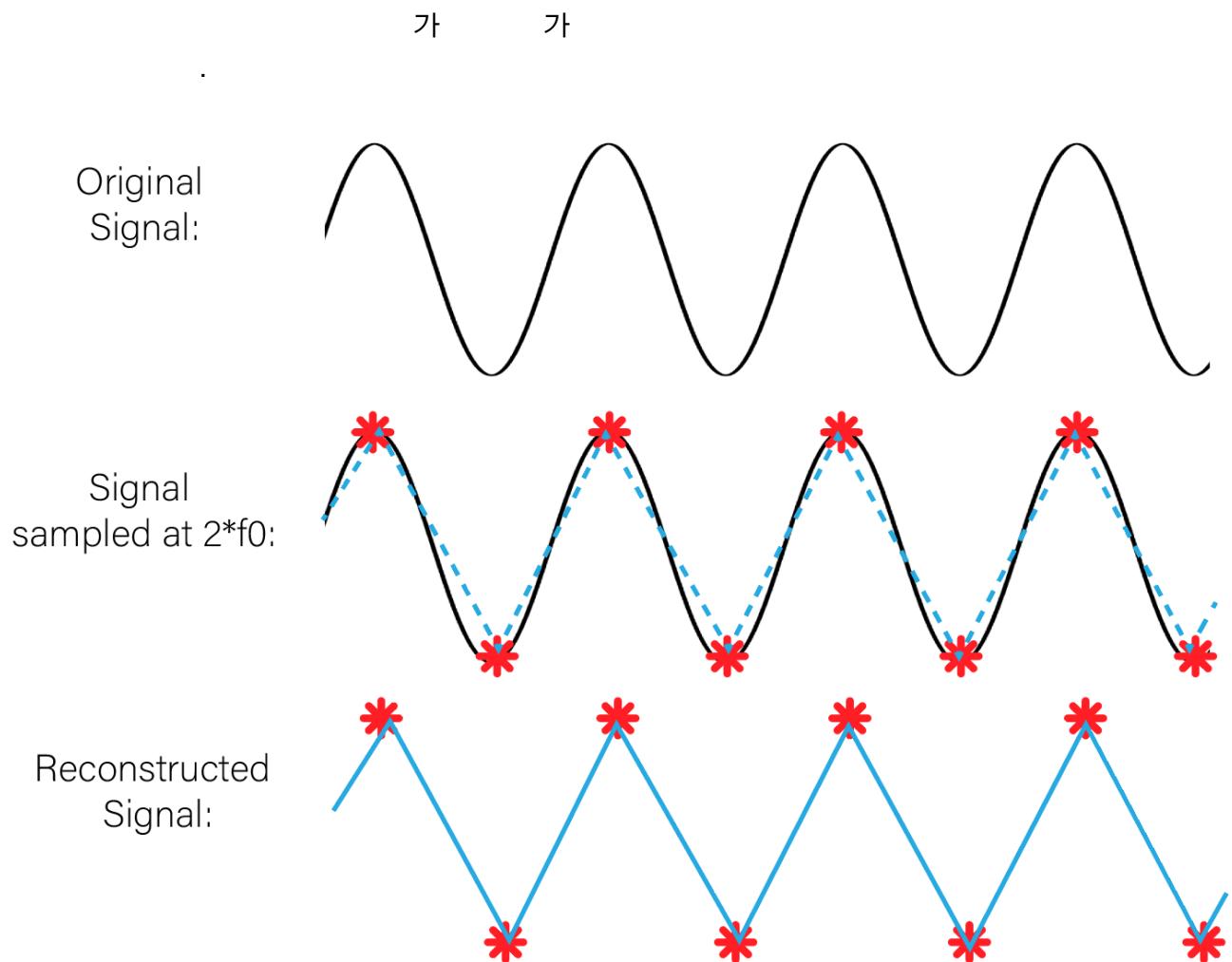


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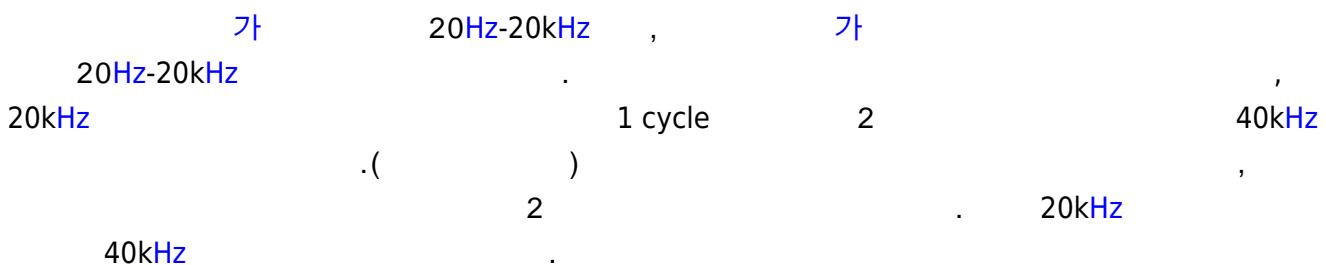
