1. SCOPE.

This Operational Practice sets out the requirements for television advertisements (commercials) in relation to audio levels and loudness.

This Operational Practice applies to all commercials, whether delivered by video tape or in a digital delivery format, and whether SDTV or HDTV.

2. CERTIFICATION.

Producers will be required to certify that their commercials comply with this OP as a condition of acceptance for broadcast.

This certification must be in the form of either:

- inclusion of an additional field in the Visual Identification, as specified in Free TV OPs 29 and 36, between the alignment signal and the countdown indicating compliance with OP48; or

- by prior arrangement[1] with the broadcaster a written certification by the person submitting the commercial that the commercial complies with OP48.

3. LOUDNESS CONSIDERATIONS.

The factors contributing to perceived loudness are complex but the correct alignment of audio levels through the various stages of production and the careful management of dynamic range and spectral content are key factors in preventing extreme variations in loudness.

4. ALIGNMENT SIGNALS.

Commercials must be preceded by a one kilohertz tone having a constant relationship to and representing the normal level of the audio material that follows it.

For analogue systems, the alignment signal will be used to equate the audio level of the material to the stations' recording and transmission level of zero VU. In digital systems, the alignment level will be 20dB below full scale digital and will be equated to zero VU on the station audio level meters. The reference level (line-up level) must be minus 20dB with respect to the onset of digital clipping i.e. –20dBFS (SMPTE RP.155).

[1] Submission to Commercials Advice constitutes a suitable "prior arrangement with the broadcaster".

It is intended that the television station equipment settings should remain fixed so that there is a unity relationship between the reference signal on material, the recording level on equipment used in the transfer process and the transmission level.

5. COMPRESSION, LIMITING & EQUALISATION

The appropriate use of various audio production tools such as compression, limiting, equalisation, reverberation and echo is necessary at various stages in the production of quality sound tracks.

However, when producing soundtracks of television commercials, compression, limiting and spectral manipulation ("equalisation") must not be used for the purpose of producing excessively noisy or strident material.

5.1 Compression

Compression should be used appropriately through the production process to constrain the dynamic range of vocal and music tracks to produce a controlled and consistent sound track.

Aggressive use of compression on components of the sound track or the final mix of a sound track must not be used for the purpose of producing excessively noisy or strident material.

5.2 Audio Limiting

Audio limiting is a useful tool that can prevent distortion in audio systems. When used in recording of television commercials, limiting must not be used for the purpose of producing excessively noisy or strident material.

5.3 Spectral Manipulation (Equalisation)

Alteration of the spectral response of the audio system to emphasize those frequencies to which the ear is most sensitive, must not be used for the purpose of producing excessively noisy or strident material.

While equalisation is a basic tool and often used in audio production, care should be taken to avoid excessive amounts of equalisation that could cause overloading of broadcast audio chains.

6. Loudness Measurement

After the final mix, all commercial soundtracks must be measured using an ITU-R Recommendation BS 1770-3[2] loudness meter to ensure compliance with the reference loudness level of -24LKFS. Refer to Free TV OP59 for correct loudness measurement and management techniques.

[2] Loudness measurements made on BS.1770-2 and BS.1770-3 meters are identical.