

TECHNICAL SUPPLEMENT FOR PROGRAMMES ACQUIRED ON SUPER16 FILM



DPP Requirements for the use of Super16 Film

This document is a supplement to the common technical specification for the delivery of programmes that the DPP has agreed can be acquired on Super16 film.

Programmes must meet the general requirements detailed in the DPP UK Broadcasters Technical Specification for the Delivery of Television Programmes as AS-11 Files for SD.

- Picture quality
- Sound quality
- Access for people with disabilities

The use of Super16 **must** be agreed in advance by the broadcaster.

Every programme submitted for transmission must satisfy a Quality Control process specified by the DPP. Any programme failing the QC process on tape or file may be rejected and returned to the supplier for repair.

1. Super16 Overview

The broadcasting of material originated on Super 16-mm (S16mm) film will frequently lead to quality problems in the process chain.

Excessive grain will create distracting artefacts where high compression rates are used, significantly reducing the image quality delivered to the audience.

Where Super16 film is used for image acquisition in new productions, the full quality potential inherent in today's film stock must be used, considering the entire production chain from shooting to post-production. The audience's viewing habits demand that the image be as noise-free as possible.

1.1. Film Requirements

Modern emulsion technology offers a wide dynamic range (currently around 16 f-stops). However the following guidelines must be followed:

- Proper exposure of the film stock is an essential;
- Excessive granularity by underexposure, causing noise in the darker areas of the image, must be avoided;
- A minimum density of $0.25 \pm 0.1 D$ and a maximum density less than $2.75 D$ must be observed;
- Only high quality film emulsions must be used preferably with an exposure index of 250 or less;
- S16mm film should be de-grained. To prevent loss of sharpness, de-graining must be used with restraint. In order to keep the degree of de-graining to a minimum, film emulsion speeds that meet production requirements should be used with adequate lighting such that there is no need to push the film during processing;
- Only lenses with high resolution, excellent MTF factor and minimal chromatic aberration must be used. Image acquisition on S16mm film therefore requires HD-optimized lenses;
- The entire available area of the negative frame must be used;
- The negative must be thoroughly cleaned before final transfer;
- High definition scanning is preferred but uncompressed standard definition file transfer is acceptable;
- All subsequent finishing post-production must use uncompressed standard definition processing or in high definition at a minimum of 185Mbs.

1.2. Video Requirements

Where agreed by the broadcaster, programmes acquired on Super16 film must be delivered as AS-11 UK DPP V1.1 SD Files as described in the DPP File delivery document and must contain the required DPP metadata.

Cuts in material must happen on frame boundaries (i.e. between field 2 and field 1). Motion on film acquired material must always occur between field 2 and field 1 (i.e. field 1 dominance).

Please note that SD files can only carry stereo audio.