

ARTE G.E.I.E. Complete Technical Guidelines

V2-01-00

December 2025

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
V2-01-00	01/12/2025	Major new version effective from 1 January 2026.

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.

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

We require TV-compatible versions of all programme video and audio content, optimised for distribution on high-quality OTT platforms such as ARTE.tv.

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

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

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

1.1 INFRASTRUCTURE

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

1.2 MULTIPLE USES - one work, multiple broadcast vectors

Media delivered to ARTE G.E.I.E. may be used on both linear distribution vectors (broadcast) and non-linear distribution vectors, including the arte.tv platform and other digital vectors such as social media.

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 arte.tv, social media, etc.)

In other words, always aim for HD and/or UHD 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 Major new version

NOTE: Important information



ARTE G.E.I.E. has made significant changes to its technical platform. This document incorporates these changes: (1080p50, UHD, HDR, XAVC, etc.).

- ☞ This document is being made available before its effective date, set for **1 January 2026**, to enable content to be produced and delivered in accordance with these new technical guidelines from that date.

- ☞ However, for a period of one year, the delivery of programmes based on the previous V1-07-3 guidelines (www.arte.tv/technical-guidelines) will continue to be accepted in terms of their technical elements (standards, formats, codec, etc.) **until 31 December 2026**.

3 TECHNICAL GUIDELINES

3.1 FILE FORMATS

Programmes and rushes are delivered in files.

Files must be created in one of the following two resolutions:

- UHD 2160p / 50 or 25 frames per second / 4:2:2 10-bit
- HD 1080p / 50 or 25 frames per second / 4:2:2 10-bit

The SDR or HDR colour space is set out in § 3.2.2.1.4 and § 3.2.2.1.5 below, and depends on the type of broadcast vector that the RFB is intended for (linear or non-linear):

- HD or UHD linear RFB (Broadcast): ITU-R BT.709 (SDR)
- HD or UHD non-linear RFB (arte.tv platform):
 - ITU BT-2020 / HDR PQ EOTF based on the ITU BT-2100 standard
 - ITU-R BT.709 (SDR)

 NOTE	<p>For HDR RFB delivery, a second RFB must be provided that is strictly identical but in SDR (ITU-R BT.709), whatever the broadcast vector (linear or non-linear).</p>
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3.1.1 RFB file compliance table

Delivery video file	Broadcast vector
RFB HD / UHD – SDR / HDR	All vectors
1080p50/25 – SDR ITU-R BT.709	1 single delivery
1080p50/25 – ITU BT-2020 HDR PQ EOTF - ITU BT-2100	Second delivery in SDR required 1080p50/25 – ITU-R BT.709
2160p50/25 – SDR ITU-R BT.709	1 single delivery
2160p50/25 – ITU BT-2020 HDR PQ EOTF - ITU BT-2100	Second delivery in HD SDR required 1080p50/25 – ITU-R BT.709

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

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

Subtitle files must conform to the exchange format specified by the specification Tech 3264 of the EBU.

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines

3.2 VIDEO

Please avoid cascading and/or converting 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 other formats must, under no circumstances, be concealed by the delivery media format.

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

3.2.1 Standards

Standards and recommendations used in this document:

- 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.
- SMPTE ST 377-1:2019 - Material Exchange Format (MXF) — File Format Specification
- SMPTE ST 379-1:2009 - Material Exchange Format (MXF) — MXF Generic Container
- SMPTE ST 379-2:2010 - Material Exchange Format (MXF) — MXF Constrained Generic Container
- SMPTE ST 381-1:2005 - Material Exchange Format (MXF) — Mapping MPEG Streams into the MXF Generic Container
- SMPTE ST 381-2:2018 - Material Exchange Format (MXF) — Mapping MPEG Streams into the MXF Constrained Generic Container
- ITU-R REC BT.2100-2:2018 - Image parameter values for HDR production and program exchange
- ITU-R REC BT.2020-2:2015 - Parameter values for ultra-high definition television systems for production and international programme exchange
- ITU-R REP BT.2408-4:2021 - Guidance for operational practices in HDR television production
- EBU R 103:2020 - Video signal tolerance in digital television systems (v3.0 – May 2020)
- EBU R 95 Safe areas for 16:9 television production (V1.1 - June 2017)
- SMPTE ST 2084:2014 - High Dynamic Range ElectroOptical Transfer Function Mastering Reference Display
- ST 2086:2018 - Mastering Display Colour Volume Metadata Supporting High Luminance and Wide Colour Gamut Images
- CTA-861.3-A - HDR Static Metadata Extensions

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 Sony XAVC format for its RFB:

- XAVC HD Intra Class 100 CBG profile for HD 1080p / 50 or 25 frames per second (4.2.2, 10-bit, 225 Mbit/s at 50p, 112 Mbit/s at 25p)
- XAVC 4K Intra Class 300 CBG profile for UHD 2160p / 50 or 25 frames per second (4.2.2, 10-bit, 500 Mbit/s at 50p, 250 Mbit/s at 25p).

However, for some deliveries coming only from ARTE Deutschland, a specific workflow allows to accept the XAVC HD Long GOP format,

- Profile XAVC HD Long GOP Class I profile for HD 1080p / 50 or 25 frames per second (4.2.2, 10-bit, 50Mbps) cf. specifications of ARD & ZDF.



Transition period:
Deliveries in 1080i/50 will still be accepted until 31 December 2026 in accordance with ARTE delivery guidelines: V1-07-3 from 1 October 2024 (www.arte.tv/technical-guidelines)

3.2.2.1.2 MXF file format

To improve interoperability and facilitate all its automated processes, ARTE G.E.I.E. requires all MXFOp1a files delivered to comply with the SMPTE ST 377-1:2019 standard, restricted to the characteristics described in the specification SMPTE RDD 32:2017, which applies to the Sony XAVC codec.

The following rules apply to MXF files:

- 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](#)

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines

3.2.2.1.4 SDR – ITU-R BT.709 file profile specifications

RFB-compliant for linear (Broadcast) and non-linear (arte.tv platform) broadcast vectors.
(See 3.1.1 RFB file compliance table).

Name	Specification	
Container	*.mxf - MXF OP-1a according to the specification: SMPTE ST 377-1:2019 - Material Exchange Format (MXF) — File Format Specification	
Codec	Sony XAVC HD Class 100 / Intra / CBG	Sony XAVC 4K Class 300 / Intra / CBG
Resolution	1920 x 1080	3840 x 2160
Frame rate	50 fps 25 fps if shot at 24p or 25p.	50 fps 25 fps if shot at 24p or 25p.
Scan type	Progressive	
Chroma sampling	4:2:2	
Bit depth	10-bit	
Colour space	ITU-R BT.709	
Audio	File can contain up to 8 stereo audio tracks, 24-bit, 48 kHz, PCM – Little-endian.	
Mono/Stereo	<u>Note:</u> 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)	

3.2.2.1.5 HDR – BT-2020 file profile specifications

Compliant exclusively for non-linear RFB (arte.tv platform).

(See 3.1.1 RFB file compliance table).

