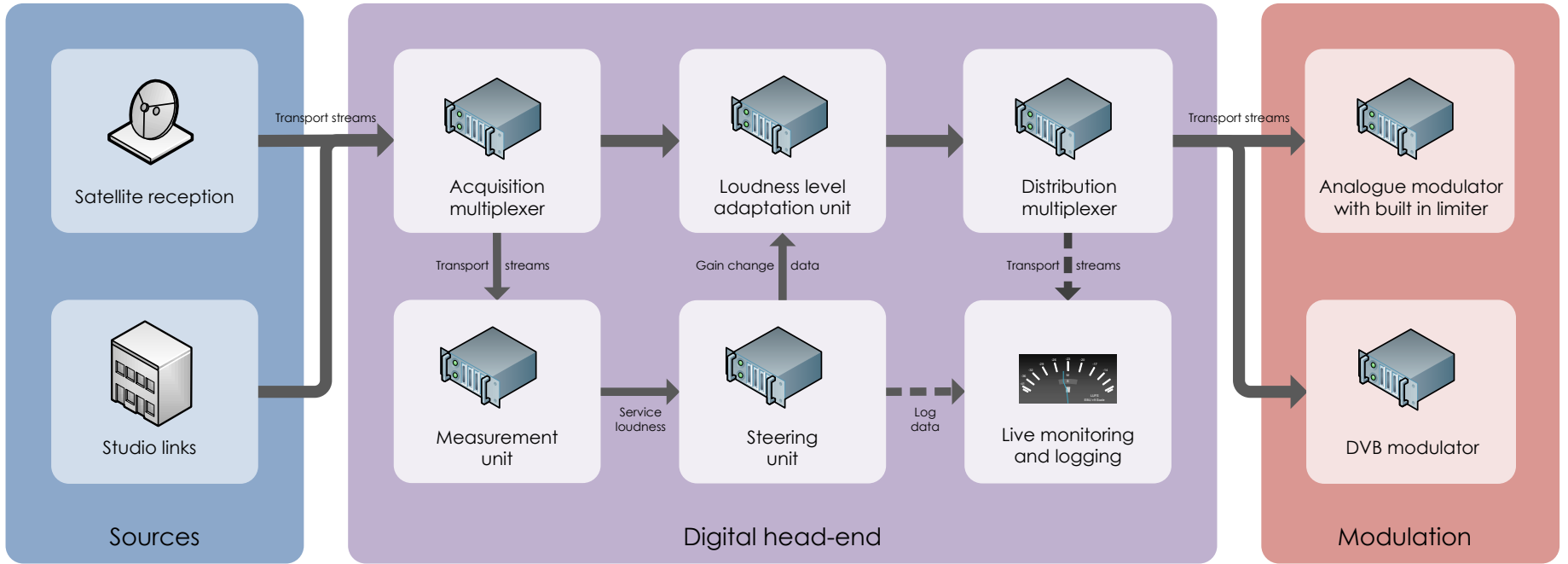


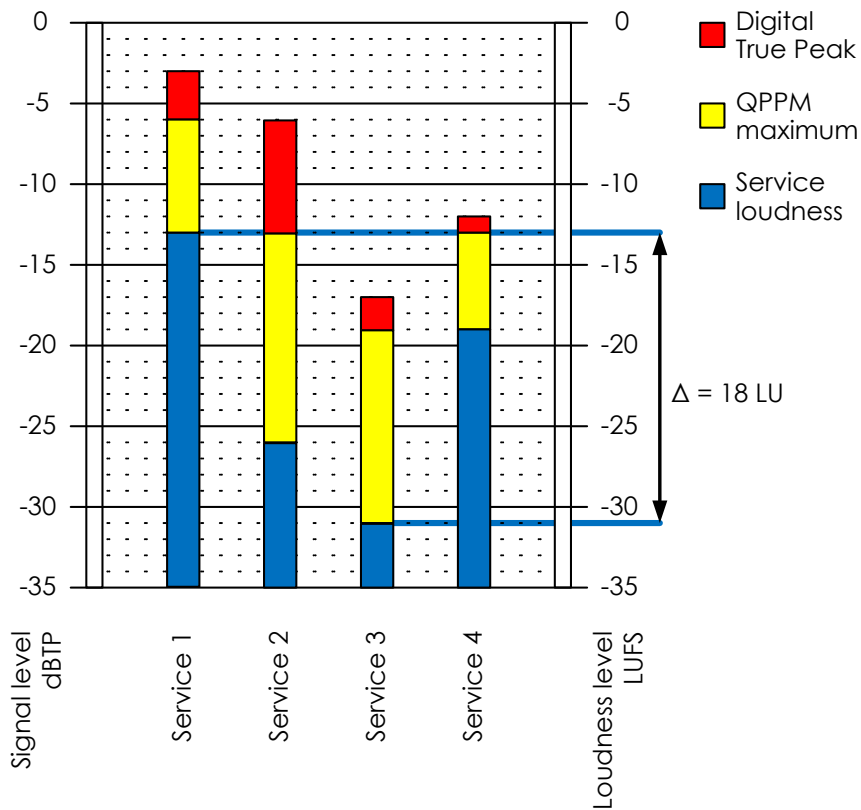
Loudness normalisation in distribution

Richard van Everdingen
Delta Sigma Consultancy

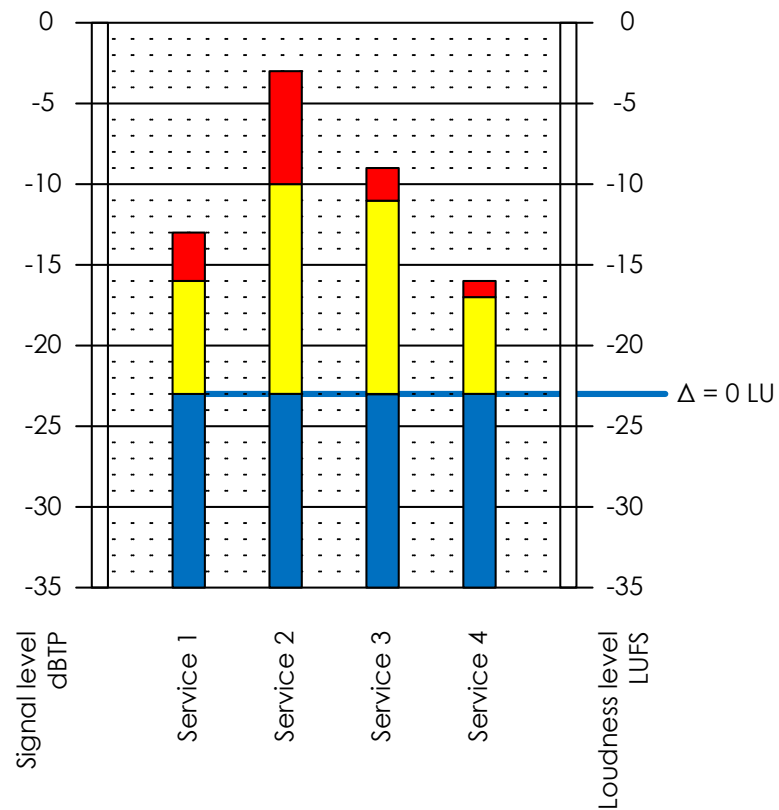




