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|--------------------------|-----------------|----------|
| Lt/Rt Surround Mix Level | 0.5 (-6 dB) | N/A |
| Lo/Ro Center Mix Level | 0.707 (-3 dB) | N/A |
| Lo/Ro Surround Mix Level | 0.595 (-4.5 dB) | N/A |
| Dolby Surround EX Mode | Not Dolby EX | N/A |
| A/D Converter Type | Standard | Standard |
| DC Filter | Enabled | Enabled |
| Lowpass Filter | Enabled | Enabled |
| LFE Lowpass Filter | Enabled | Disabled |
| Srnd 3 dB Atten | Disabled | Disabled |
| Srnd Phase Shift | Enabled | Disabled |

** This loudness value may be amended based upon measurements performed in preliminary matches.

TECHNICAL SPECIFICATIONS

A BLITS line-up tone source should be available to ensure the accurate identification and technical line-up of the 5.1 surround sound stems. The use of a RTW meter capable of displaying a graphical representation of the sound field of the 5.1 surround mix is recommended.

Line-up tones should be aligned to -18dBFS for digital audio signals and 0dBu for analogue audio signals.

Quasi-peak programme meters should be calibrated to IEC 268-10 (analogue) and IEC 268-18 (digital).

Audio loudness normalisation and permitted maximum level (R128)

Instead of using the previous peak normalisation of audio signal procedures, it is requested that host broadcasters instead follow the EBU R128 audio guidelines. These recommend that the loudness range and maximum true peak level be used for the normalisation of audio signals. Commentary will be added to the 5.1 or stereo mixes by rights holders and so the integrated loudness target value of the match coverage (without commentary) should be -25 LUFS. Further details of these audio recommendations can be found in FAME/Broadcaster Information Centre/Manuals and Guidelines.

Host broadcasters' commentary feeds that are to be included in the Dolby® E stream should also meet the above parameters.

As detailed in [section 8.1.5](#), the end-to-end satellite test will include a clipboard for synchronisation checks.

For further information on setting up and checking the quality of HD and Dolby® E within an HD-SDI signal, please go to FAME/Broadcaster Information Centre/Manuals and Guidelines/Associated information. (For more information on FAME, see [chapter 9](#))

AUDIO CONFIGURATION FOR MULTILATERAL SIGNAL

The table below details the standard audio configuration required for on-pass to the EBU SNG/Fibre for the multilateral distribution.