Name	Specification	
Container	*.mxf - MXF OP-1a according to the specification: SMPTE ST 377-1:2019 - Material Exchange Format (MXF) — File Format Specification	
Codec	Sony XAVC HD Class 100 / Intra / CBG	Sony XAVC 4K Class 300 / Intra / CBG
Resolution	1920 x 1080	3840 x 2160
Frame rate	50 fps 25 fps if shot at 24p or 25p.	50 fps 25 fps if shot at 24p or 25p.
Scan type	Progressive	
Chroma sub-sampling	4:2:2	
Bit depth	10-bit	
Luminance and Chroma difference	YCrCb - NCL Non-Constant-Luminance	
Colour space	ITU-R BT.2020	
EOTF transfer function	BT-2100 PQ / ST 2084	
Encoding range	Narrow (1) EBU R103 Nominal 64-940	
Peak display luminance	1000 cd/m ² 75% IRE	
Reference white luminance	203 cd/m ² 58% IRE Y'/Cb/Cr=572/512/512	
Static HDR10 metadata	SMPTE ST 2086 + CTA-861.3 / MaxFALL + MaxCLL	

Audio	File can contain up to 8 stereo audio tracks, 24-bit, 48 kHz, PCM – Little-endian.
	<u>Note:</u> 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)

3.2.2.1.6 Static HDR10 metadata

The static SMPTE ST 2086 metadata and MaxFALL and MaxCLL values must be provided in a file accompanying the deliverables.

The structure and values will be similar to those in the following example: <HDR norm="HDR10" ver_xml="1.0">

```

<MasteringDisplayColorVolume>
    <DisplayPrimaries>
        <DisplayPrimary name="Red" x="0.7080" y="0.2920" />
        <DisplayPrimary name="Green" x="0.1700" y="0.7970" />
        <DisplayPrimary name="Blue" x="0.1310" y="0.0460" />
    </DisplayPrimaries>
    <DisplayLuminance min="0.0001" max="1000"/>
    <WhitePoint x="0.3127" y="0.3290"/>
</MasteringDisplayColorVolume>
<StaticMetadatas>
    <Metadata name="MaxCLL" value="1000"/>
    <Metadata name="MaxFALL" value="400"/>
</StaticMetadatas>
</HDR>

```

Note:

- The DisplayPrimaries values are the default values corresponding to the ITU R-REC-BT.2100- (BT2020-2) colour system.
- The DisplayLuminance value is to be entered in line with the characteristics of the monitor used for colour grading.
- The StaticMetadatas values are to be entered in line with the MaxCLL and MaxFALL measurements for the programme.

3.2.2.2 Production material formats

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

- XAVC HD Intra Class 100 CBG (1920 x 1080, 4.2.2, 10-bit) ITU-R BT.709
- DNX HD 185 (1920 x 1080, 4.2.2, 10-bit)
- ProRes HQ, 184 Mbit/s (4.2.2, 1920 x 1080, 10-bit);
- AVC-Intra 100, 112 Mbit/s (4.2.2, 1920 x 1080, 10-bit);
- AVC-Intra 100, 112 Mbit/s (4.2.2, 1280 x 720, 10-bit)

For exceptional cases of UHD production, the codecs to be used for components delivered to ARTE are recommended by ARTE G.E.I.E. in the following order of preference:

- XAVC 4K Intra Class 300 CBG (3840 x 2160, 4.2.2, 10-bit) ITU-R BT.709
- DNX HR/HQ (3840 x 2160, 4.2.2, 10-bit)
- ProRes HQ, 184 Mbit/s (4.2.2, 3840 x 2160, 10-bit);

Deliveries are primarily SDR (REC 709 – Gamma 2.2). For any other LUT used for the delivery of rushes, prior approval must be obtained from ARTE production.

3.2.3 SDR tolerances (ITU-R BT.709)

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)

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.

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 1080p picture format.

Source image format	Pixels/line	Start lines	End lines	Active lines
1.33*	1440	21	1123	1080
1.66*	1800	21	1123	1080
1.77	1920	21	1123	1080
1.85*	1920	32	1112	1036
2.35*	1920	87	1057	816

* 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 be 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 comfortably legible on all ARTE distribution media (TV and arte.tv platform).

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 centred horizontally (Pillarbox)
- 'Wide' format images (1.85, 2.35, etc.) must be centred 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.

Deliveries of RFB files relating to the purchase or co-production of ARTE G.E.I.E. via the programme delivery platform ("Partner") 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 Standards:

Standards and recommendations used in this document:

- 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;
- 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.

3.3.2 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.

3.3.2.1 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.

3.3.2.2 Loudness

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.

3.3.2.3 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).

3.3.2.4 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, etc.):

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.

3.3.2.5 Dynamic profile target values

Loudness excursions are permitted, measured using the method defined in § 3.3.2.5.1 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

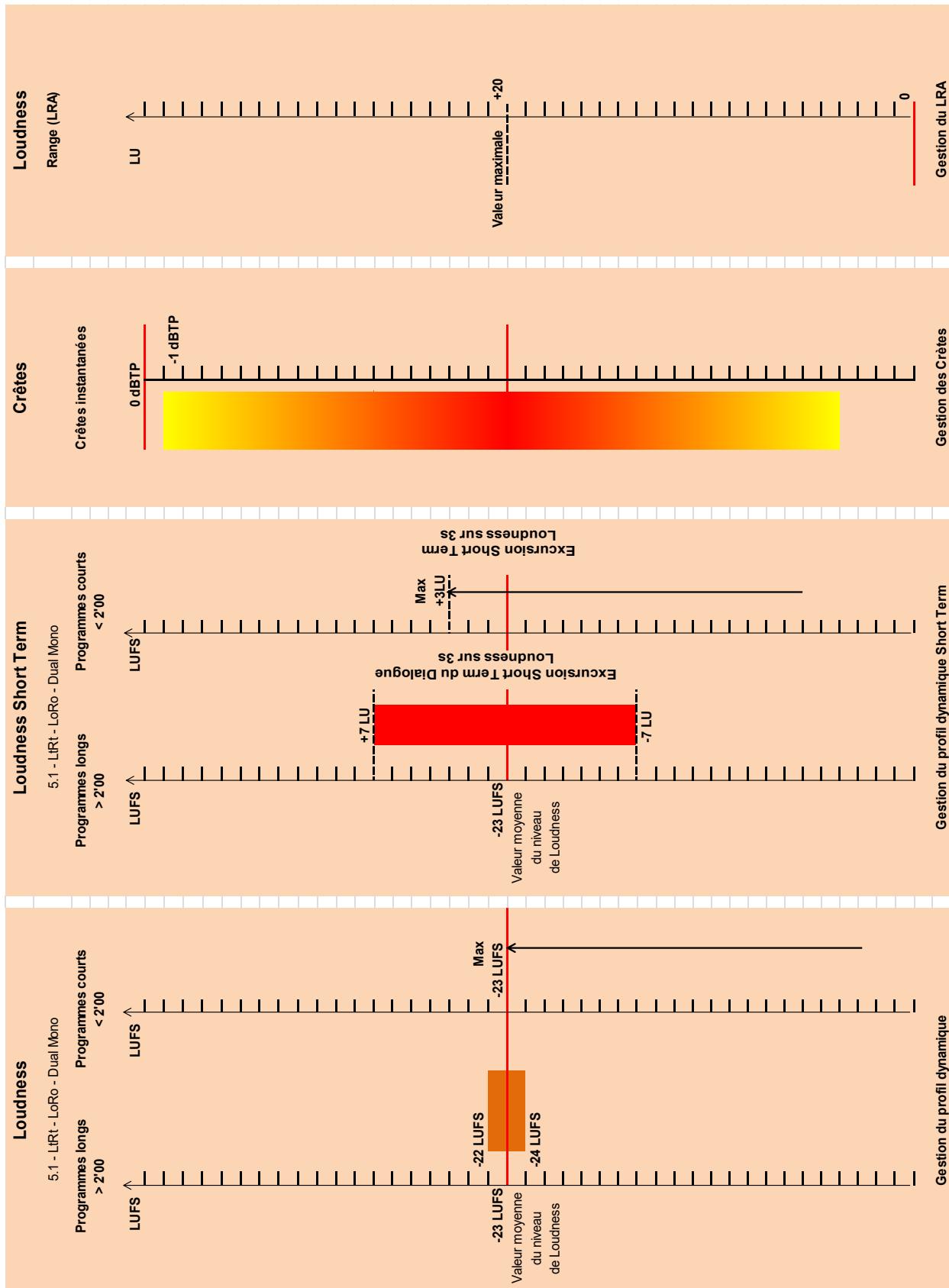
3.3.2.5.1 Short Term measurements

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.