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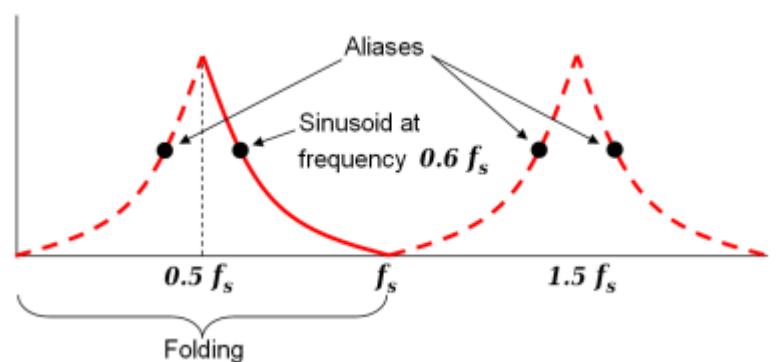
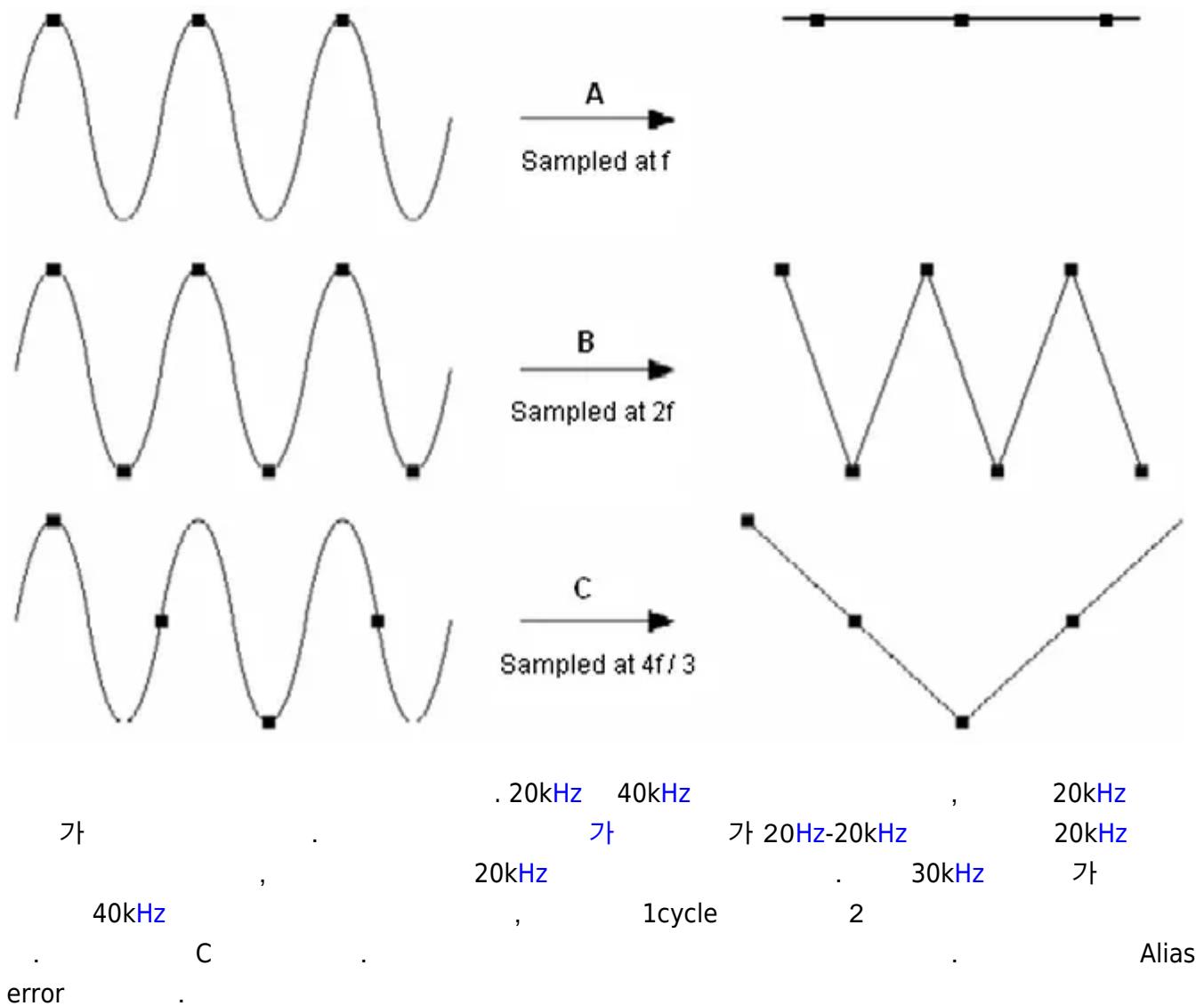