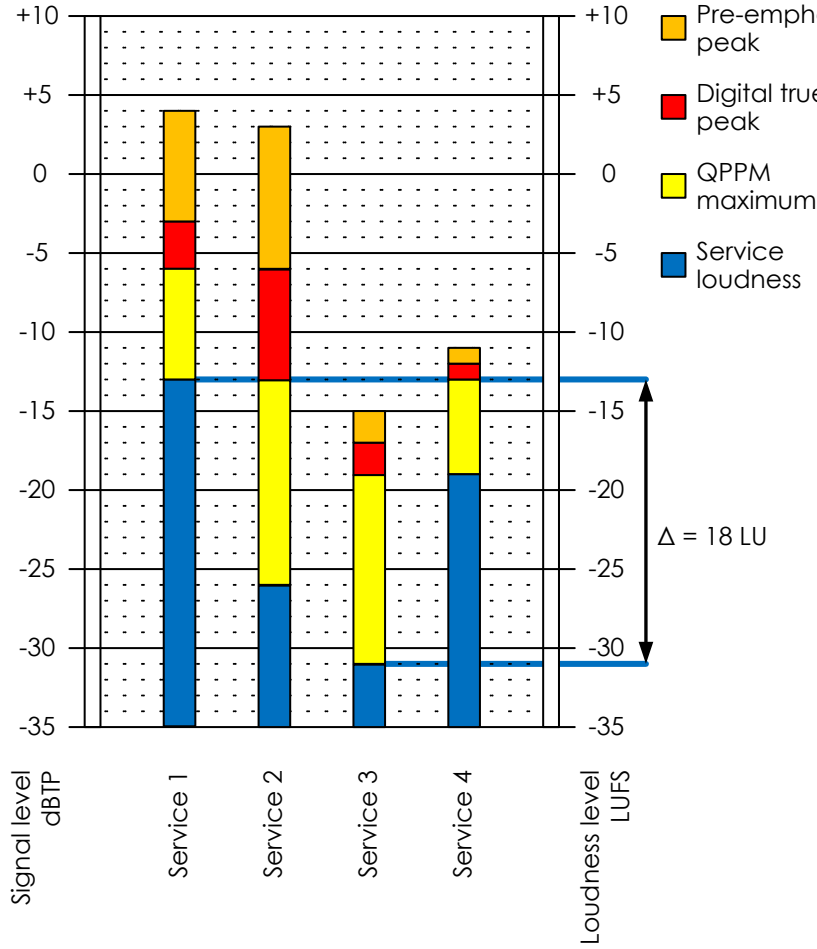
Before



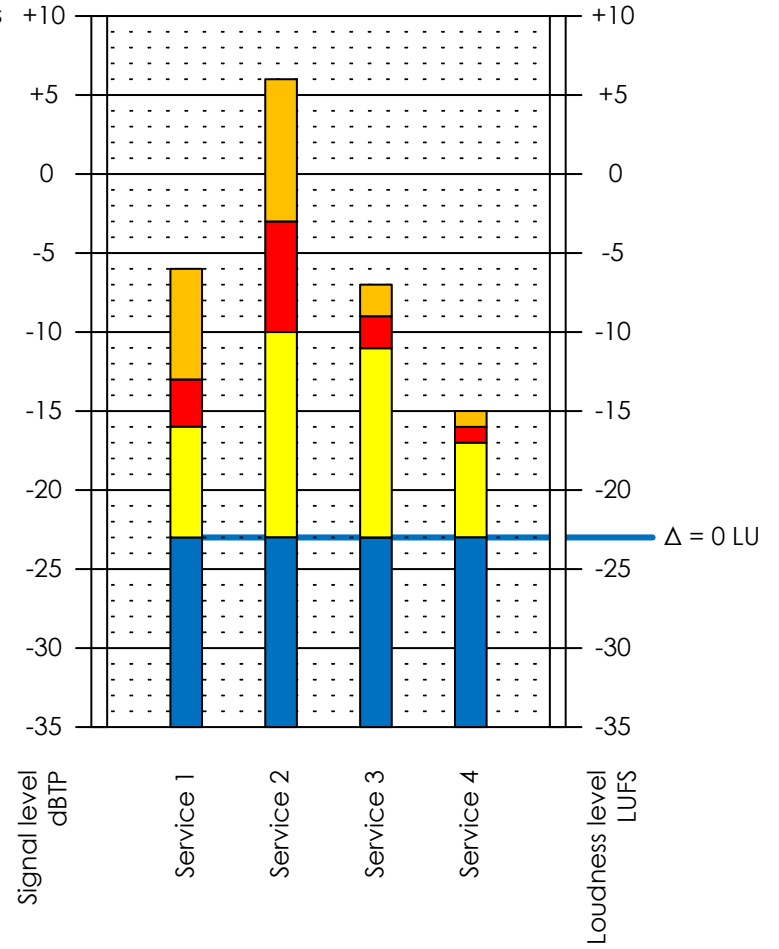
After



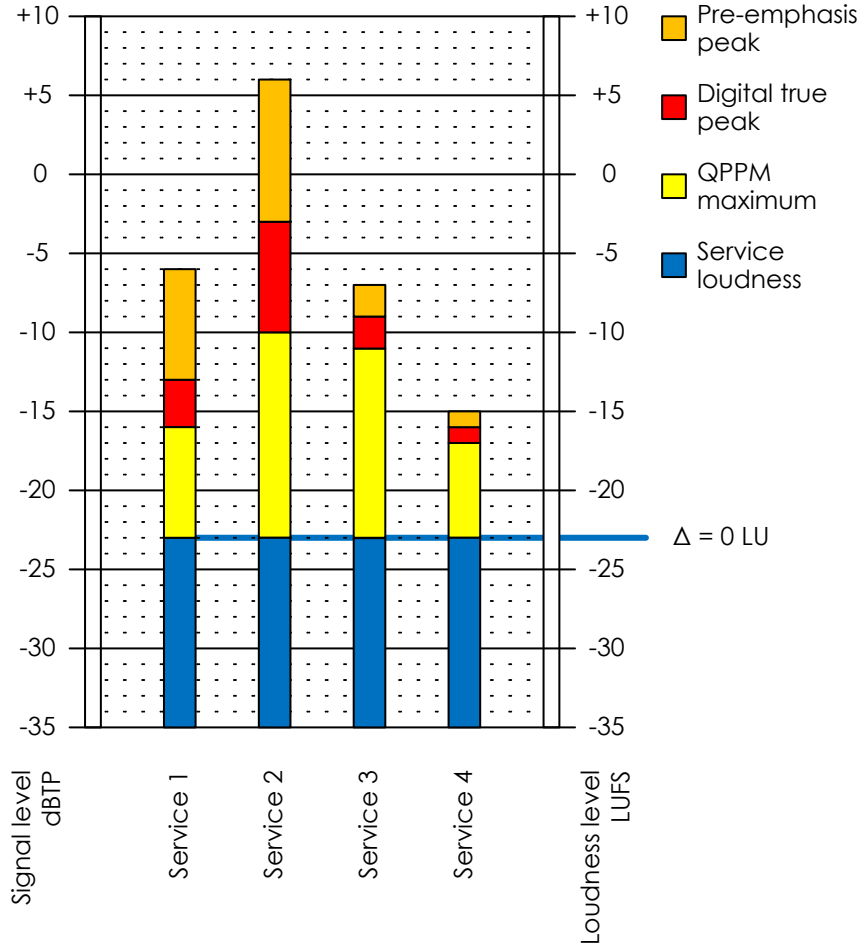
Before



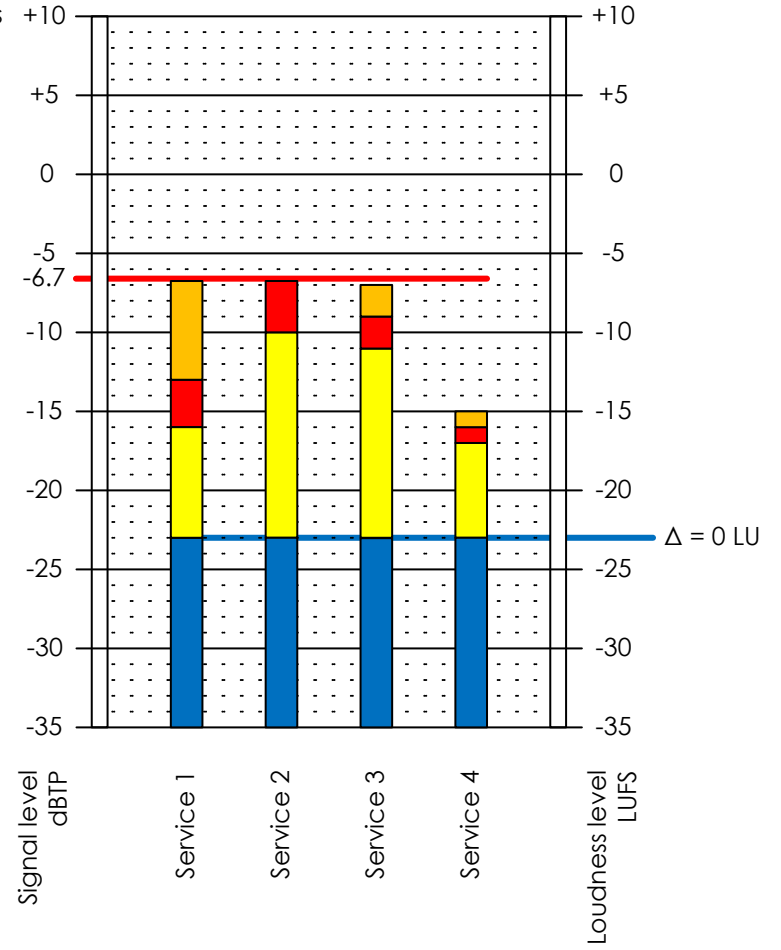
After

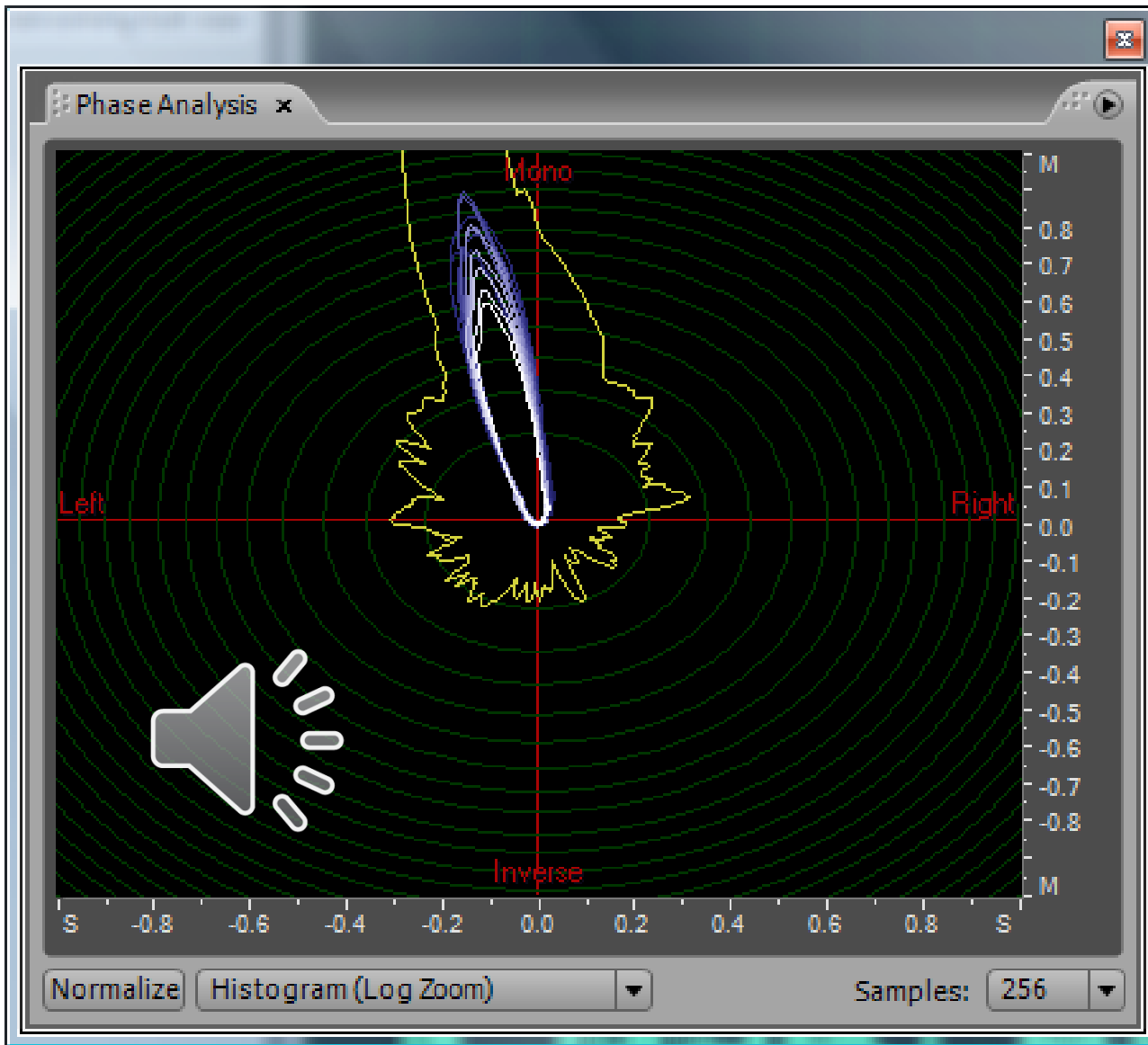


