SOUS-TITRE)
- Nom du fichier auquel le commentaire se rapporte
- Commentaire

13.9.2 Oracle-Ansicht Beschreibung für ARTE Deutschland:

Lieferumfang :

AD_VFT_LIVRAISON_ENTETE mit folgenden Metadaten :

- Lieferumfang ID
- ARTE GEIE EM Nummer
- Remontage
- Liefernde Anstalt
- Folgeanzahl

AD_VFT_LIVRAISON_ELEMENT mit folgenden Metadaten :

- Lieferumfang ID
- Art der Datei (V, A, U, T)
- Label (VO, VOA ... für Audio ; VO-ALL,... für Untertitel, ...)
- Sprache
- Format (HD, SD, 3D für Video)
- Format Zusatzinfo (HD-A100, HD-XDCAM50, SD-IMX30, SD-DVCPRO25, SD-DVCPRO50)

Video - AD_VFT_ELE_VIDEO mit folgenden Metadaten :

- Lieferumfang ID
- ARTE GEIE EM Nummer
- Remontage
- Liefernde Anstalt
- Folgeanzahl
- Format (HD, SD, 3D)
- Format Zusatzinfo (HD-A100, HD-XDCAM50, SD-IMX30, SD-DVCPRO25, SD-DVCPRO50)
- TC Anfang
- TC Ende
- Bildformat
- Technische Abnahme
- Kommentar
- Useful (0 or 1, as long as Arte Deutschland is not able to deliver audio essences alone)

Audio - AD_VFT_ELE_AUDIO mit folgenden Metadaten :

- Lieferumfang ID
- ARTE GEIE EM Nummer
- Remontage
- Liefernde Anstalt
- Folgeanzahl
- Reihenfolge der Sprachfassung
- Label (VOA, ...)
- Sprache
- Tonstatus (Stereo, ...)
- Technische Abnahme
- Kommentar
- Useful (0 or 1, as long as Arte Deutschland is not able to deliver audio essences alone)
- Loudness (0 or 1, to know if the Loudness has been verified by the pole or if it is an archive)

Untertitel - AD_VFT_ELE_SOUS_TITRE mit folgenden Metadaten :

- Lieferumfang ID
- ARTE GEIE EM Nummer
- Remontage
- Liefernde Anstalt
- Label (VA-ALL, ...)
- Anzahl der Untertitel
- TC 1. Untertitel
- TC 2. Untertitel
- TC letzter Untertitel
- Angabe UT/ST
- Kommentar

13.10 WAV AUDIO FILE

Structure and minimal data of the Wav audio file used by ARTE.

13.10.1 Terminology

B (Byte)	= integer on 1 byte
W (Word)	= integer on 2 bytes
DW (Double Word)	= integer on 4 bytes
S[x] (String)	= character string with x characters

13.10.2 Adresses de référence :

a0 = beginning of the section describing the file type

a1 = beginning of the format description section

a2 = start of coded data section

Decimal address	Data	Structure	Hexadecimal values & strings	Technical Parameters ARTE	Description
	chunk type				File type chunk
a0	file_type	S[4]	"RIFF"		Identification of the file type
a0 + 4	file_size	DW			Size of the file
a0 + 8	file_id	S[4]	"WAVE"		Identification of the file
	chunk format				Format descriptive chunk
a1	chunk_id	S[4]	"fmt "		Chunk identification
a1 + 4	chunk_size	DW			Chunk size
a1 + 8	format	W	0100	PCM = 1	Format category
a1 + 10	channels_nb	W	0200	2 channels	Number of channels (double mono / stereo)
a1 + 12	sampling_freq	DW	80BB0000	48 KHz	Sampling frequency
a1 + 16	bytes_per_second	DW	00650400		Number of bytes per second
a1 + 20	bytes_per_sample	W	0600		Number of bytes per sample
a1 + 22	Depth	DW	18000000	24-bit	Number of bits per sample
	Chunk données				Section contenant les données codées
a2	Chunk_id	S[4]	"data"		Chunk identification
a2 + 4	Chunk_size	DW			Chunk size
a2 + 8	données				Start of sound sampling

RIFF = Resource Interchange File Format

PCM = Pulse Code Modulation

A "bext" section (broadcast_audio_extension) is accepted but not usable by the ARTE ingest system.

14 REFERENCES

Recommandations of the CST, de la Ficam et du HD Forum :

- **CST RT 040** Recommendation Technique PAD fichiers Éditeurs

http://www.cst.fr/wp-content/uploads/2014/02/CST-RT-040-TV-2016-Pad_Fichiers_editeurs.pdf

Recommendations of the TPRF-HDTV_(ARD, ZDF und ORF)

- **TPRF-HDTV**

<https://www.irt.de/publikationen/technische-richtlinien/kostenfreie-richtlinien/>

Recommendations of the European Broadcasting Union (UER - EBU):

- **EBU R128 :** Loudness normalisation and permitted maximum level of audio signals

As well as its supplement and annexes:

- **EBU R128 s1** Loudness parameters for Short-form content (adverts, promos, etc.)
- **EBU Tech Doc 3341** Loudness Metering: 'EBU Mode' metering to supplement loudness normalisation in accordance with EBU R 128
- **EBU Tech Doc 3342** Loudness Range: A descriptor to supplement loudness normalisation in accordance with EBU R 128
- **EBU Tech Doc 3343** Practical Guidelines for Production and Implementation in accordance with EBU R 128
- **EBU Tech Doc 3344** Practical Guidelines for Distribution systems in accordance with EBU R 128
- **EBU R 37:** The relative timing of the sound and vision components of a television signal
- **EBU Tech. 3276:** Listening conditions for the assessment of sound programme material: monophonic and two-channel stereophonic
- **EBU Tech. 3299:** High Definition (HD) Image Formats for Television Production
- **EBU Tech. 3264-E:** Subtitling data exchange format
- **EBU R122:** Material Exchange Format Timecode Implementation

Recommendations from European Telecommunications Standards Institute (ETSI):

- **ETS 300 706:** Enhanced Teletext specification

Recommendations from Society of Motion Picture and Television Engineers (SMPTE):

- **SMPTE 12M-2:** Transmission of Timecode in the Ancillary Data Space
- **SMPTE 274:** 1920x1080 Image Sample Structure Digital Representation and Digital Timing Reference Sequences for Multiple Picture Rates
- **SMPTE 292M:** Bit-Serial Digital Interface for High-Definition Television Systems
- **SMPTE 291-1:** Ancillary Data Packet and Space Formatting **SMPTE 299-1:** 24-Bit Digital Audio Format for SMPTE 292 M Bit-Serial Interfaces
- **SMPTE 334-1:** Vertical Ancillary Data Mapping

Recommendations of the Internationale Telecommunication Union (ITU):

- **ITU-R BT.709:** Parameter values for the HDTV standards for production and international programme exchange
<https://www.itu.int/rec/R-REC-BT.709/en>
- **ITU-R BS.1770:** Algorithms to measure audio programme loudness and true-peak audio level

Recommendations of the AES:

- **AES :** Définition du True Peak et du Sample Peak (**voir ITU-R BS 1770-2**)
<http://www.itu.int/rec/R-REC-BS.1770-4-201510-I/FR>

Recommendations of the International Electrotechnical Commission (IEC):

- **IEC 60268-5 :** Effective Frequency Range, Characteristic Modulation Distortion



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