Nyquist's theorem

Nyquist's theorem states that a periodic signal must be sampled at more than twice the highest frequency component of the signal

Aliasing error





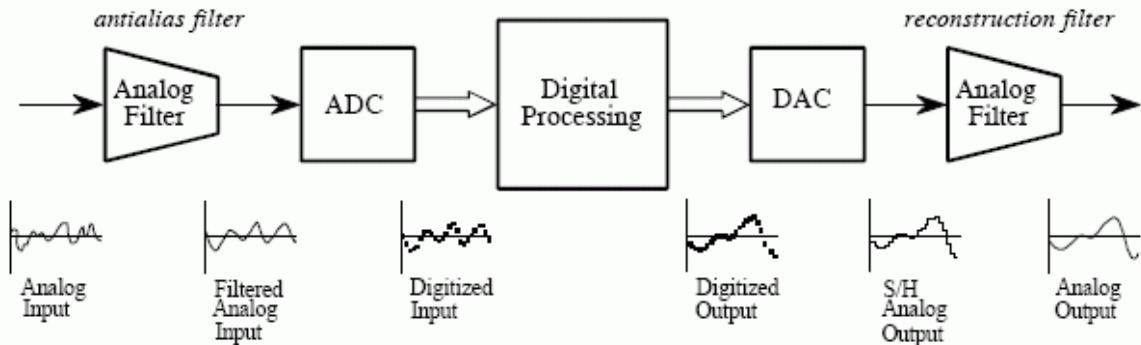


FIGURE 3-7

Analog electronic filters used to comply with the sampling theorem. The electronic filter placed before an ADC is called an *antialias filter*. It is used to remove frequency components above one-half of the sampling rate that would alias during the sampling. The electronic filter placed after a DAC is called a *reconstruction filter*. It also eliminates frequencies above the Nyquist rate, and may include a correction for the zeroth-order hold.

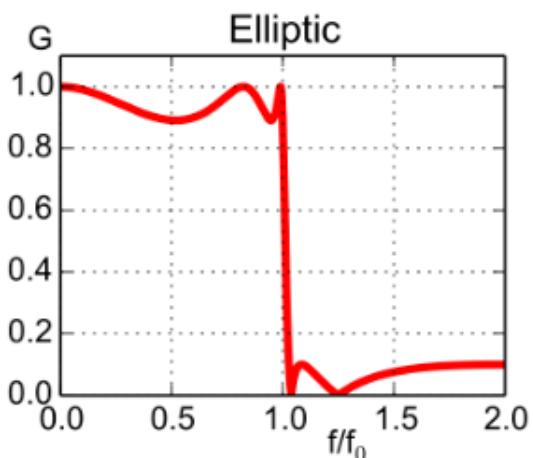
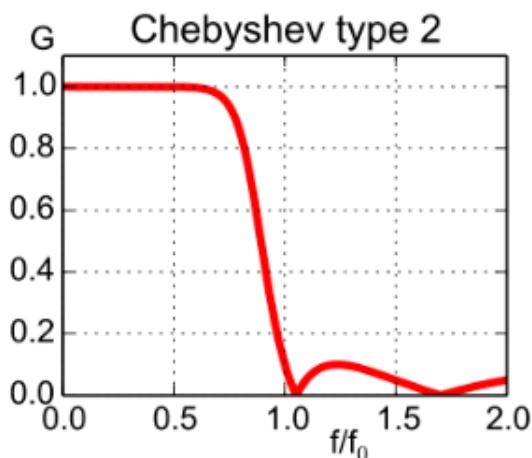
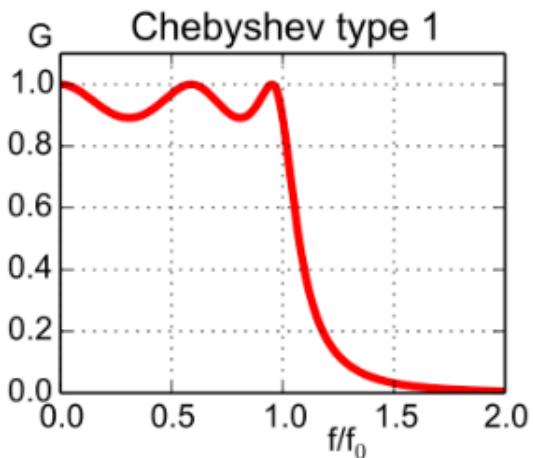
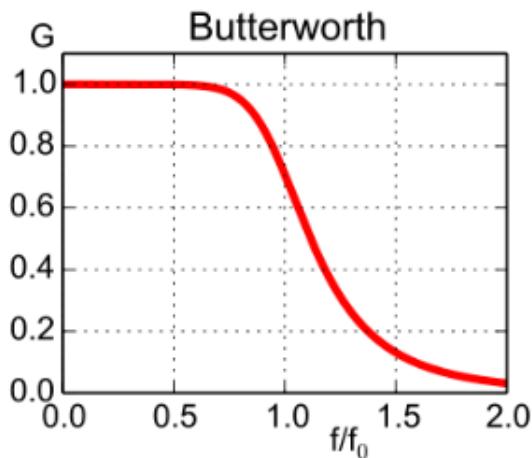
Anti-aliasing filter

