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Subject: ECC 82 recommendation | Telefunken vs Mazda Belvu

Posted by [kasperbergholt](#) on Sat, 04 Dec 2021 17:51:48 GMT

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Hi!

I've upgraded from a preamplifier with a fixed mini tube to one with a standard socket accepting an ECC 82 (Audio Note M1).

I'm looking for recommendations on different tube types / brands / signatures to test.

It comes with an EI Yugoslavia produced in the 90's (on Telefunken equipment some sources say).

I've ordered an NOS Siemens E80 CC (which is compatible) and a NOS Telefunken.

Anyone with experiences with Mazda Belvu or Toshiba (which seems to be bang for the bucks and the only Japanese product receiving good reviews).

Thanks,

Kasper

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Subject: Re: ECC 82 recommendation | Telefunken vs Mazda Belvu

Posted by [positron](#) on Wed, 08 Dec 2021 17:58:13 GMT

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kasperbergholt wrote on Sat, 04 December 2021 11:51Hi!

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Hi Kasper,

Just a note that the 80 and 82 are not truly compatible. There are major differences between them that affect distortion, clipping, dissipation etc.

1. filament current 600ma vs 300ma at 6.3 volts, check fil tranny for handling capability
2. transconductance ~2700 vs ~7000
3.  $\mu$  ~27 vs ~17
4. plate resistance
5. plate dissipation 2 vs 2.75

As such, the plate voltages and currents will be quite different, requiring different plate, cathode resistors. Without changing these parts values, the clipping point and distortion characteristics will be different. Might also check the plate dissipation to be sure it is safely within limits.

You might make a go of it, but I could not guarantee the quality will be optimum.

Cheers and good luck with your endeavors. :)

steve

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Subject: Re: ECC 82 recommendation | Telefunken vs Mazda Belvu

Posted by [gofar99](#) on Sat, 11 Dec 2021 02:24:05 GMT

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Hi, I agree that the E80 is not the same as an ECC82. However a larger question is IMO important. I get asked this question regarding some of my builds all the time. My answer is always the same....to my ears in my gear type/brand XX sounds better to me. I will often try to clarify why I think that. Like one is dull sounding, one bright, one warm and mellow one crisp and so on. But the answer can not be definitively related to your ears and your gear. Yes there are some brands that are bad sounding regardless of the gear, my suspicion is that they either are not the type specified or rejects. But a great majority of new tubes from reputable companies (both NOS and new production) the sound will be pretty good. Not identical, just good. So I hope someone out there will have your gear, at least one variable will be eliminated. As for your ears and preferences that is another story.

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Subject: Re: ECC 82 recommendation | Telefunken vs Mazda Belvu

Posted by [kasperbergholt](#) on Sat, 11 Dec 2021 14:32:52 GMT

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positron wrote on Wed, 08 December 2021 11:58kasperbergholt wrote on Sat, 04 December 2021 11:51Hi!

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Cheers and good luck with your endeavors. :)

steve

Hi Steve! Thank you very much for your feedback, it was exactly knowledge like this I was after. I'll have to read up on the technical aspects, but I do get the essence of it.

The Siemens ECC82 was out of the stock, so I got a Telefunken ECC82 instead (normal version, not smooth plates).

To my ears the Telefunken sounds much better than the ECC80. First thing I noticed is the amount of soft hiss before the music starts playing. The Telefunken is extremely quiet in comparison to both the IE Yugoslavia and the ECC80.

So for now, and considering the things you said about compatibility, I've mostly listened to the Telefunken vs the IE Yugoslavia. I get a bit more speed and treble in the Yugoslavia, but also a bit of harshness and overall thinner stereo perspective, which leads to a bit more distinctness

especially on violins, guitars, and other string instruments.

But it's not what I prefer. But I do get some people's preference for more detail.

Best & thanks again,

Kasper

<https://bergholt.net/blog/>

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Subject: Re: ECC 82 recommendation | Telefunken vs Mazda Belvu  
Posted by [kasperbergholt](#) on Sat, 11 Dec 2021 14:40:49 GMT

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gofar99 wrote on Fri, 10 December 2021 20:24Hi, I agree that the E80 is not the same as an ECC82. However a larger question is IMO important. I get asked this question regarding some of my builds all the time. My answer is always the same....to my ears in my gear type/brand XX sounds better to me. I will often try to clarify why I think that. Like one is dull sounding, one bright, one warm and mellow one crisp and so on. But the answer can not be definitively related to your ears and your gear. Yes there are some brands that are bad sounding regardless of the gear, my suspicion is that they either are not the type specified or rejects. But a great majority of new tubes from reputable companies (both NOS and new production) the sound will be pretty good. Not identical, just good. So I hope someone out there will have your gear, at least one variable will be eliminated. As for your ears and preferences that is another story.

