

# Wiring diagram for serial ports for use with mtrigger.py and Canon xxxD DSLRs

This is adaptor is designed to be a low risk to your hardware, but when you hack hardware, the risk is yours.

I strongly suggest using a USB-serial adaptor rather than a serial port on the motherboard as the latter can use higher voltages, especially on old machines.  
Also although RS232 hardware tends to be robust, you probably don't want to short RTS/DTR to ground or even each other on your motherboard (even though the standard says this should be OK),  
Using a USB-serial adaptor means you're unlikely to fry your computer,  
Opto-isolators are used to give the camera and the PC *some* protection from each other.  
If you just want to shoot, not focus, a mono plug can be used, and the optoisolator connected to pin 4 can be omitted  
(or repurposed for another camera, lights etc.)

Check the voltages on the USB-serial adaptor you're using:  
My cheap USB-232 has False=0V, True=5V, a more expensive one has False=-6.5V, True=6.5V.  $\pm 15V$  is allowed.  
Choose resistors accordingly (the 110 $\Omega$  specified below is good for  $\sim 5V$ ) and note the maximum reverse voltage of the PC817 is 6V.  
It will probably survive this but a blocking diode would be a good idea for long-term use, or substitute a different opto-isolator.

At least some Canon xxD DSLRs use a different connector, but cheap adaptors are available either to use with the plug below or to cut up .

It is possible to build this circuit on stripboard small enough to fit in a reasonable sized 9-way backshell.  
Other makes and models of camera are likely to use different connectors, but the principle of connecting two pins together to trigger the camera has been widespread for years. Cutting up a cheap third party cable release should provide the necessary connector.

