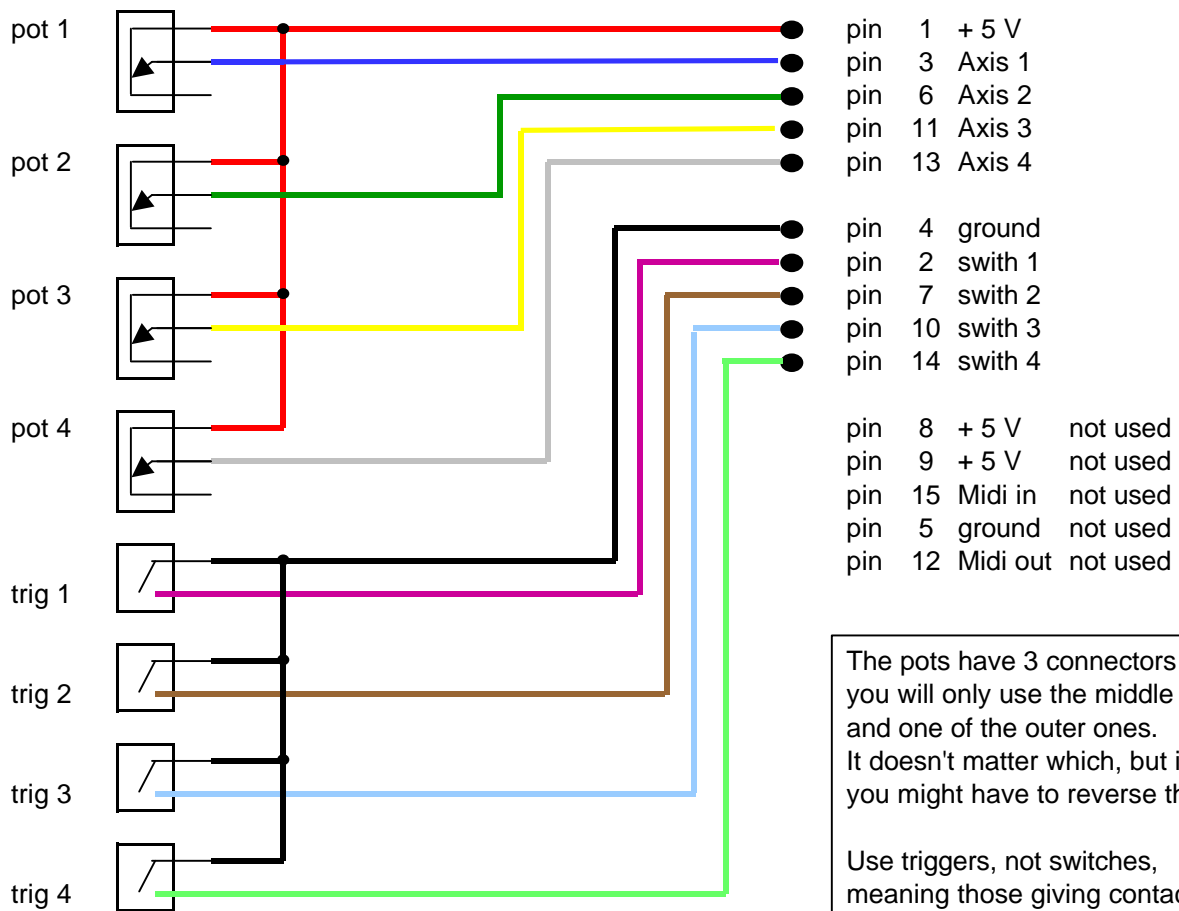


electrical wiring



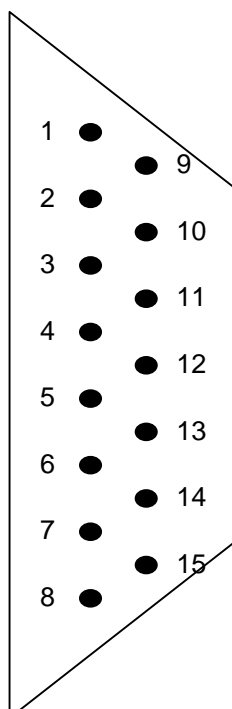
electric symbols aren't correct, and my english should be better... I'm working on it...

The pots have 3 connectors but you will only use the middle one and one of the outer ones. It doesn't matter which, but in FS you might have to reverse the axis.

Use triggers, not switches, meaning those giving contact only for the time you press the button.