Before

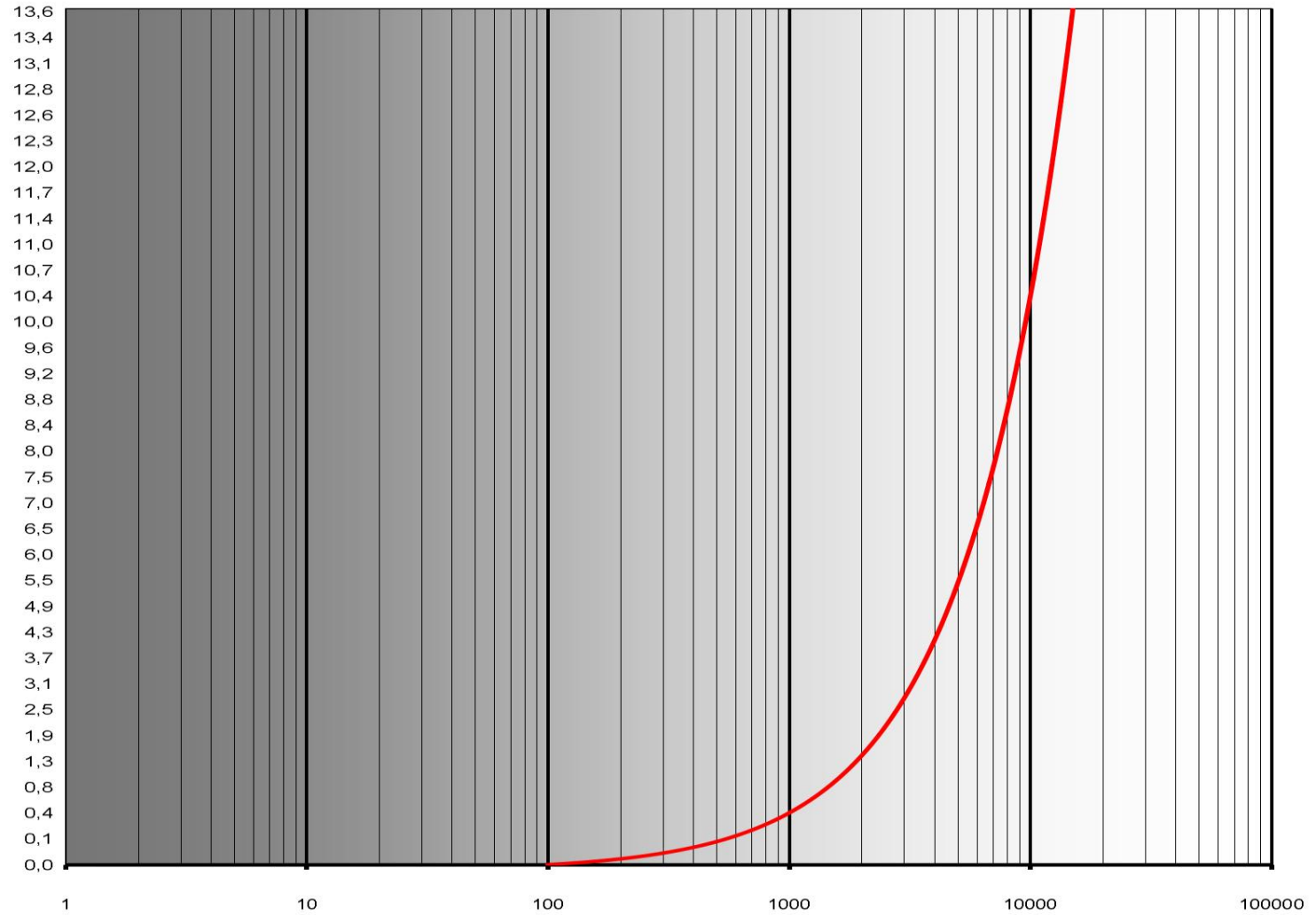


After

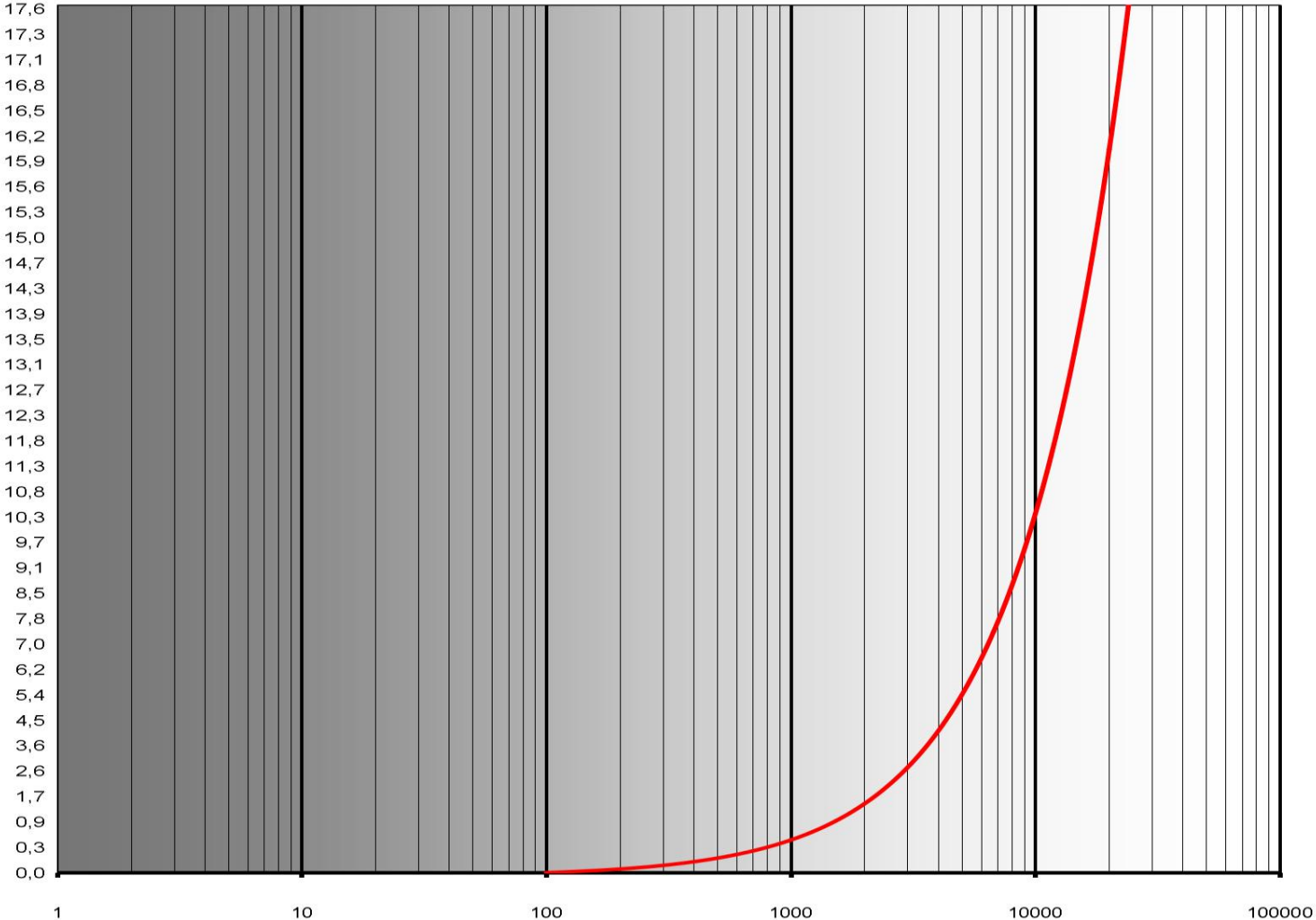


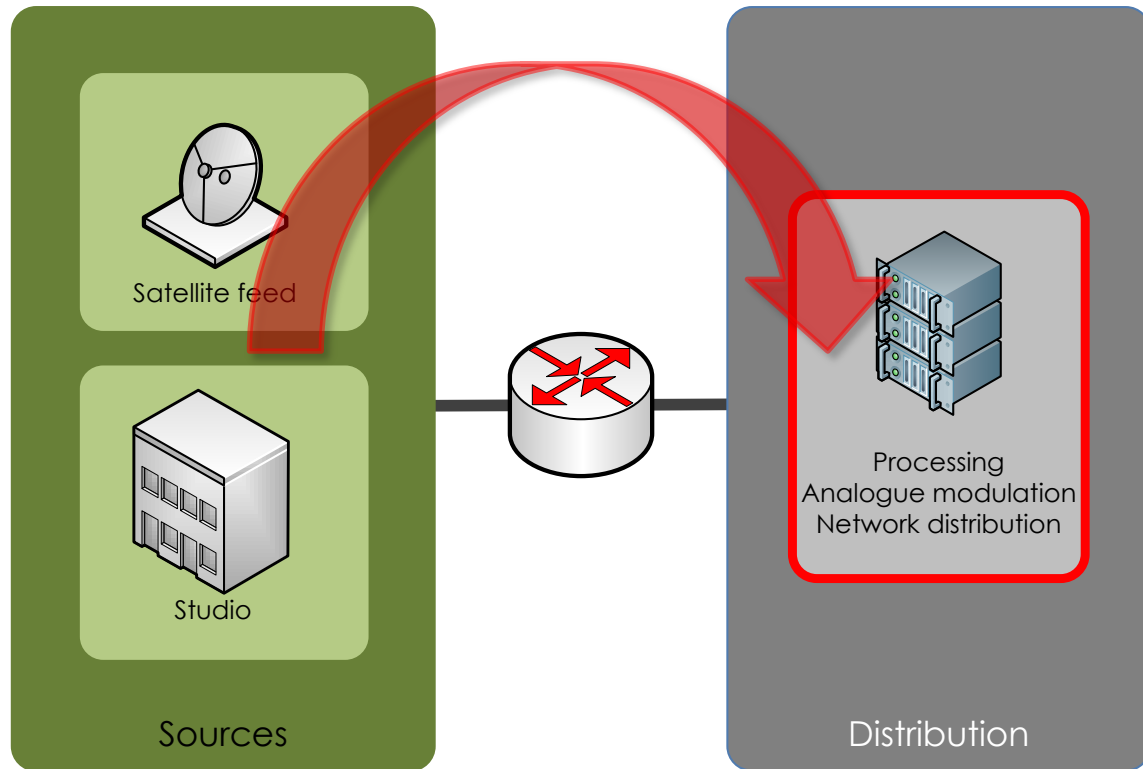


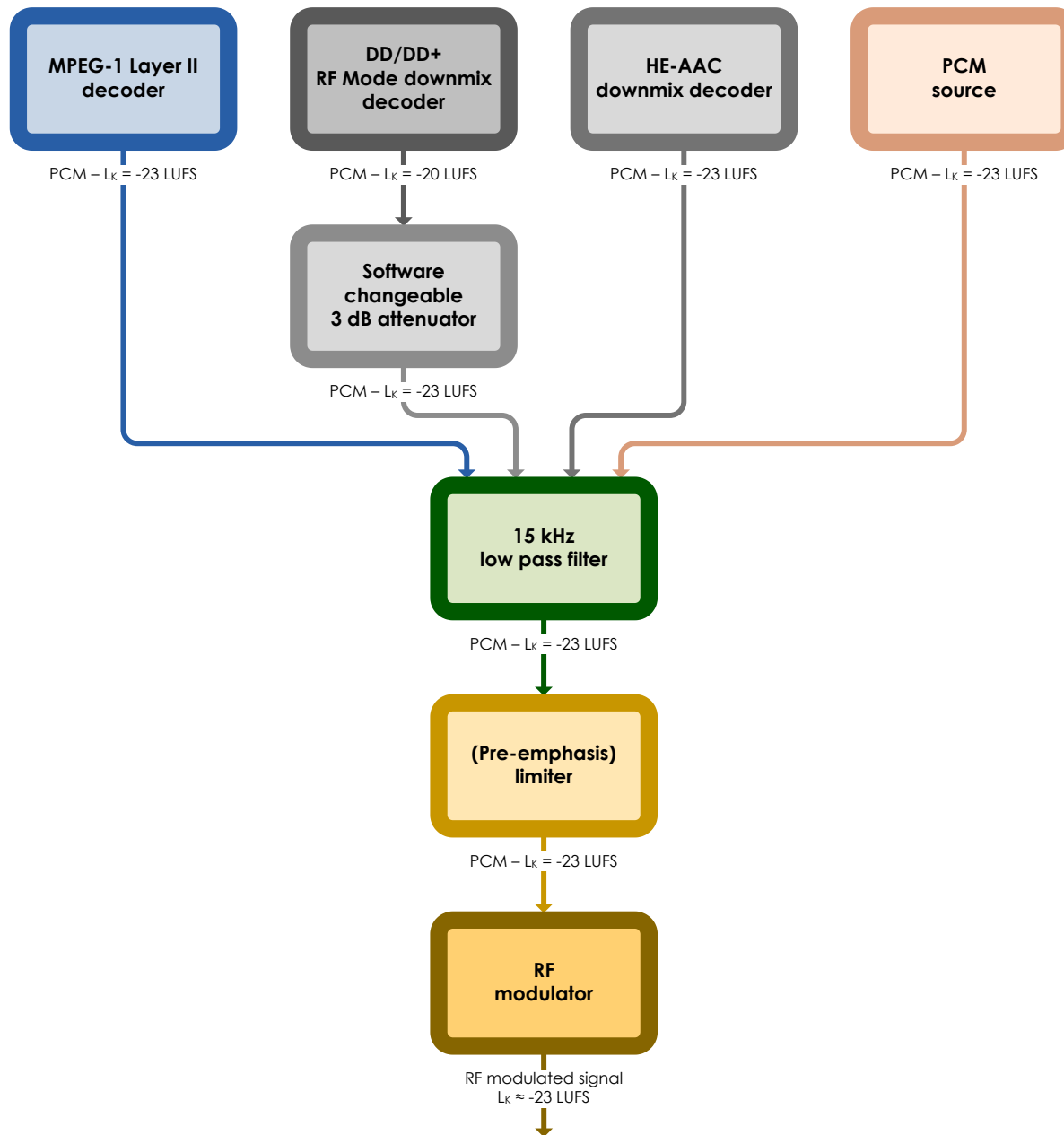
15 kHz



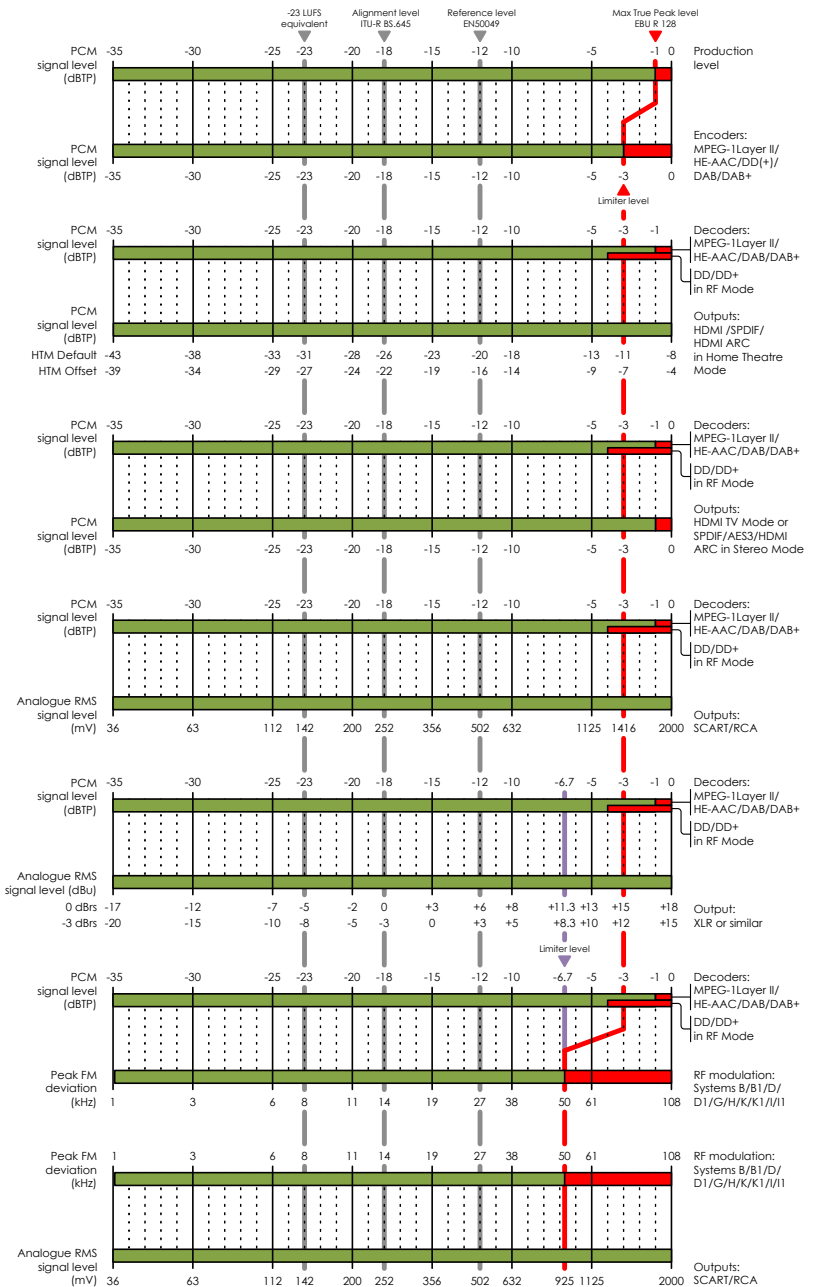
