

## Technical Specification for Programme Delivery

### File Format

Audio files should be submitted in the WAV format. If the audio file is programme material delivered for broadcast, then the audio format for the file will be:

Linear PCM, 48 KHz, 16 Bit (or greater by prior agreement).

Files can be delivered via or any web based file transfer client (WeTransfer, Putfile, Hightail etc.), or via File Transfer Protocol (FTP).

### Audio Properties

Audio quality remains the producer's overall responsibility. The importance of consistent levels and overall quality cannot be over-stressed. Distortion, noise, induced hum etc should not be audible. During the production process, audio should not be subjected to bit rate reduction (e.g recording on Minidisc or MPEG). Multiple transfers involving bit rate reduction should be avoided, otherwise coding artefacts are likely to be audible.

The recording should contain, where appropriate, the full transmittable audio bandwidth (20Hz to 20KHz). Exceptions may be made; examples include archive material or material gathered necessarily under adverse conditions.

Any such deviations from the normal standards or anything which could be interpreted as a fault or error must be noted on the recording report.

For details on Balance Control, refer to the relevant commissioning Network.

### Stereo

Stereo programmes must always be supplied as a single wav file with the two channels recorded as A and B (i.e left and right), not as M and S (i.e sum and difference). Stereo programmes must be recorded so as to be compatible for listeners in mono. In general signals should be in phase between channels. The S (difference) signal should rarely exceed the M (sum) signal (otherwise cancellation can result when the signal is heard in mono). Avoid extremes of stereo imagery or 'out of phase' effects as these present problems with mono compatibility.

### Mono

Even if the programme content is entirely mono it should still be recorded as two identical channels (A and B) with zero phase difference between them.