3.3.2.5.2 Loudness Summary Diagram



3.3.3 Synchronisation audio and video

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

- either sound ≤ 40ms before picture
- or sound ≤ 60ms after picture

3.3.4 PCM

PCM is mandatory for all audio versions delivered for broadcast.

RIFF structure and WAV format are also mandatory for file delivery (see Appendix 13.7 [WAV audio file](#)).

Sampling frequency must be 48 kHz.

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

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

Number of channels: 2 (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.

3.3.4.1 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.

3.3.4.2 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.

3.3.4.3 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.

3.4 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.

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

The Timecodes at the start of the programme must be **10:00:00:00**.

3.5 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

3.5.1 File header (GSI block)

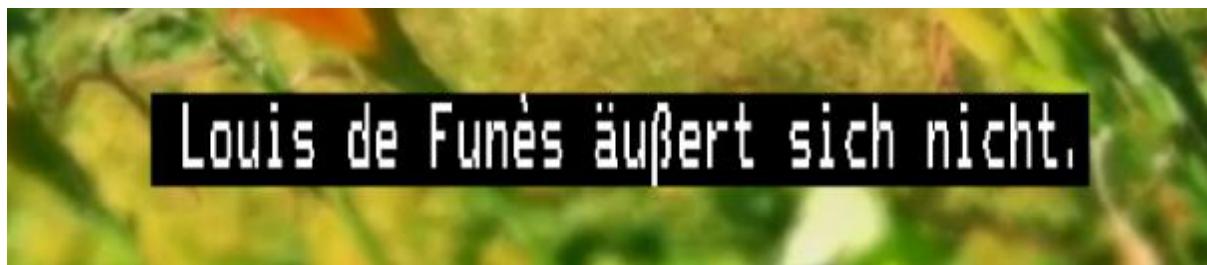
The GSI block must contain at least:

Information	STL symbol	Value	Explanation
Code Page Number	CPN	850	Multilingual character set
Disk Format Code	DFC	STL25.01	25 frames per second
Display Standard Code	DSC	1 or 2	Level 1 or 2 Teletext Display Standard
Character Code Table	CCT	00	Latin language group
Language Code	LC	08 or 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)
Maximum 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. ©, ®, etc.). See § 3.5.3.2 [Non-authorised characters](#).

For example:



3.5.2 Subtitle numbering (TTI block)

Number subtitles incrementally and continuously starting with 1.

3.5.3 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 characters², 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;
- The subtitle file must only contain text for broadcast. Do not fill out any additional fields or create any zero-duration subtitles.

² 37 useful characters are possible when they are without a colour code (white colour by default); with another colour code, such as yellow, 36 useful characters are useable.

3.5.3.1 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 § 3.5.2, [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.

3.5.3.2 Non-authorised 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	
¹/₈	³/₈	⁵/₈	⁷/₈	Ω	ª	’n	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	@	[]	'	{	}	'	"	,	"	x
Replaced characters	*	()	'	()	'	"	'	"	x

Replaced characters

3.5.3.3 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](#)

3.6 SPECIFIC TECHNICAL GUIDELINES FOR PRODUCTION

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

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

3.6.1 Post-production

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

3.6.1.1 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:

- File transfers using the platforms recommended by ARTE production.
- Professional memory cards or hard drives (XQD, SxS, etc.) to be confirmed with ARTE production;
- ☞ Any other delivery format requires prior approval from ARTE production.

3.6.1.2 Video editing

ARTE G.E.I.E. mainly post-produces video on Avid systems (XAVC Intra class 100 or 300). Any Avid project deliveries need to be compatible with the software versions in use (for further information on the versions used, contact your ARTE production correspondents).

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

3.6.1.3 Graphic processing

Post-production video at ARTE G.E.I.E. is Adobe graphic systems. Any graphic project deliveries need to be compatible with software versions in use (for further information on the versions used, contact your ARTE production correspondents). Preferably, deliver non-compressed TGA components. Any other deliveries require prior file type and format approval.

3.6.1.4 Audio file formats for mixing

Post-production audio at ARTE G.E.I.E. is on Pro-Tools systems.

We accept the following audio file formats:

- WAV
- BWF

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.

Picture synchronisation: the start of the sound file must always match the programme TC IN.

See also § 3.3 [Audio](#).

3.6.2 Technical guidelines for live transmission

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

3.6.2.1 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](#).

3.6.2.2 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

3.6.2.3 Encoding bitrates

The 'Producer' is required to deliver signals to the ARTE G.E.I.E. MCR in the following format:

Compression codec:	MPEG-4 (H-264)
Minimum rates:	32 Mbit/s, 4.2.2
Resolution:	1920 x 1080i50 or 1920 x 1080p50
Audio rates:	384 Kbit/s PCM

3.6.2.4 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.

3.6.2.5 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).

3.6.2.6 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.

3.6.2.7 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 two 'Production' and 'Technical' talkback networks via SIP audio codecs, audio codecs or patches on telephone lines, installed 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. MCR in Strasbourg.

3.6.2.8 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, etc.) require two return channels (German and French) to the subtitling unit.

4 SUBTITLING GUIDELINES

The technical specifications presented in this section apply to all subtitles. Other additional and specific information is provided in the relevant sections below.

4.1 RFB SUBTITLE FILES

Subtitle files are delivered to servers via a dedicated interface.

- [RFB delivery by ARTE France](#) § 6.2
- [RFB delivery by ARTE Deutschland](#) § 6.3
- [RFB delivery by Producers/Distributors](#) § 6.4
- [Language version purchase delivery](#) § 6.5
- [RFB delivery by Multilingual Suppliers](#) § 6.6

4.2 SUBTITLE LISTS

Attach a 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 subtitle composition 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 subtitle

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;

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines

- 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 two subtitles.
- Exception for subtitles for the deaf and hard-of-hearing: the minimum gap between two subtitles is reduced to 2 frames.

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), etc.

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 37 useful characters³, 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.

³ 36 characters with yellow colour code

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

The technical specifications in § 3.5 [Subtitling](#) apply (except those relating to the use of character generators to burn in subtitles).

Specifications for the time between two subtitles; § 4.3.6 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:

<https://www.csa.fr/Reguler/Espace-juridique/Les-relations-de-l-Arcom-avec-les-editeurs/Chartes-et-autres-guides/Charte-relative-a-la-qualite-du-sous-titrage-a-destination-des-personnes-sourdes-ou-malentendantes-Decembre-2011>

The Charter:

<https://www.csa.fr/content/download/20043/334122/version/3/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.

