



Tape Recorder Equalization Standards

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Overview

- Tape does not have a flat frequency response.
- To optimize the quality the input signal is equalized to decrease with increasing frequency in a standard way.
- Playback is therefore equalized so that it complements the record equalization producing a “flat” response.



Standards Organizations

- IEC
 - The International Electrotechnical Commission
- NAB
 - The National Association of Broadcasters
- AES
 - The Audio Engineering Society
- CCIR
 - French for the International Radio Consultative Committee
- DIN
 - German for German Industrial Standard



History

- The US standards have been:
 - NAB for 3.75ips, 7.5ips and 15ips
 - AES for 30ips
- The European standards have been:
 - IEC=CCIR=DIN
- Since the US is now part of the IEC so these standards have been renamed
 - NAB = IEC2
 - AES = IEC2



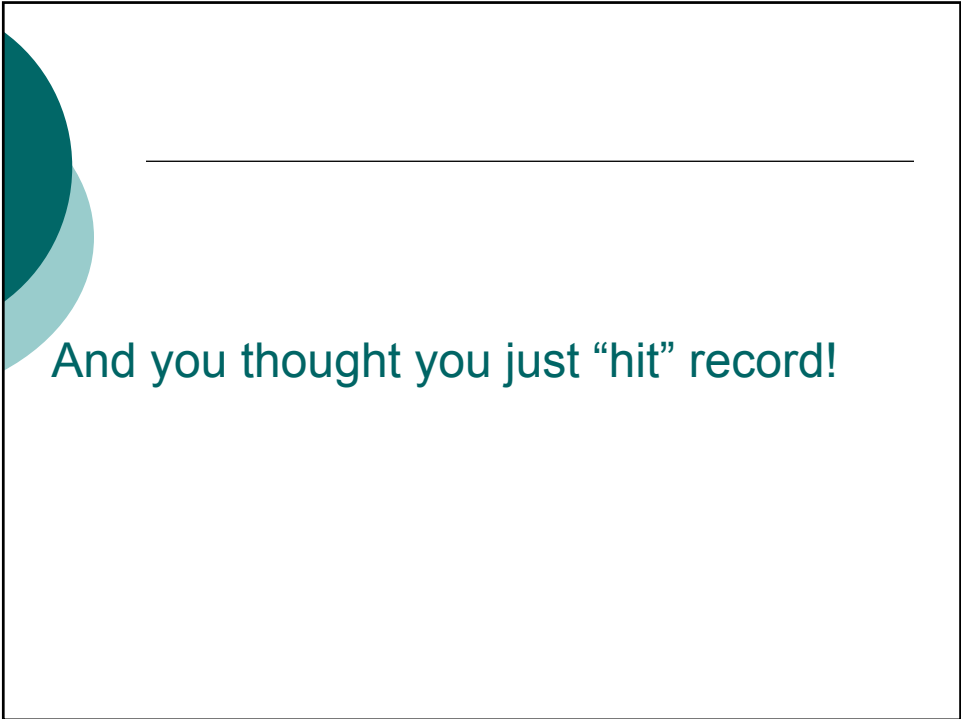
Standards in use

- 3.75ips = IEC (NAB)
- 30ips = IEC2 (AES)
- 7.5ips =
 - IEC2 (NAB) for the USA
 - IEC = IEC1 = CCIR = DIN for Europe
- 15ips =
 - ½" 8-trk and 1" 16-trk always use IEC = IEC1
 - IEC2 (NAB) for the USA
 - IEC1 (IEC) for Europe
 - Nagra tape recorders use Nagra Master Equalization



To Summarize

- In the USA
 - IEC2 for all tape speeds except 3.75 (IEC)
- In Europe
 - IEC1 for 3.75ips – 15ips
 - IEC2 for 30ips
- For ½" 8-trk and 1" 16-trk
 - always use IEC = IEC1



And you thought you just “hit” record!