20kHz

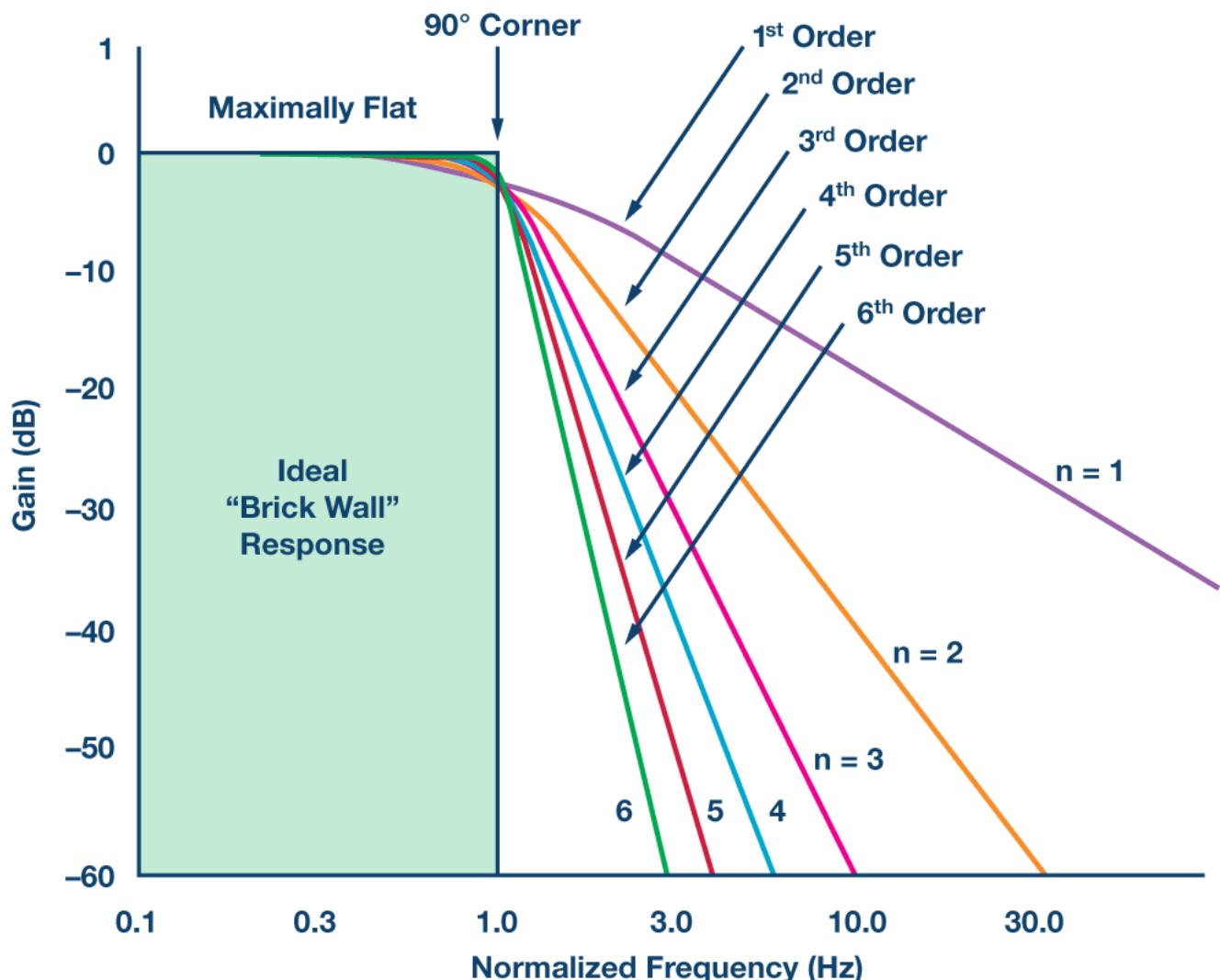
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20kHz

