

# FREE TV AUSTRALIA OPERATIONAL PRACTICE OP- 49

IDENTIFICATION AND ORDERING OF MULTIPLE AUDIO TRACKS CARRIED ON CONTRIBUTION CIRCUITS

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## 1. SCOPE

This document defines a naming scheme indicating content and an ordering scheme of channel numbers for multiple audio tracks carried on contribution circuits, such as for outside broadcasts, either as discreet audio channels or as embedded audio in SDI or HDSDI streams.

## 2. GENERAL

2.1 This document is in two parts –

- (i) **National** – relevant to Australian operations
- (ii) **International** – relevant to feeds intended for overseas destinations.

## 3. NATIONAL FEEDS

### 3.1 4 audio track layout

**Channel 1** Mixed stereo program Left [including commentary]

AES1

**Channel 2** Mixed stereo program Right [including commentary]

**Channel 3** International Sound Left

AES2

**Channel 4** International Sound Right

### 3.2 8 audio track layout

Within a Dolby E multiplex the 8 track audio is coded as **5.1 + 2** in the metadata:

<b>8 Audio Channel</b> Layout Within Dolby E Multiplex:	
Track 1	5.1 Left Front
Track 2	5.1 Right Front
Track 3	5.1 Centre
Track 4	5.1 LFE
Track 5	5.1 Left Surround
Track 6	5.1 Right Surround
Track 7	Stereo Left Total
Track 8	Stereo Right Total

When dealing with discrete PCM audio (i.e. no Audio Multiplex like Dolby E), the following is required:

<b>8 Audio Channel Layout:</b>	
Track 1	Stereo Left Total ( $L_t$ )
Track 2	Stereo Right Total ( $R_t$ )
Track 3	5.1 Left Front
Track 4	5.1 Right Front
Track 5	5.1 Centre
Track 6	5.1 LFE
Track 7	5.1 Left Surround
Track 8	5.1 Right Surround

The internal contents of the digital audio multiplex should have its channels ordered as above.

### **3.3 10 / 12 audio track layout**

<b>12 Track</b>	
Track 1	Stereo Left Total ( $L_t$ )
Track 2	Stereo Right Total ( $R_t$ )
Track 3	$L_t$ M+E
Track 4	$R_t$ M+E
Track 5	5.1 Left Front
Track 6	5.1 Right Front
Track 7	5.1 Centre
Track 8	5.1 LFE
Track 9	5.1 Left Surround
Track 10	5.1 Right Surround
Track 11	Mute / Freely Assigned / Audio Description Channel 1
Track 12	Mute / Freely Assigned / Audio Description Channel 2

### 3.4 16 audio track layout

16 Track	
Track 1	Stereo Left Total (L <sub>t</sub> )
Track 2	Stereo Right Total (R <sub>t</sub> )
Track 3	L <sub>t</sub> M+E
Track 4	R <sub>t</sub> M+E
Track 5	5.1 Left Front
Track 6	5.1 Right Front
Track 7	5.1 Centre
Track 8	5.1 LFE
Track 9	5.1 Left Surround
Track 10	5.1 Right Surround
Track 11	5.1 M&E Left Front
Track 12	5.1 M&E Right Front
Track 13	5.1 M&E Centre
Track 14	5.1 M&E LFE
Track 15	5.1 M&E Left Surround
Track 16	5.1 M&E Right Surround

## 4. INTERNATIONAL FEEDS

- 4.1 Track 1 International Sound Left  
Track 2 International Sound Right  
Track 3 Mixed Stereo Program Left  
Track 4 Mixed Stereo Program Right
- 4.2 Optionally by agreement between the parties –  
Track 1 International Sound Left  
Track 2 International Sound Right  
Track 3 Commentary  
Track 4 Freely Assigned

Commentary originating in Australia, unless specified otherwise, will be English and may be used as a guide track.

**5. SPECIAL IN-HOUSE FEED REQUIREMENTS**

This OP does not prevent the usage of other arrangements for special production needs within a broadcast operation.

**6. OTHER REQUIREMENTS**

A track identification system should be employed to ensure that downstream of the source any user can unambiguously determine the track number and thus the content.

The source ID generator shall provide 4 unique outputs labelled tracks 1, 2, 3 and 4. The content of each channel shall be 1000Hz alignment tone at -20dBFS alignment level (SMPTE RP 155), which equates to 0VU, interrupted at least once every 30 seconds by a voice announcement indicating track number and optionally a source name.

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