24 kHz





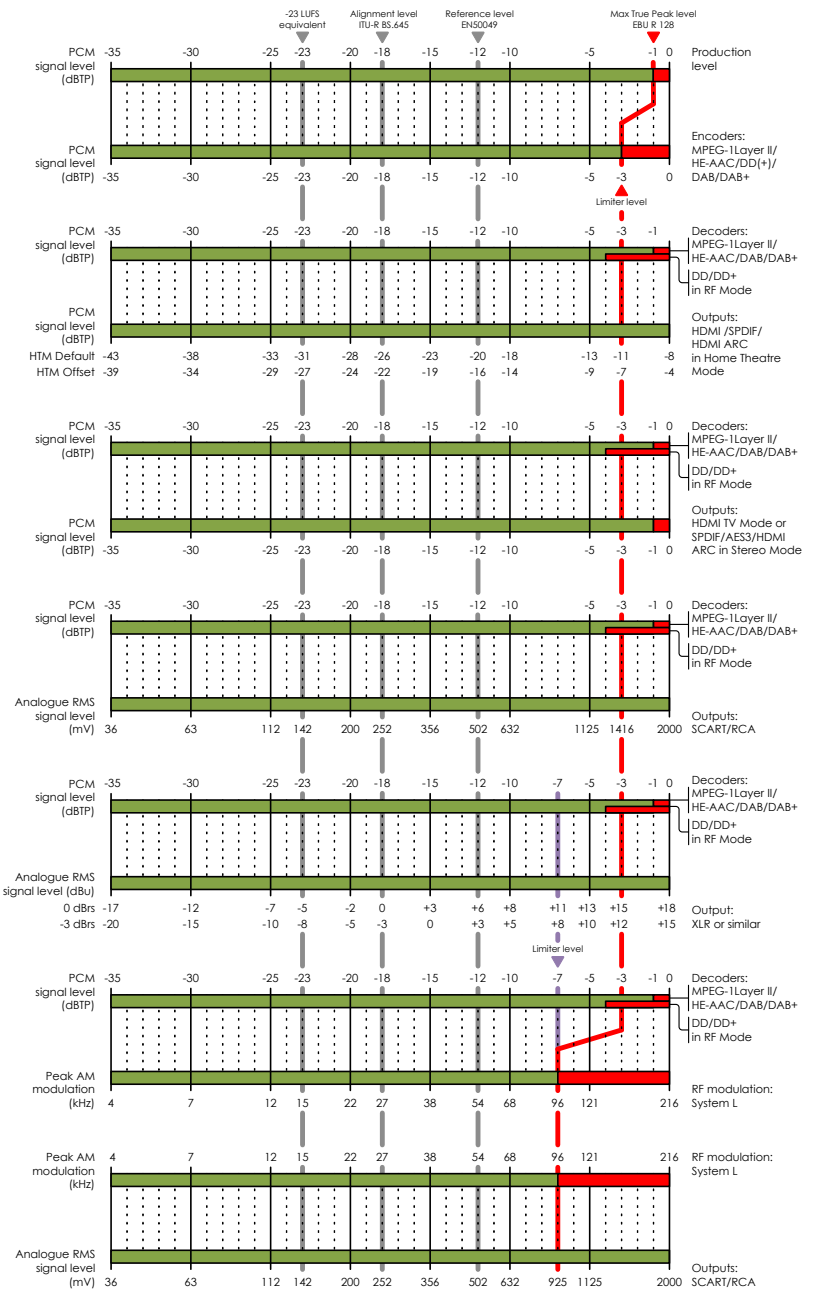


TV Systems B/B1/D/D1/G/H/K/K1/I/I1



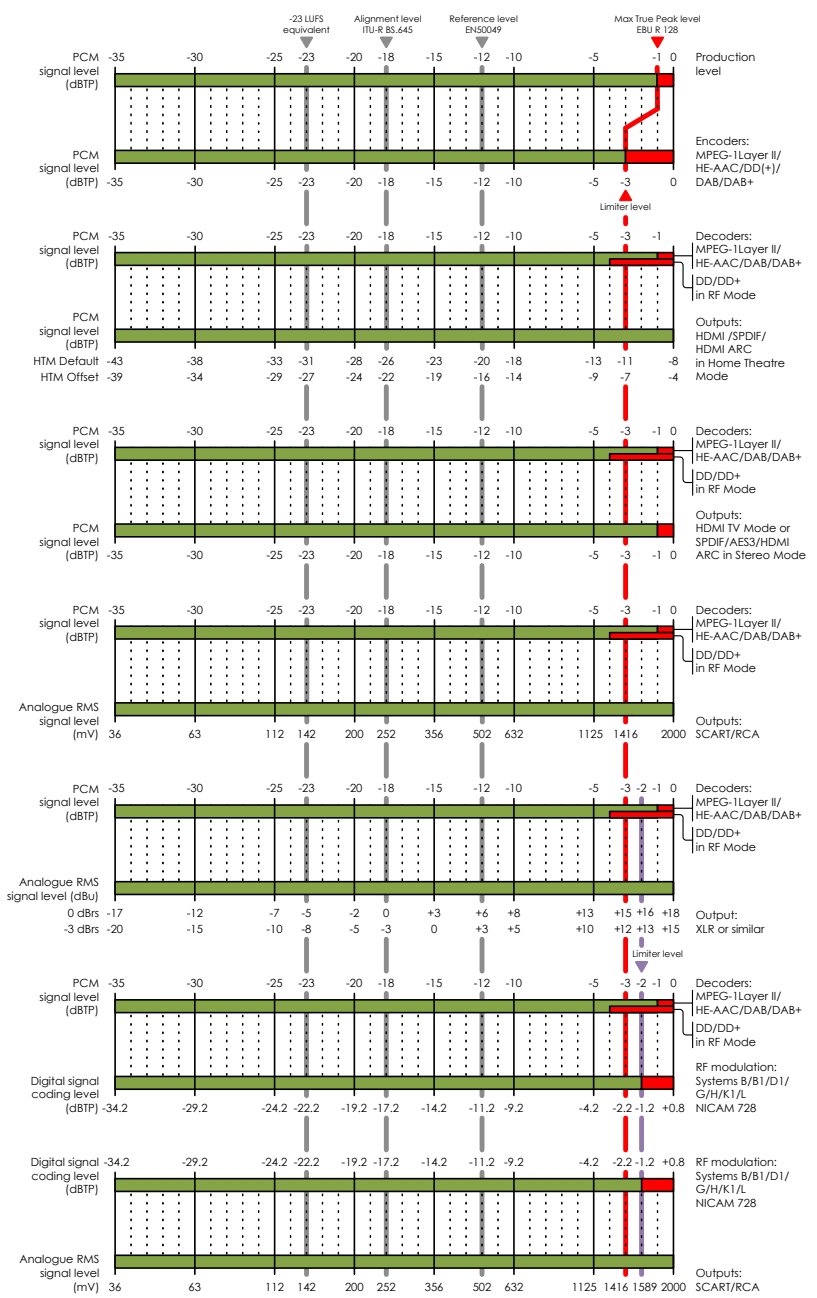
Conditions: 1 kHz sine wave in phase on Left and Right channel only, Dialnorm = -23, Mode = RF, DRC = None, PRL = -23, TL = -23

TV System L



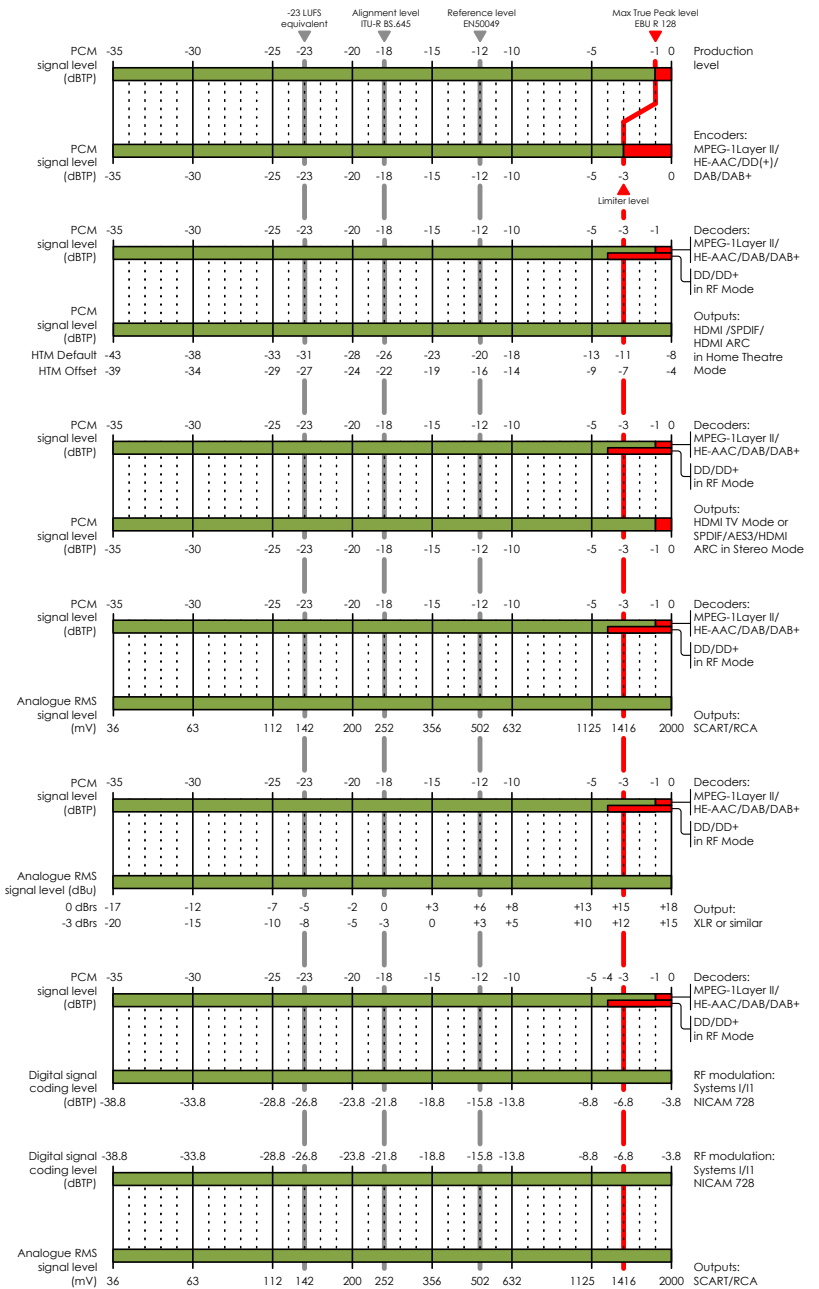
Conditions: 1 kHz sine wave in phase on Left and Right channel only, Dialnorm = -23, Mode = RF, DRC = None, PRL = -23, TL = -23