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines

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

Specifications for the time between two subtitles; § [4.3.6 Display times](#).

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 those of German-speaking public channels.

See those of ARD, ORF, SRF, ZDF:

<http://www.daserste.de/service/kontakt-und-service/barrierefreiheit-im-ersten/untertitel-standards/index.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](#).

These recommendations mirror CSA (Conseil Supérieur de l'Audiovisuel) recommendations:

<https://www.csa.fr/Media/Files/Espace-Juridique/Chartes/Charte-de-l-audiodescription>

The Charter:

<https://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, the date recorded in ARTE's programme IS ('APIOS') switches to the following day.

The delivery information must include all the content pending delivery for a given programme. It must be completed in full when a video is delivered for the first time. 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 (ARTE programme IS) after the associated video has been delivered and integrated.

The versions delivered by the unit (videos, language versions and working versions) are checked by ARTE G.E.I.E. on a "sampling" basis only, under the "First Entry" procedure: this constitutes an acknowledgement of receipt of the material, and not full and final acceptance.

The unit remains responsible for the versions that it has delivered, and must take responsibility for correcting any defects identified by ARTE G.E.I.E.

The delivered programme must not contain any channel / group logo in the title or the body of the programme.

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)	§ 3.2.2.1 Ready-for-Broadcast formats	FTP via internal link or Ingest API	
1	Technical record metadata	Oracle view or Ingest API		
N	Audio file (1 per programme part, and 1 per language version)	*.wav § 3.3 Audio format	FTP via internal link or Ingest API	
N	Subtitle file (1 per programme part, and 1 per language version)	*.stl §3.5 Subtitle format	FTP via internal link or Ingest API	
1	HDR metadata description xml file	*.xml Static HDR10 metadata §3.2.2.1.6	FTP via internal link or Ingest API	Only for HDR deliveries
N	Subtitle list	*.docx or *.doc § 4.2 Subtitle lists	FTP via internal link or Ingest API	
1	Provisional delivery slip	Oracle view or Ingest API		
N	Original text	*.docx or *.doc	FTP via internal link or Ingest API	st-doublage@arte.tv
1	Closing credits transcript	*.docx or *.doc	FTP via internal link or Ingest API	st-doublage@arte.tv
1	Medium or file for editorial requirements	Viewing link or files	FTP via internal link or Ingest API	

6.3 RFB DELIVERY BY ARTE DEUTSCHLAND

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)	§ 3.2.2.1 Ready-for-Broadcast formats	MFT ARTE-D (Tixel System)	
1	Technical record metadata	Oracle view		
N	Audio file (1 per programme part, and 1 per language version)	*.wav § 3.3 Audio format	MFT ARTE-D (Tixel System)	
N	Subtitle file (1 per programme part, and 1 per language version)	*.stl §3.5 Subtitle format	Apax-System	
1	HDR metadata description xml file	*.xml Static HDR10 metadata § 3.2.2.1.6	FTP via internal link or Ingest API	Only for HDR deliveries
N	Subtitle list	*.docx or *.doc § 4.2 Subtitle lists	E-Mail	st-doublage@arte.tv
1	Provisional delivery slip	Oracle view		
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	Viewing link or files		

The MXF file is delivered by file transfer (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 § 6.4.1, 6.4.2 and 6.4.3.

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 – VOEU– VME and VDO can be requested (see § 6.7.1 Language versions).

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	File	Format	Delivery route	See also
N	Video/audio HiRate File (1 per programme part)	§ 3.2.2.1 Format for RFB § 3.3 Audio § 6.7 Labels for delivered audio and subtitles	Submission via ARTE Partner delivery portal interface	
1	Ancillary data (Metadata)	Enter in Partner	Enter data in Partner, during RFB delivery	Equivalent of Record Report
N	Subtitle file (1 single file for each language version)	*.stl § 3.5 Subtitling guidelines	Delivery via Partner interface	
N	Subtitling List with Timecodes	*.docx, *.doc	Delivery via Partner interface	
1	HDR metadata description xml file	*.xml Static HDR10 metadata § 3.2.2.1.6	FTP via internal link or Ingest API	Only for HDR deliveries

Number	File	Format	Delivery route	See also
N	Original text with Timecode in the shooting language(s) (For Co-Productions)	*.docx, *.doc(*.pdf) ⁴	Delivery via Partner interface	
1	List of inserts / burn-ins with timecode	*.docx, *.doc	Delivery via Partner interface	
1	Closing credits transcript	*.docx, *.doc	Delivery via Partner interface	
1	Copyright and neighbouring rights declarations (music, music videos, artwork, photos, literary quotes, archive materials, etc.) - Standardised Cue Sheet	*.xlsx	Delivery via Partner interface	Model in Partner § 13.5 Copyright notification form .
1	ISAN number (1 per episode and version)	See 6.4.3.3 ISAN number	Enter in Partner	
1	Viewing link for editorial purposes	Link by E-Mail	E-Mail	sent to the Programme Manager: firstname.surname@arte.tv

⁴ *.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 –VOEU– 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, etc.) are to be entered and validated by the Producer / Distributor in the Partner delivery portal 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, the producer sends a link to a LowRate viewing file with a burned-in Timecode to the Programme Manager by E-Mail (firstname.surname@arte.tv).

6.4.2 Specificities for purchasing of programmes

6.4.2.1 Subtitling

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

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 "Découvertes"), three original texts with Timecode are delivered:

- Long text (52');
- Short Text (43'), with cutting indications for the 52' version

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](#).

6.4.3.5 Contacts

For any queries regarding the delivery of co-productions and programme acquisitions, please contact prodmaterial@arte.tv.

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	File	Format	Delivery route		
N	Video/audio HiRate File (1 per programme part)	§ 3.2.2.1 Format for RFB § 3.3 Audio § 6.7 Labels for delivered audio and subtitles	Delivery interface	via	Partner
N	Subtitle file (1 single file for each language version)	*.stl § 3.5 Subtitling guidelines	Delivery interface	via	Partner
N	Subtitling List with Timecodes	*.docx, *.doc	Delivery interface	via	Partner
N	Dialogue list	*.docx, *.doc	Delivery interface	via	Partner

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.

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	Delivery via Partner interface	
1	Subtitle file (1 per programme part, and 1 per language version)	*.stl	Delivery via Partner interface	
1	Subtitle list	*.docx or *.doc	Delivery via Partner interface	
1	Dialogue list	*.docx or *.doc	Delivery via Partner interface	

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 are as follows:

- *.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, etc.
- *.stl = subtitle files (see § 3.5 [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
VOEU	VOEU	Version with Commentaries, without Voice Over
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 in 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 VOA.

VOEU: An Original European Version (VOEU) is an version with Commentaries (Generally in French or German) without Voice Over.
 A VOEU is RFB for arte.tv after subtitled versions have been produced in ARTE's European languages (English, Spanish, Polish, Italian, etc.).
 The R128 standard is not mandatory for this version but should be used whenever possible.

VF: A VF is a Version in French that has been post-produced (lip-dubbed and/or voiced-over)
 A VOF 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 VOF 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: An 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. It must be mixed at a linear level.

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 (e.g. 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.

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines

Arios 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 German (RFB).

VO-STMF: A VO-STMF is a VO with subtitles for the deaf and hard-of-hearing in French (RFB).

VO-STMA: A VO-STMA is a VO with Sub Titles for the deaf and hard-of-hearing 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.

