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Subject: Identical gain & tonality in double-triode tubes (ECC82)

Posted by [kasperbergholt](#) on Mon, 13 Dec 2021 16:52:23 GMT

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Dear tablers,

Inspired by the excellent feedback (e.g. on the E80 CC tube having quite different specs from the ECC82) the I got in this thread:

<https://audioroundtable.com/forum/index.php?t=msg&th=23320&goto=94872&>

some new questions have shown up in regards to gain levels for a single tube preamplifier like mine.

Which parameters determine the level og gain?

Some measurements are extremely detailed, e.g. this one from an eBay listing:

Sollwert IA [mA] fx 10,5 og 10,5  
Messwert IA [mA] fx 10,012 og 9,945  
= % vom Sollwer 95 og 95%  
S (mA/V] 1,92 og 19,96  
bei Deltage UG1 0,6 og 0m6  
D Anode [%] 6 og 6,1  
Messwer IA [mA] 7,2 og 7,13  
bei UA [V] 225,08 og 225,08

Ri [KOhm] 9,1 og 9

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A different listing for a tube in the same price range is a lot more sparse:

ECC82 TELEFUNKEN ( 12AU7 E82CC CV400 ) # <> # NOS  
gemessen auf RPM370  
12 / 12 mA 100 % = 10,5 mA

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Most list the mA values, few the Anode value.

In addition, is there a formula for calculating if the difference between values will be noticable e.g. in a 1 dB's difference in volume measured from 1 meter from the loudspeaker?

And, lastly, how about differences in tonality / frequency response. Are such inherent in the gains

measurement (or other parameters)?

Thanks again,

Kasper

## File Attachments

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1) [ecc82-tube-measurement.jpg](#), downloaded 179 times

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