
Subject: C1, 7.5 uF/440VAC

Posted by [PakProtector](#) on Sun, 23 Jan 2005 02:21:51 GMT

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it is indeed the output coupling cap. Since the impedance of a cap is $1/j\omega C$, we want the cap as large as is sonically reasonable. Forget about j and root negative 1. It is the real part of this we will look at. At 20 cps, ω is $2\pi \cdot 20$ radians per second and C is $7.5 \cdot 10^{-6}$. this yeilds 1061.03295 Ohms. At 40 cps, it is half that, and at 80 cps, half of that. This is close enough to the 10:1 ratio of input impedance to output impedance which keeps us from rolling off too early, even with a 10kOhm SS amp. For a 100kOhm Valve amp and several tens of pF of cabling capacitance, we're still good. regards, Douglas