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 (e.g. Polish dubbing of a French film). 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:

- § 3.5 [Subtitling](#) (the technical guidelines)
- § 4 [Subtitling guidelines](#)
- § 8.3.3.3 [Subtitling shows](#)
- § 10.2.3.1 [Subtitle files](#)
- § 13.2 [Subtitling of foreign versions](#)

6.11 CREDITS

6.11.1 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.

6.11.2 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 § 6.13 ([Delivery address](#))).

6.12 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.

6.12.1 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.

6.13 DELIVERY ADDRESS

ARTE G.E.I.E

Programme Management

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

- 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 European 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 § 3.3.2.2 [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
- Original European Version: Tracks/Channels 5 and 6

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

Ask the relevant production team for your credentials to access the ARTE delivery platform (address, login, password).

Please name your files as follows:

- For ARTE Journal: AJ_Title_Journalist Name
- For ARTE Reportage: AR_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 (.,;/-+öêéèçüöàäë, 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 and a WAVE file of International Versions (VI) for viewing purposes and/or to post-produce audio and/or subtitles.

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

7.2.2 Other content

These elements are to be delivered on the ARTE delivery platform.

The script (in French or German, after final mix) is also to be delivered by E-Mail to the address provided by the relevant production unit.

Provide a transcript including Timecodes to produce subtitles.

Tally the transcript Timecodes 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 Timecodes and timing (see § 11.4 [Copyright notification form](#));
- High-quality photos (4 Megapixel or higher resolution) via <ftp://ftptec.arte.tv>;
- 5 to 10 production photos, landscape and portrait format, with captions and copyright, at 3840 x 2160, 300 dpi, in JPG or PNG
- A text for the launch;
- A text for the press: TV weeklies require text 10 weeks before broadcast;
- Carbon footprint reports (preliminary and final, to be checked with the ARTE G.E.I.E. production manager).

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 Timecodes. 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 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), a delegated producer, ARTE G.E.I.E. or one of its associated partners.

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 MCR 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 of its choice.

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. MCR in Strasbourg.

The 'Producer' is responsible for delivering and routing the programme in the complete language version of the Unit which they represent, in accordance with the project as approved by the programme conference: this includes studio presentation shoots, interpretation, voice-over 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, and a representative from 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 transmission resources:

- Transmitting as per § 3.6.2 [Technical guidelines for live transmission](#);
- Secure signal consolidation circuits;
- Signal quality control;
- Coordination circuit management;
- Compliance tests with the Strasbourg MCR at least 3 hours before the live broadcast and for a minimum of half an hour.

If the 'Producer' is an ARTE Unit or one of its associated partners, it may delegate signal broadcast and technical coordination to ARTE G.E.I.E., as well as qualitative validation.

If it 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 Procedure for re-delivery following a technical incident during a live or time-shifted broadcast

The re-delivery procedure is triggered when a technical incident occurs during the broadcast of a live or time-shifted programme.

In such a case, the ARTE G.E.I.E. representative asks the representative of the Unit (programme managers at the production venue) to inform the 'Producer' of the need to re-deliver a corrected broadcast-format file of the programme.

This delivery must be completed as quickly as possible under the same programme number as the live broadcast (EM number - Version A), via the Partner interface or an FTP address.

If the programme is subtitled, the 'Producer' must simultaneously provide the subtitling provider with a downloadable link to the re-delivered programme including burnt-in TC for subtitle re-syncing.

8.3.1.6 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 one of its associated partners, it may delegate the processing of its language version 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.

8.3.2 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'.

This production manager coordinates between the 'Producer' and the ARTE G.E.I.E. technical teams to ensure that all the technical aspects (broadcast, audio, interpretation and subtitling) are perfectly synchronised. They ensure that the technical set-up is established and validated in agreement with the various technical managers of both the 'Producer' and ARTE.

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

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.

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;

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines

- 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 they are producing.

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

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 is as 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. programme 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 workstation for the interpretation supervisor with a monitor and a headset.
- A talkback network to allow interpreters to communicate with the sound engineer in charge of the second language version, the supervisor and the programme manager/editor in charge of the second language version;
- Return channels:

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines

- 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, the programme manager and the supervisor 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 MCR, 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, with the address provided by the production manager or in a link sent by email.

If requested by the 'Producer', ARTE G.E.I.E. may call on a provider to install interpreter booths, with the 'Producer' covering the costs associated with its own version. The corresponding bills will be based on a prior quote factoring in each production's specific conditions.

8.3.3.3 Subtitling shows

See the following guidelines for subtitle production and delivery:

§ 3.5 [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. 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 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: files made available via an email link or a previously determined FTP server.

Our FTP system can handle the following format: .mp4;

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

Before each live broadcast and/or production, a series of tests will be conducted with ARTE's technical provider in Strasbourg to verify, synchronise and fine-tune the subtitling, at least 3 hours before live broadcasts.

8.3.3.3 Composing live subtitles

The files for subtitling must conform to EBU N19, the guidelines in this document (see § 3.5 [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 least 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 self-promotion packaging team at ARTE G.E.I.E. See § 11 ([Self-promotion guidelines](#))

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 (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, survey and live, meals, accommodation, telephone, etc.)
Equipment transport if required (vehicle, driver, travel and accommodation, etc.)	Replacement for Production Manager working off-site
MCR live uplink technician (travel, meals, accommodation, telephone, etc.)	MCR survey technician (travel, meals, accommodation, telephone, etc.)
Transmission (uplink, connection, technician and associated expenses) + backup link	
Telephone lines (orders + consumption)	
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
	Travel and accommodation for interpreter supervisor for live broadcast
	Programme Manager (travel, meals, accommodation, telephone, etc.), for the survey and live broadcast
	Live audio ops manager (travel, meals, accommodation, telephone, etc.) for language version 2
Package of multilingual services for subtitling (translation, adaptation, splitting and spotting) of language version 1 + choir master fees and costs relating to travel, meals, telephone, etc.	Package of multilingual services for subtitling (translation, adaptation, splitting and spotting) of language version 2 + choir master fees and costs relating to travel, meals, telephone, etc.
50% of costs for an additional choir master if livestreaming ST in 6 languages AT THE SAME TIME as a broadcast	50% of costs for an additional choir master if livestreaming ST in 6 languages AT THE SAME TIME as a broadcast
50% of subtitling technical costs + travel, meals, accommodation, telephone costs, etc. for language version 1	50% of subtitling technical costs + travel, meals, accommodation, telephone costs, etc. for 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

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

Scheduled and/or news-related content deliveries, via the ARTE G.E.I.E. FTP site or a dedicated production delivery platform, must conform to the formats and data rates appended in 13.4 [News FTP Transmission Sheet](#).

10 Guidelines for Arte Concert live broadcasts, short content and digital bonus materials on arte.tv

These guidelines cover certain audiovisual content (bonus materials, interviews, short programmes, etc.) and live recordings intended exclusively for the ARTE.tv platform (web, mobile, etc.).

Other programmes (intended both for TV and digital platforms) must comply with the Broadcast standards. 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 Live Stream Web Encoding

LoRes streams for all arte.tv digital services must be encoded in line with the characteristics presented 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 G.E.I.E. (see § 10.2.1 [Encoding of ARTE.tv platform horizontal files](#)) to be put online again.

10.1.1 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

10.1.1.1 Live streaming cost breakdown.

Technical costs

Technical costs for encoding and streaming are covered by the Unit or by ARTE G.E.I.E. for co-productions.

