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Subject: Re: serial.dll for serial port under IDL  
Posted by [Rick Towler](#) on Fri, 24 Oct 2008 16:10:28 GMT  
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Peter sent some test code to me and I was able to reproduce the problem.

It turns out that the issue is that IDL is "too fast" in that if you write and then immediately read, IDL polls the serial port before anything is in the serial port buffer. For small amounts of data this means that you'll see nothing as Peter did. For large amounts of data it means that you will not see all of the data. For example, sending 4000 bytes of data and immediately reading results in (on my machine) only 3984 bytes being returned. If you insert a pause between the write and the read (wait, 0.1) you will Rx all 4000 bytes.

The issue is a bit more complicated than I have presented since you never get those last few bytes even if you call comm\_read again. In my case I should have 16 more bytes lying around but subsequent calls yield nothing. So the question is, is this a result of a freak timing issue that only comes up when you're looping back? Or is there a bug in the .dlm?

I'm leaning toward the prior but I don't know. I do know that if you are providing your own buffer to comm\_read it better be the same size or smaller than the serial port buffer or you get some weird results.

Post your results Peter.

-Rick

```
; test program for serial port reader
; NOTE: you MUST set the COM port number correctly first time or code
crashes
;
portstring='COM3'
print,'Trying to open ',portstring
handle=comm_open(portstring,DATA=8,BAUD=4800,STOP=1,PARITY=' N',mode=3)
print,'handle from OPEN=',handle
;----- WRITE
data=byte('6b')
h=comm_write(handle,data)
print,'Result of write : ',h
;----- READ
buf = bytarr(5)
h=comm_read(handle,BUFFER=buf)
print,'Result of read : ',h
print,'Buffer read: ',buf
```

```
;----- CLOSE -----  
res=comm_close(/all)  
print,'result of comm_close command:',res  
end
```

Rick Towler wrote:

```
>  
>  
> peter.thejll@gmail.com wrote:  
>> Hi, Thanks for your suggestions.  
>>  
>> On Oct 20, 8:19 pm, Rick Towler <rick.tow...@nomail.noaa.gov> wrote:  
>>> Are you sure the serial dlm isn't working?  
>>  
>> No.  
>>  
>>> Isolate the issue by doing a  
>>> loopback test. Simply short pins 2 and 3 of the DB9 connector as  
>>> described here:  
>>>  
>>> http://zone.ni.com/devzone/cda/tut/p/id/3450  
>>>  
>>> Then write a simple program in IDL that sends some data then reads it.  
>>> Once you can send data to yourself then connect up the external devices  
>>> and try to communicate with them.  
>>  
>> Good idea! I am not much for soldering though - is the cable you  
>> describe a 'null-modem cable'? I have one of those.  
>  
> No soldering required. You can use a paper clip :). That null modem  
> cable should have female connectors at both ends so you can plug one end  
> into your computer then short pins 2-3 at the other end of the cable.  
>  
> Use Hyperterm to test your cable as described on that same webpage I  
> linked above. Once you know your cable is working then you can try IDL.  
> The test in IDL will be as simple as this:  
>  
> IDL> h=comm_open('COM1',BAUD=9600,DATA=8,MODE=3,PARITY='N',STOP=1 )  
> IDL> b=comm_write(h,'This is a test')  
> IDL> data=comm_read(h)  
> IDL> print, data  
> 84 104 105 115 32 105 115 32 97 32 116 101 115 116  
> IDL> print, string(data)  
> This is a test
```

>  
>  
> It looks as if the original .dll was built for IDL 5.6. I just  
> recompiled it for 6.4 for the test above. The issue might simply be  
> that you need to recompile. I know you're working with 6.3, but I'll  
> send you the .dll I just compiled and you can try that.  
>  
> -Rick

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