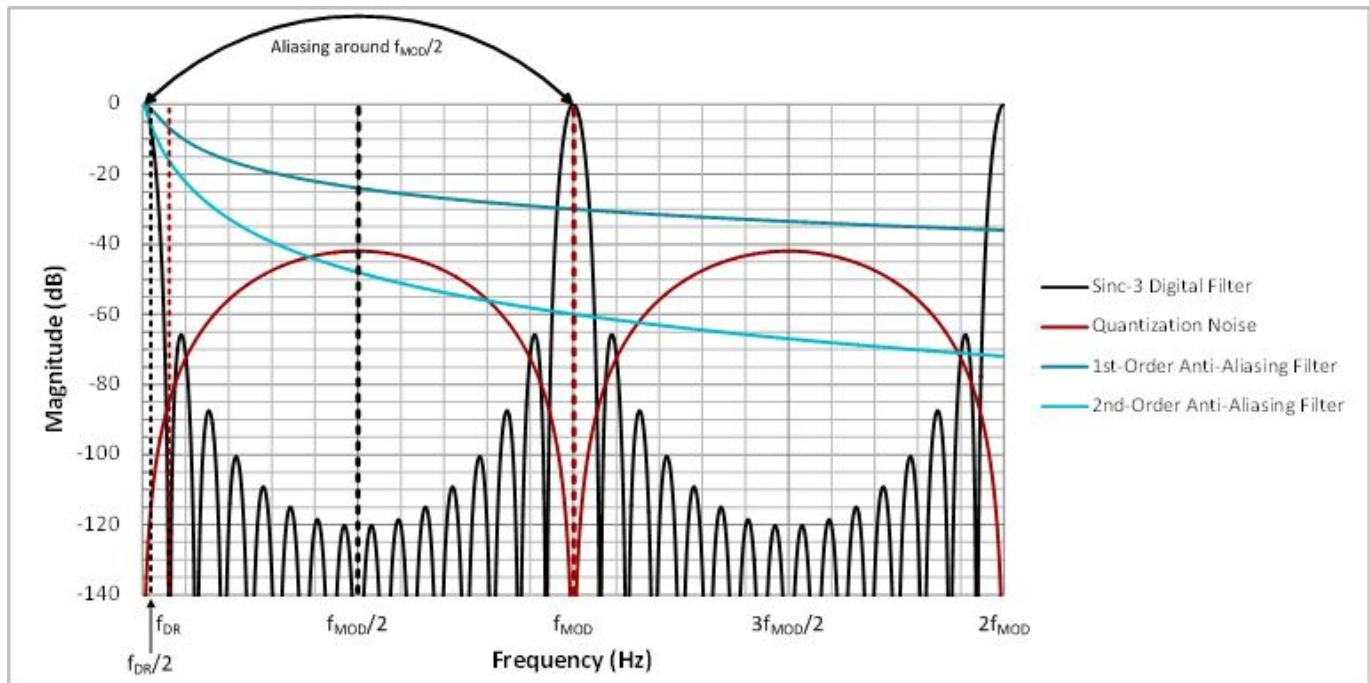
Anti-aliasing filter



, 20kHz
1)
2)
가
가



, Butterworth , 1 20kHz 3 -60dB³⁾ 가
 가 , 1 60kHz , 60kHz
 -60dB , alias error , alias error
 가 , alias error , 4)
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Reference

<https://www.audiomasterclass.com/newsletter/should-i-record-at-44-1-khz-or-96-khz>

- Facebook
- Twitter
- Email

1)

Order

2)

3)

-60dB

4)

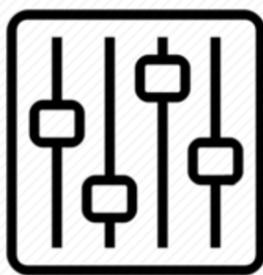
가 24-bit 가

144dB

24-bit

120dB

24dB 가



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