Subtitling costs

Subtitling costs are allocated as follows:

- 50% covered by the Unit for language version 1
- 50% covered by ARTE G.E.I.E. for language version 2

Technical costs for subtitling are allocated as follows:

- 50% covered by the Unit for language version 1
- 50% covered by ARTE G.E.I.E. for language version 2

10.2 AUDIOVISUAL FILES

10.2.1 Encoding of horizontal files for short content and digital bonus materials on arte.tv.

Low bitrate 16:9 files intended for ARTE Web platforms must be encoded with the following characteristics:

1	Container	MP4
2	Extension	.mp4
3	Resolutions	1920x1080 - Progressive
4	Frames	25 fps, CFR (Constant Frame Rate) 50 fps, CFR (Constant Frame Rate)
5	Sampling	4:2:0
6	Bit depth	8-bit
7	Video encoding	H264/AVC, Main or High profile, Level 4.2 max, GOP max 3 seconds
8	Video bitrate	VBR (Variable Bit Rate) or Capped CRF (Constant Rate Factor) VBR: 8 to 14 Mbit/s Capped CRF: CRF: 18 Maxrate = 20 Mbit/s Buffer = 30 Mbit/s Any CRF encoding that is uncapped or exceeds the limits set will be rejected. The presence of these parameters must be able to be checked within the file's metadata.
9	Colour space	Rec.709
10	EOTF transfer function	Rec.709
11	Range	Limited
12	Broadcast mode	Encoder, select "Streamable" option
13	Audio encoding	AAC
14	Audio bitrate	CBR, 192 to 320 kbit/s – 48 kHz
15	Audio	1 stereo per video file encoded

10.2.2 Encoding of vertical files for short content and digital bonus materials on arte.tv / social media (TikTok, Instagram, etc.).

Low-bitrate 9/16 files intended for ARTE Web platforms must be encoded with the following characteristics:

1	Container	MP4
2	Extension	.mp4
3	Resolutions	900x1600 - Progressive 1080x1920 - Progressive
4	Frames	25 fps, CFR (Constant Frame Rate) 50 fps, CFR (Constant Frame Rate)
5	Sampling	4:2:0
6	Bit depth	8-bit
7	Video encoding	H264/AVC, Main or High profile, Level 4.2 max, GOP max 3 seconds
8*	Video bitrate	VBR (Variable Bit Rate) or Capped CRF (Constant Rate Factor) VBR: 8 to 14 Mbit/s Capped CRF: CRF: 18 Maxrate = 20 Mbit/s Buffer = 30 Mbit/s Any CRF encoding that is uncapped or exceeds the limits set will be rejected. The presence of these parameters must be able to be checked within the file's metadata.
9	Colour space	Rec.709
10	EOTF transfer function	Rec.709
11	Range	Limited
12	Broadcast mode	Select "Streamable" in the encoder
13	Audio codec	AAC
14	Audio bitrate	128 to 320 kbit/s, CBR – 48 kHz
15	Audio	1 stereo per video file encoded

* POINT 8: Generally speaking, 8 Mbit/s to 14 Mbit/s is mandatory for 900x1600 or 1080x1920 resolutions. Use of any other bitrate requires prior approval.

10.2.3 Producing second language versions

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

10.2.3.1 Subtitle files

When delivering subtitles for audiovisual content (bonus materials, interviews, short programmes, etc.), intended exclusively for ARTE's digital services, two formats are accepted by ARTE (STL and SRT), with STL as the preferred option. Video Timecode for Web programmes must start at 00:00:00:00.

10.2.3.1.1 Editing in STL Format

Submit subtitle files to specification EBU Tech 3264 (see § 3.5 [Subtitling](#) and § 4 [Subtitling guidelines](#)).

Otherwise, for reference:

- 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 in 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;
- The subtitle file must only contain text for broadcast. Do not fill out any additional fields or create any zero-duration subtitles.

EBU-authorised 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
½	¾	½	¾	Ω	ª	‘n	ij	IJ	‘

Forbidden characters

The use of any forbidden characters causes errors during broadcast.

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

Caractères remplacés	@	[]	'	{	}	'	"	,	"	x
Caractères affichés	*	()	'	()	'	"	'	"	x

Replaced characters

10.2.3.1.2 SRT Format

The rules for subtitle composition in SRT format follow those for composition in STL format (see § 10.2.3.1.1 [Editing in STL format](#)).

SRT subtitles consist of 4 parts:

