

Re: How come its OK to mix impedances in a radio system??

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 - *Date:* Sun, 17 Jul 2005 13:37:36 -0400
-

<jmeyer@xxxxxxxxxxx> wrote in message
news:eofjd19b1a0p7i6ljm81o0oakl03q78ipr@xxxxxxxxxxx
> On Sat, 16 Jul 2005 18:46:15 -0700, Jim Thompson <thegreatone@xxxxxxxxxxx>
> wroth:
>
>
>>>
>>>* In other words, if the stages are not all matched to the same
>>>reference impedance, then the output power would be less than what it
>>>should be.
>>
>>Welcome to reality :-) Impedance matching is only necessary when you
>>are working with fixed impedance modules.
>>
>> ...Jim Thompson
>
>
> Another way to look at the situation...
>
> Consider the AC power grid. If the generator at the power plant were
> matched to the impedance of the grid, then they would have to generate 200
> watts
> for every 100 watts delivered to the grid. Half of their power would go
> into
> heating the generator. That's not realistic. And it illustrates the
> fallacy of
> the idea that maximum power transfer in a system always depends on matched
> impedances.
>
> There are other reasons why impedance matching is a good thing,
> sometimes, but not everywhere.
>
> Jim "The other one" Meyer
>
>
Interestingly, the one place where one might think you want to match
impedances for sure doesn't work out either. In connecting an antenna to the

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input of a low noise amplifier, maximum gain occurs for the matched case.
BUT, often, if not usually, best signal to noise occurs when there is a slight mismatch.

Tam

• **References:**

- ◆ **How come its OK to mix impedances in a radio system??**
◇ From: billcalley
 - ◆ **Re: How come its OK to mix impedances in a radio system??**
◇ From: Jim Thompson
 - ◆ **Re: How come its OK to mix impedances in a radio system??**
◇ From: jmeyer
-
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