We encounter communication problem when we connected two [TRS3122E](http://www.ti.com/product/TRS3122E) together.  One [TRS3122E](http://www.ti.com/product/TRS3122E) is on the uC board and another TRS3122 is 28" away on the communication hub.  They are connected via a RJ45 cable.

The communication hub side is close to metal chassis and the common mode noise is injected into ground of the uC and the metal chassis up to 1000V p-p sine waveform.

I tried to find way to increase the noise immunity and please comment on the following questions:

1.  We supply Vcc with 3.3V now.  Is it better to use 5V supply?

2. For capacitor selection with Vcc = 3.3V, we currently use 100nF for all C1 - C5, is it better to use C1 = 47nF, C2 = 470nF, C3 = 100nF, C4=C5=470nF,



3. Is it better to use 4.7uF Cbypas for Vcc and Vl than 0.1uF for noise immunity?

4. For all test in done at Rload = 3kOhm, and the datasheet shows receiver input resistance in 5kOhm, is that means we can add another Rload in parallel with 5kOhm to 3kOhm to increase the current?





If you can think of any ways to improve the noise immunity of configuring the [TRS3122E](http://www.ti.com/product/TRS3122E), we appreciate your comments.

Thank you very much,

Frank W