I agree, it's a very good point. And I guess most audiophiles, at least in theory, consider the purity of the signal highly important - and seen from this perspective, tubes shouldn't sound that different if they neither add nor subtract from the signal.

I've ordered a new Tung Sol tube also to do some comparative listening - it's around 20 euros whereas the Telefunken cost me 130 euros, which will colour my listening experience. It'd be interesting to do some blind listening tests.

Would it be okay to upload some pictures of the different tubes?

Thanks again!

-- Kasper

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Subject: Re: ECC 82 recommendation | Telefunken vs Mazda Belvu  
Posted by [kasperbergholt](#) on Sat, 11 Dec 2021 14:49:24 GMT

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One more thing, in addition to less noise in the Telefunken, I detect a small difference between sound level between the right and left channels in the ECC80, and a small difference in the colouration of the background noise - right being a bit 'darker' sounding, the right side being a bit lower in volume than the left side.

I can adjust for this on the preamplifier, but would have expected very similar volume levels.

Can such a difference be understood by some measurement metric that's stated by some sellers of tubes?

Thanks again,

Kasper

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Subject: Re: ECC 82 recommendation | Telefunken vs Mazda Belvu

Posted by [positron](#) on Sun, 12 Dec 2021 06:52:18 GMT

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Hello Kasper, Bruce, and other Gentlemen,

I hope to provide a general reply to the subject at hand, and some personal information as others may not know me.

As an introduction, I have been doing R&D for some 40+ years developing an audio system in my lab as well as selling my products. Been retired for some 10 years.

With this setup, I am hoping my research results will help those in their quest for higher quality reproduction from their system(s). Some experimental listening test procedures are confidential since I developed them. I also perform multiple types of listening tests and compare the results for any discrepancies. Although measurements have some value, listening testing is the final test of course.

When designing my own components decades ago, it took months, even years, before the listening testing was completed and I was comfortable with the results.

I realize that most, if not nearly all, will not be able to conduct the same experiments or make the same system adjustments to their audio systems. However, some suggestions will be applicable if one is able to get at parts, including crossovers etc.

I am at somewhat of an advantage in that I have built my entire audio system from scratch, except for the source, which includes the dac, which I have significantly upgraded/modified. The phono, line preamplifier, interconnects, monoblock amps, speaker wires, and speakers are all my own designs.

No copying here. I have used many and different types of speakers, up to \$28,000, and preferred to design my own due to accessibility problems in speakers parts/adjustments.

My initial response to the subject at hand is that I have found it preferable to create the lowest distortion possible for a given stage. That is why my initial comment.

(By distortion, I mean not only minimal THD, but also intermodulation distortion (IMD), hum, noise, grunge, frequency response (fr) deviations, channel separation issues, anything that causes the output to differ from the input of a stage, thus the component.)

Reducing distortion involves not only the design, but the parts quality/accuracy, the layout, and method of connecting parts etc. Everything makes a difference.

A truly accurate system will reproduce the recording to exceptional quality. Enough to drop one's jaw to say the least.

Anyway, I understand what you are working with Kasper. Those type tubes will have inherently higher noise figures etc and the manufacturer will make a difference, as you have presented. I hope all goes well with your endeavors.

I attempt to lower both the THD and IMD to the lowest levels for greatest fidelity. This also includes the design, parts quality, layout, channel separation etc. As mentioned earlier, everything seems to make a difference.

cheers and great week gents.

pos

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Subject: Re: ECC 82 recommendation | Telefunken vs Mazda Belvu

Posted by [kasperbergholt](#) on Sat, 18 Dec 2021 17:08:57 GMT

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Did some photos of the Telefunken ECC82, my favourite so far in terms of tonality, clarity and precise bass.

I don't know its production year, perhaps somebody can tell from the serial number on the sides- or on the top (151)?

I've tried adding artificial contrast to one of the photos of the bottom where it says 2-2-2 in a triangle.

### File Attachments

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- 1) [telefunken-ecc82-nos-new-old-stock \(1\).jpg](#), downloaded 168 times
  - 2) [telefunken-ecc82-nos-new-old-stock \(2\).jpg](#), downloaded 162 times
  - 3) [telefunken-ecc82-nos-new-old-stock \(3\).jpg](#), downloaded 158 times
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