- A number identifying each sequential subtitle;
- The Timecode that the subtitle should appear on the screen;
- The 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 an SRT file
2
00:02:25,476 --> 00:02:27.501
Well

```

10.2.3.1.3 Subtitling of foreign languages

For uploading bonus materials, short programmes, etc., 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 § 3.5.1 [File header \(GSI block\)](#).

10.2.4 Multilingual versions

Please deliver a file for each version of each programme for the ARTE.tv platform:

- VO or VOA or VOF;
- VA and/or VF;
- VS, VI, VOEU, etc.

The deliverable versions will be stated in the order.

IMPORTANT: To benefit from the ARTE Player's multi-audio features, delivery in Broadcast format (see § 3.3 [Audio](#)) is required for programmes with multiple audio tracks.

10.3 COPYRIGHT NOTICE

Every programme delivered to Strasbourg must be accompanied by a standardised Cue Sheet, available on the delivery platform. See § 13.5 [Copyright notification form](#).

10.4 DELIVERY

10.4.1 Delivery platform access

The link to access the delivery platform will be provided by ARTE.

Suppliers will need to provide a login e-mail address in order to create a user account on the platform.

10.4.2 Physical delivery

Physical deliveries are only authorised in exceptional cases, and only following prior approval from ARTE.

10.4.3 Contact

For any queries regarding the delivery of co-productions and programme acquisitions for ARTE G.E.I.E., please contact prodmaterial@arte.tv.

11 Self-promotion packaging and sponsoring guidelines

11.1 TECHNICAL GUIDELINES

All delivered components must be HD and comply with § 3 [Technical guidelines](#):

- § 3.1 [File formats](#)
- § 3.2 [Video](#)
- § 3.3, [Audio](#) § 3.3.2 [Loudness measurement](#)

And § 3.6 [Specific technical guidelines for production](#).

11.2 AUDIO CONFIGURATION

The following audio configuration guidelines apply:

11.2.1 Programmes that will only be broadcast in France:

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

11.2.2 Programmes that will only be broadcast in Germany:

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

11.2.3 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 (1080p/50):

- XAVC HD Intra Class 100 CBG (1920 x 1080, 4.2.2, 10-bit) ITU-R BT.709
- DNX HD 185 (1920 x 1080, 4.2.2, 10-bit)
- ProRes HQ, 184 Mbit/s (4.2.2, 1920 x 1080, 10-bit);

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

- Encode audio files with Wave, with *.wav extensions, PCM, mono, stereo, 48 kHz sampling frequency and 24-bit quantisation. (For a mono, double this in the AES pair).

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

The audio standards remain unchanged and must comply with the guidelines set out in § 3.3 [Audio](#) and § 3.3.2 [Loudness measurement](#).

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 COPYRIGHT NOTIFICATION FORM

Include a copyright notification form for every component you deliver. See § 13.5 [Copyright notification form](#) for a template.

11.5 DELIVERY

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

11.6 CONTACTS

Self-promotion Packaging Sector

E-Mail: Prod.event@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 §13.6.

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

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines

COMPLETE TECHNICAL GUIDELINES ARTE GEIE V2-00-02.DOCX

- Definition 1920 x 1080 pixels
- Resolution of 300 dpi
- Framing in 'landscape' mode is preferred.

12.3.2 JPEG file header (IPTC)

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

- IPTC-Header with:
 - Title
 - Copyright
 - Source (Supplier Unit)
 - 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

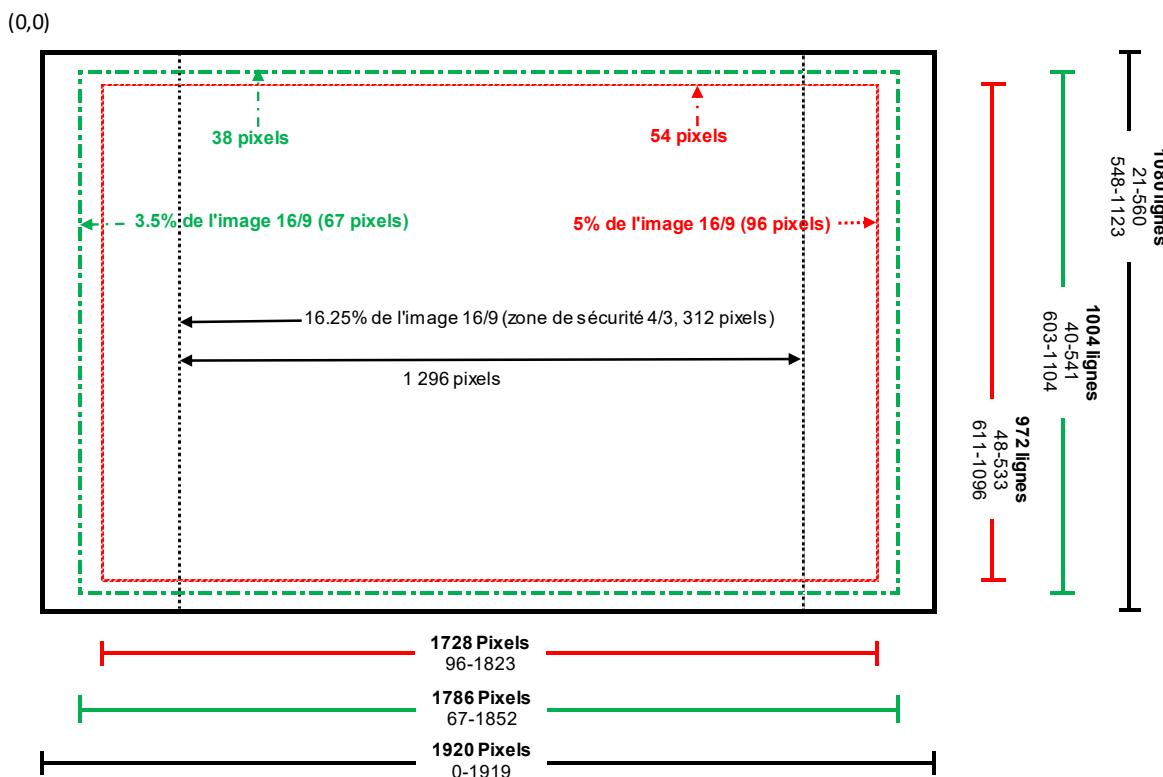
13.1 SAFE AREAS

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:

ANNEXE - SECU-TITRES

Zone de balayage en 1080 pour un affichage 16:9



Le nombre total de lignes est de 1125 (lignes actives de 21 à 560 et de 584 à 1123 = 1080 lignes).

Une ligne complète se compose de 2200 pixels.

La ligne "numérique active" comprend 1920 pixels (numérotés de 0 à 1919 inclus)

Tous les pixels actifs sont inclus dans la ligne active de l'image.

La zone de sécurité de l'action est de 3,5 % et la zone de sécurité graphique est de 5 %, en haut, en bas et sur les côtés de l'image.

La zone de sécurité pour le sous-titrage correspond à l'image 4/3 (1296 pixels)

13.2 SUBTITLING OF FOREIGN VERSIONS

File header (GSI block)

The GSI block must contain at least the following data:

- Code page number 850
- STL 25.01 format (25 fps)
- Character code table: Latin
- Language code (e.g. English =09, Spanish =0A hexa.)
- Programme title: field to be completed
- Max. number of displayable rows: 23
- Time Code for Start-of-Programme: identical to the video code

Page Code	Txt	Characters Code (CCT number)		Language Code (Hex)	Language
850	Multilingual	Level 2	00	Latin Alphabet	07 Danish
850	Multilingual	Level 2	00	Latin Alphabet	08 German
850	Multilingual	Level 2	00	Latin Alphabet	09 English
850	Multilingual	Level 2	00	Latin Alphabet	0A Spanish
850	Multilingual	Level 2	00	Latin Alphabet	27 Finnish
850	Multilingual	Level 2	00	Latin Alphabet	0F French
850	Multilingual	Level 2	00	Latin Alphabet	15 Italian
850	Multilingual	Level 2	00	Latin Alphabet	18 Latvian
850	Multilingual	Level 2	00	Latin Alphabet	1D Dutch
850	Multilingual	Level 2	00	Latin Alphabet	1E Norwegian
850	Multilingual	Level 2	00	Latin Alphabet	20 Polish
850	Multilingual	Level 2	00	Latin Alphabet	28 Swedish

13.3 ARTE PROGRAMME SATELLITE BROADCASTS



FREE SATELLITE BROADCASTING

		ident : Arte HD	ident : arte HD
	HOT BIRD		ASTRA 1