TV Systems B/B1/D1/G/H/K1/L NICAM 728L



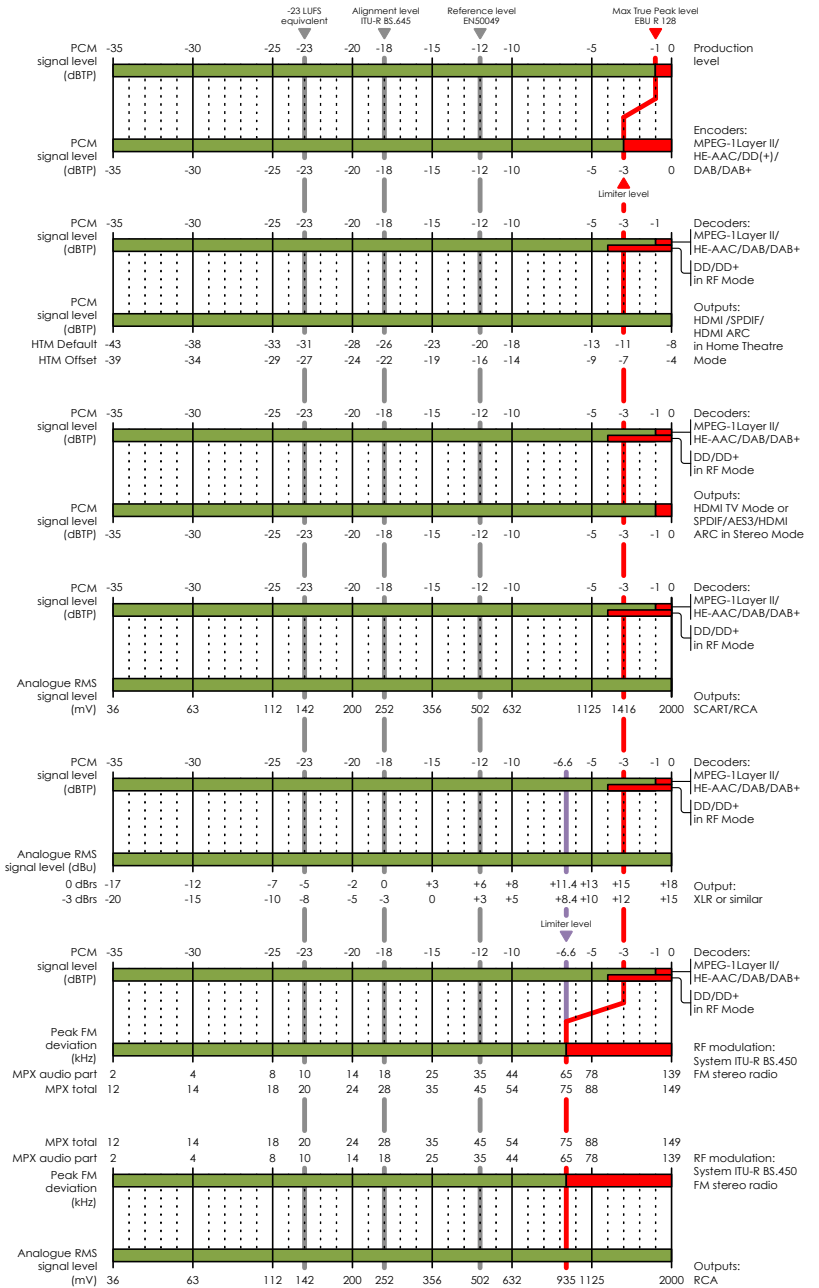
Conditions: 1 kHz sine wave in phase on Left and Right channel only, Dialnorm = -23, Mode = RF, DRC = None, PRL = -23, TL = -23

