

Transmission Gate question

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 - *Date:* 30 Jan 2006 23:01:22 -0800
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I've been staring at a transmission gate circuit for a while trying to figure out how it works and I'm not making any progress. The problem we have (yes, it's a homework problem) is to determine the on resistance for the specific gate we've been given. The circuit diagram is basically just an nmos and a pmos connected in parallel. The input side (I know they're interchangeable) is set to 5V and both of the fets are on (5v & 0v gate for n/p, respectively). No output voltage is given. I've searched for a while on google trying to find helpful information, but all I can find is that the input signal is supposed to pass through to Vout so that Vout is almost equal to Vin.

My question is... How can I determine the output voltage? I can't determine the transistor mode or currents without the output voltage, and if I can't do that I cannot determine the on resistance. I am not asking for an answer to my problem, I would just like a nudge in the right direction if possible. This problem is driving me crazy.

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 - ◇ *From:* Mark Ferguson
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