Standard	HD MPEG 4	HD MPEG 4	
Position	13° East	19,2° East	
Frequency (MHz)	10892 H	11494 H	
Format	27500 ksymb/s FEC 3/4 8PSK (DVB-S2)	22000 ksymb/s FEC 2/3 8PSK (DVB-S2)	
Services	ServPID 1307 VidPID 571 AudPID_fra Dolby 572 AudPID_qaa Dolby 573 AudPID_qad Dolby 574 AudPID_ger Dolby 577	ServPID 10302 VidPID 5111 AudPID_deu 5112 AudPID_fra 5113 AudPID_mul 5116 AudPID_mis 5117	
Audios	french original audiodescription (fr) german	german french original audiodescription (ge)	
burned-in Subtitling	french	german	
Teletext		german (+ french)	
Teletext Subtitling	french (hard of hearing) french for original sound	german (page 150) french (page 888)	

HD 1080i

HD 720p

13.4 NEWS FTP TRANSMISSION SHEET

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

Audio designation:

Duration minutes seconds

audio1 audio3

Journalist:

audio2 audio4

Team:

Types of files accepted:

IMAGE AND SOUND

MPEG 4 container (*.mpeg 4):

IMAGE: Definition 1920 x 1080 p/50

Compression codec H264, bitrate: 20 Mbit/s - Other

SOUND: AAC sampling frequency 48kHz

Quantisation 24-bit 16-bit / Mono Stereo

AAF container (*.aaf):

IMAGE: Definition 1920 x 1080 p/50

Compression codec DNxHD, bitrate 120 Mbit/s 185 Mbit/s

SOUND: Sampling frequency 48kHz

Quantisation 24-bit 16-bit / Mono Stereo

SOUND ALONE

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

Number of files: 0

No.	File name	Size (Mbit)
Example:	MEYER SYRIE DESERTEUR	59.5
1-		0,00
2-		0,00
3-		0,00

13.5 COPYRIGHT NOTIFICATION FORM

The copyright notification form can be downloaded from ARTE's 'PARTNER' platform. It becomes accessible once a login has been issued when setting up production agreements with ARTE.

This form covers:

- Musical works = any extract of music or background sound
- Audiovisual works = archive materials, excerpts from documentaries, reports, profiles, feature films, television films, animation films, recordings of live performances, docufictions, making-of materials, multimedia creation, video art, credits, packaging, etc.
- Still images = photos, illustrations, graphic works, drawings, comic strips, sculptures, paintings, architectural works, engravings, lithographs, maps, logos or any other creation in visual form
- Literary works = poems, novels, etc., and original translations
- Performing arts works = extracts from all forms of theatre, dance, opera, musical comedy, circus, puppetry, sketches, etc.
- Radio works = documentary, literary and journalistic radio works
- Music videos = in addition to detailed excerpts, the music must also be declared in the "Musical works" section

13.6 GUIDE TO THE DELIVERY OF COMMUNICATION MATERIAL

13.6.1 Recommendations for the composition of titles

13.6.1.1 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.

13.6.1.2 Length of programme title

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

13.6.1.3 Upper and lower case

By default, all titles must be written in lower case except the first letter of the title, and unless the existing original title is capitalised (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).

13.6.1.4 Position of the article

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

13.6.1.5 Special characters and accented characters

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

Accented characters and dieresis 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.

13.6.2 Special rules for certain types of programmes

13.6.2.1 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:

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines

- 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

13.6.2.2 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)
- Subtitle: The Separation: 1789 - 1945

13.6.2.3 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 the 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.

13.6.2.4 Web programmes

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

13.7 WAV AUDIO FILE

Structure and minimal data for Wav audio files used by ARTE:

13.7.1 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

13.7.2 Reference addresses:

a0 = beginning of the file type description section

a1 = beginning of the format description section

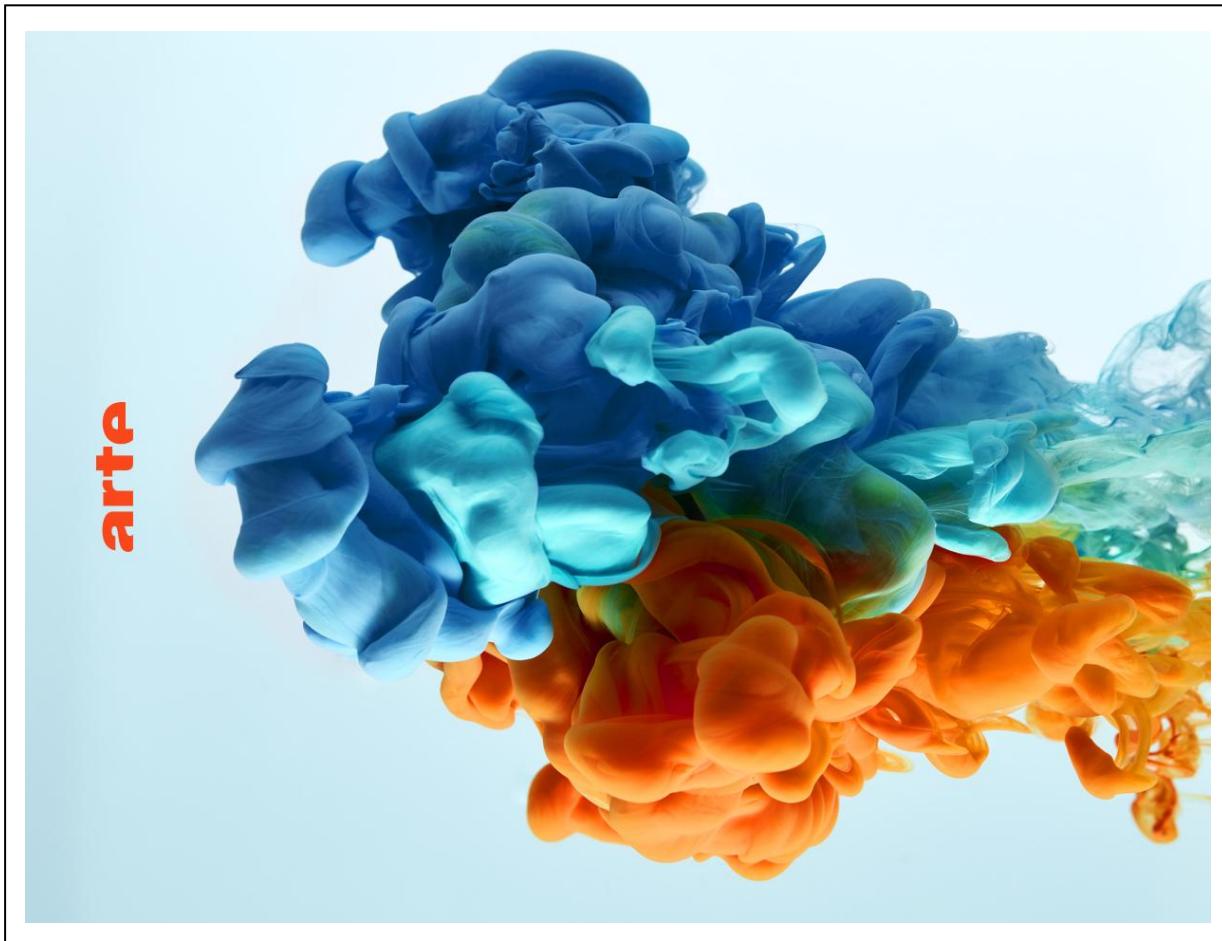
a2 = beginning of the coded data section

Adresse décimale	Données	Structure	Valeurs hexadécimales & chaînes de caractères	Paramètres Techniques ARTE	Description
	chunk type				Section du type de fichier
a0	file_type	S[4]	“RIFF”		Identification du format
a0 + 4	file_size	DW			Taille du fichier à partir de file_id
a0 + 8	file_id	S[4]	“WAVE”		Identification du type de fichier
	chunk format				Section descriptive du format
a1	chunk_id	S[4]	“fmt ”		Identification de la section
a1 + 4	chunk_size	DW			Taille de la section
a1 + 8	format	W	0100	PCM = 1	Format de codage
a1 + 10	channels_nb	W	0200	2 canaux	Nombre de canaux (double mono / stéréo)
a1 + 12	sampling_freq	DW	80BB0000	48 KHz	Fréquence d'échantillonnage
a1 + 16	bytes_per_second	DW	00650400		Nombre d'octets par seconde
a1 + 20	bytes_per_sample	W	0600		Nombre d'octets par échantillon
a1 + 22	Depth	DW	18000000	24-bit	Profondeur (nombre de bits par échantillon)
	Chunk données				Section contenant les données codées
a2	Chunk_id	S[4]	“data”		Identification de la section
a2 + 4	Chunk_size	DW			Taille de la section
a2 + 8	données				Début de l'échantillonnage du son

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.



arte**ARTE G.E.I.E.****4 QUAI DU CHANOINE WINTERER****BP 20035 – F 67080 STRASBOURG CEDEX - FRANCE****POSTFACH 1980 - D-77679 KEHL - GERMANY**

The most recent version of these guidelines must be verified on the ARTE website:
www.arte.tv/technical-guidelines