TV Systems I/I1 NICAM 728L

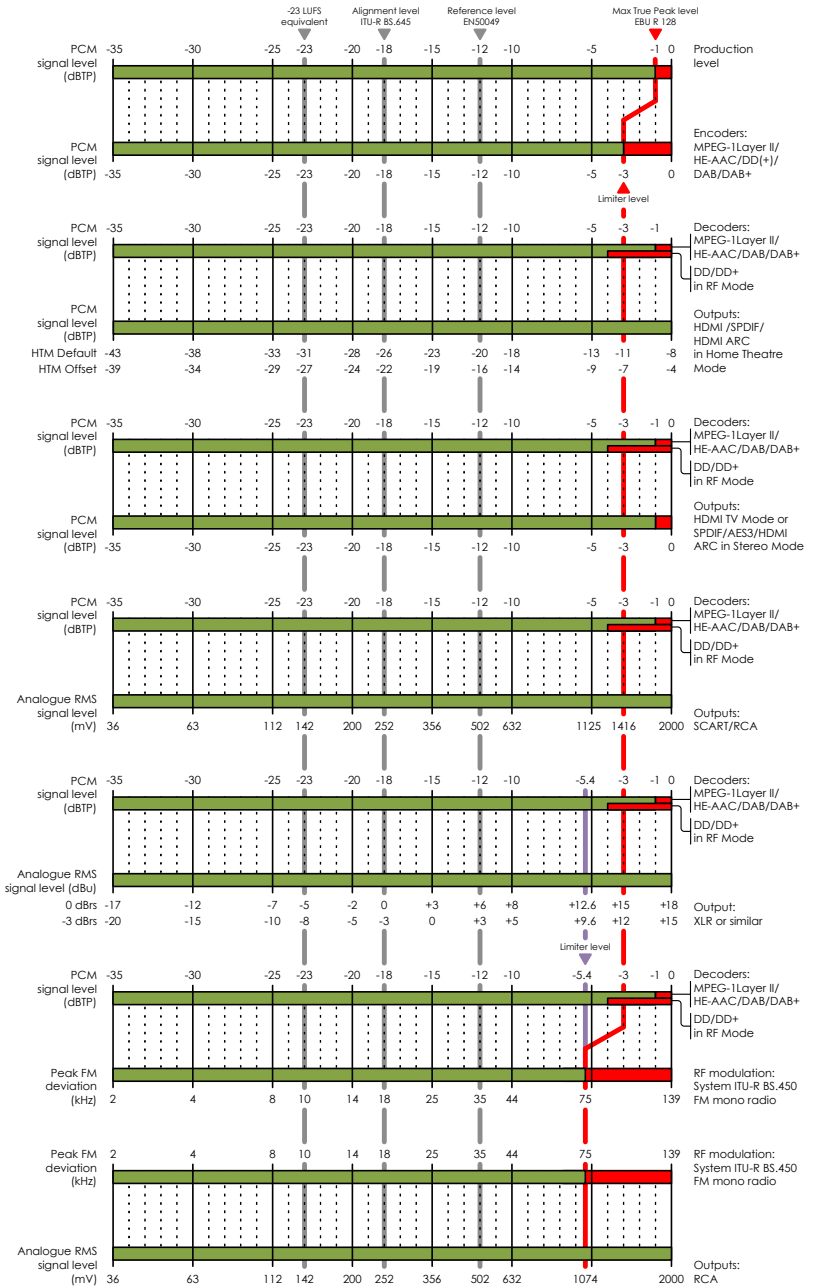


Conditions: 1 kHz sine wave in phase on Left and Right channel only, Dialnorm = -23, Mode = RF, DRC = None, PRL = -23, TL = -23