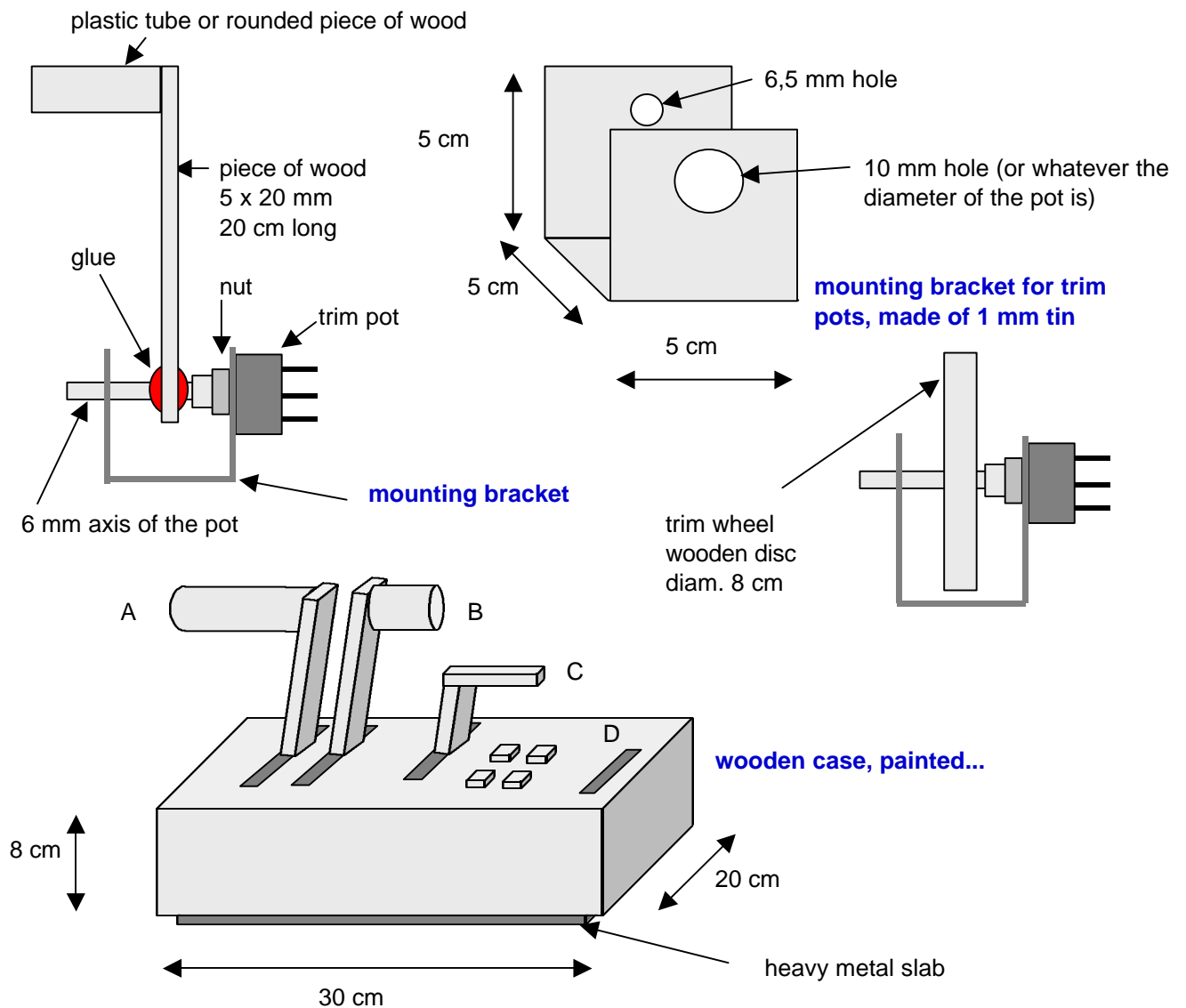
Usually the PC expects trim pots of 100 k Ω linear, but concerning to your construction of the handgrips you can't use the full range of the pot, so better use a 200 k Ω

I'd recommend to install FSUIPC which allows a much better calibration of joysticks than the MS Windows control panel. FSUIPC is an addon for FS2002



numbering of the pins at the male plug for gameport connector view from the back, meaning from inside the plug (the pins should be numbered somewhere on the plug)

Use a shielded cable, connect the shield with the plug's ground / case



my assignments of the 4 axis:

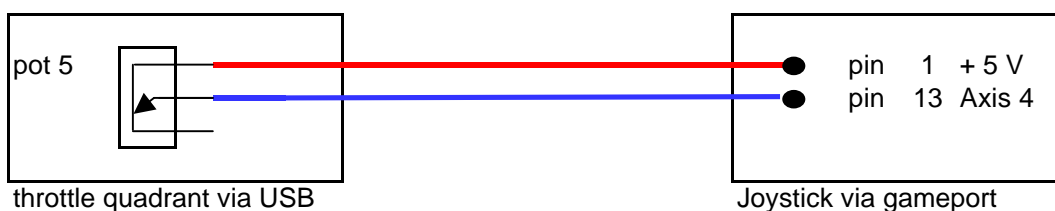
	A	B	C	D	
single prop	throttle	- -	prop	elev. trim	The 4 triggers are assigned to flaps up / down, gear and parking break
twin prop	throttle 1	throttle 2	prop both	elev. trim	
twin jet	throttle 1	throttle 2	spoiler	elev. trim	

If you connect this throttle quadrant directly to the gameport, it will work fine.

If you decide to connect it via USB (using an USB to gameport converter) you will notice, that the elevator trim isn't working sensible enough. This is because the USB input allows only 16 or somewhat values for an axis. This is not enough for rudder trim.

There are several solutions: Change the elevator trim effectiveness in the relevant aircraft.cfg, try some tweaking in the sensibility settings of the axis in FS 2002 or do what I did:

I wired the elevator trim axis of the throttle quadrant as the 4th axis of my joystick, which is connected to the gameport. So I could add a 5th axis to the throttle quadrant which is wired as it's 4th axis. I assigned it to Mix (I built it as a turn knob, which you can see in the pictures. This is the reason why there are two cables coming out of the box...)



The regular trim pot of the joystick's 4 th axis has to be disconnected.

Here some pictures of my homebuilt throttle quadrant



And this are the prices for the material I used:

1 15 pin plug	1,5 Euro	
2 m of 10 wire shielded cable	2,5 Euro	
3 trim pots 200 K Ω linear (for the handgrips)	3,9 Euro	
2 trim pots 100 K Ω linear	2,6 Euro	
4 switches	6,0 Euro	
some wood	4,0 Euro	
some tin	4,0 Euro	
some screws, nuts etc...	2,0 Euro	
some paint, glue cable...	3,0 Euro	
30,00 Euro	= ~ 30 US \$	

It took me about 2 days to build it, but the real net building time lasted only a few hours. And believe me, building was at least half the fun...

One more thing to mention:

The handgrips are very easy to move. For those of you who like it more realistic:

add a "break" to the handgrip

works fine...