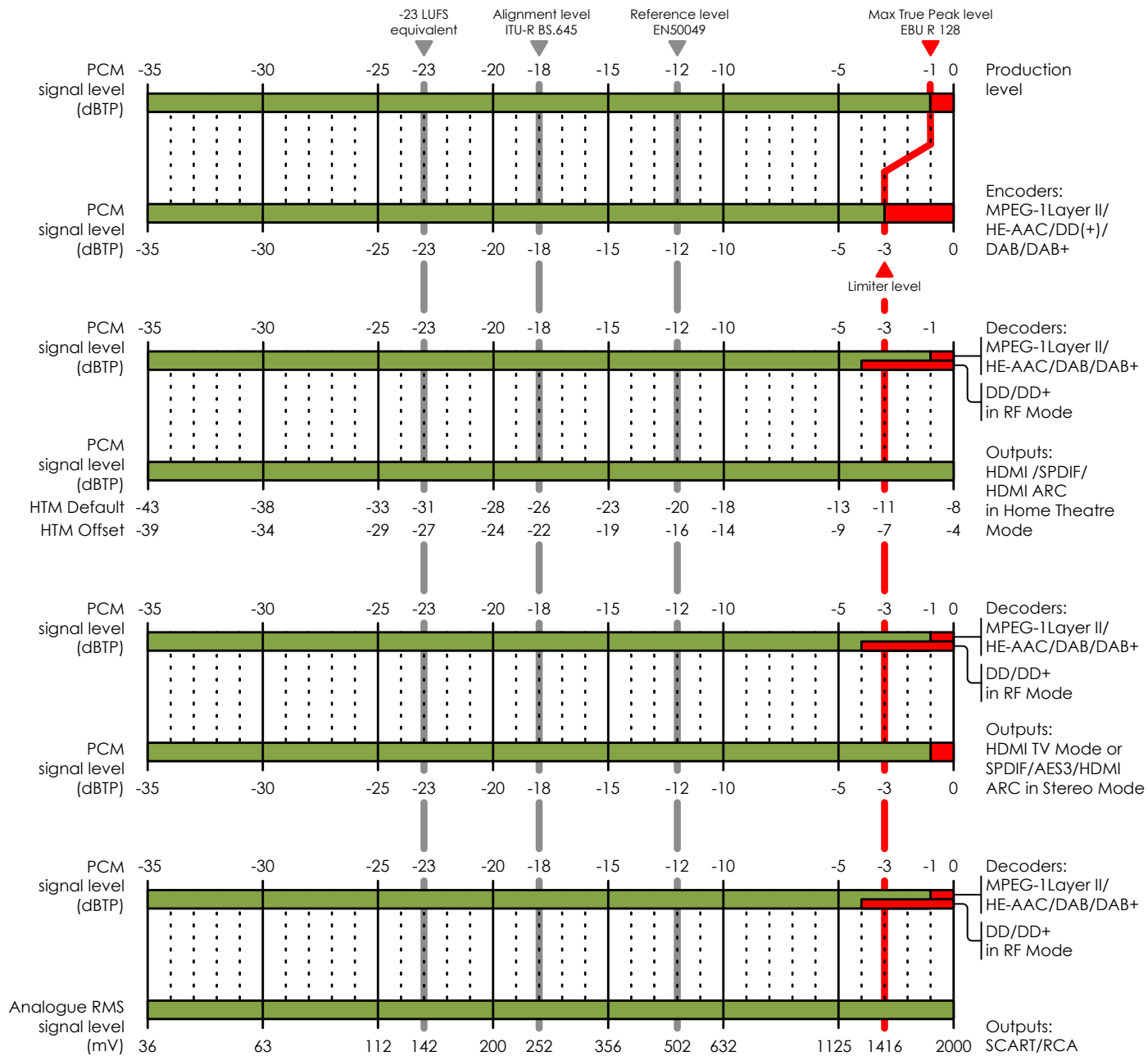
FM Radio Stereo

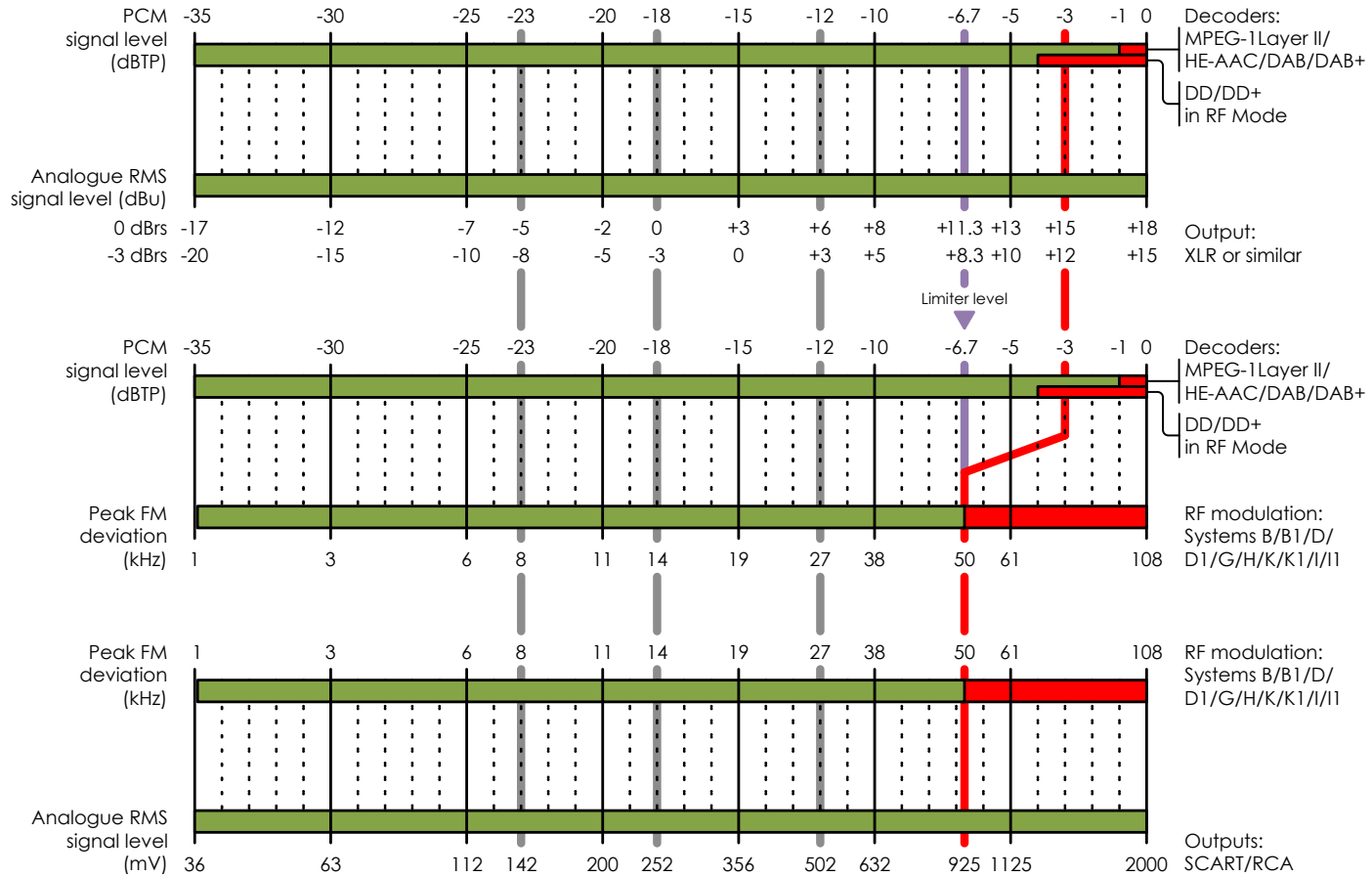


FM Radio Mono

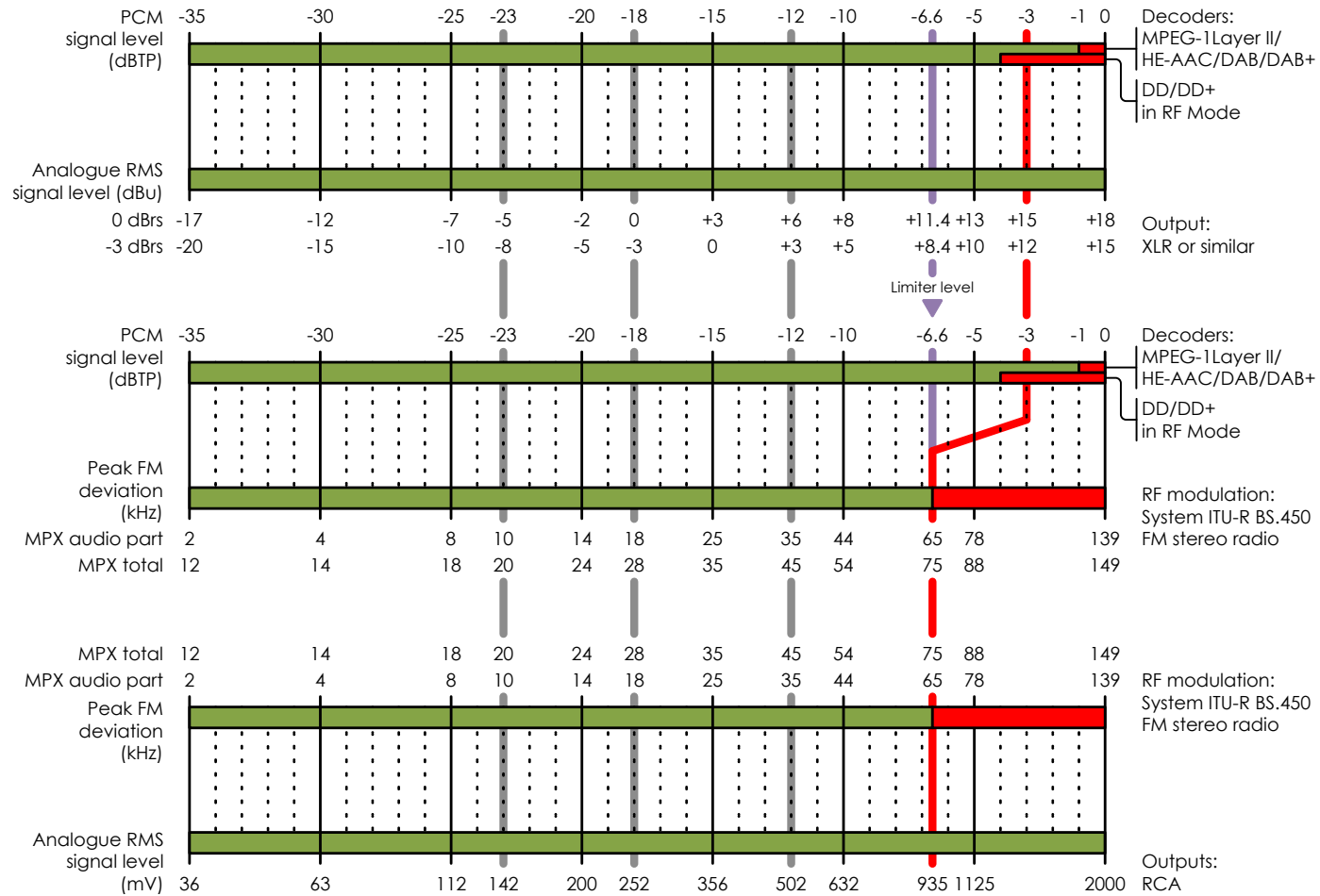


Conditions: 1 kHz sine wave in phase on Left and Right channel only, Dialnorm = -23, Mode = RF, DRC = None, PRL = -23, TL = -23





Conditions: 1 kHz sine wave in phase on Left and Right channel only, Dialnorm = -23, Mode = RF, DRC = None, PRL = -23, TL = -23



Conditions: 1 kHz sine wave in phase on Left and Right channel only, Dialnorm = -23, Mode = RF, DRC = None, PRL = -23, TL = -23

International Telecommunication Union

ITU-R
Radiocommunication Sector of ITU

Recommendation ITU-R BS.412-9
(12/1998)

**Planning standards for terrestrial FM sound
broadcasting at VHF**

BS Series
Broadcasting service (sound)



Loudness normalisation in distribution

www.tech.ebu.ch/loudness

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