Solder Monkey's TQS Conversion Notes

And FLCS or F22 Pro

Read more: http://simhq.com/forum/ubbthreads.php/topics/4326554#ixzz4VCwW7dPX

1. What I ended up with the following as a pinout for the TQS conversion. This is a minimally invasive mod.

2. As with many thrustmaster products, every switch comes back to a single return line. (common or row wire)

3. **You don't need diodes with a single row and multiple columns**. (ie a 1x3 or 1x6 Button matrix)

I don't have this TQS anymore, so I just have my notebook page on the conversion. Can post some photos if you like, but now that I'm looking at them months later, I could have done better.

On your colored ribbon cable:

Brown   ----- Square 4 way Left

Black   ----- Switch on Pot

White   ----- Switch 1 Up

Gray   ----- Axis for Pot with Switch

Purple   ----- Axis for pot with Detent

Blue   ----- Ground

Green   ----- Nubby switch near eraser

Yellow 2 -----   Return line (Row or Column) for all switches

Orange 2 ----- Switch 2 Down

Red 2 ----- Switch 1 Down

Brown 2 ----- Switch 2 Up

Plus Add a single wire at +5v into the handle to setup your pots.

(I used the Green Nubby wire, to power the RNG and ANT Pots as the Nubby was eliminated when 1 replaced the Eraserhead with the X-Fighter POV HAT)

FLCS or F22 Pro

you've got a five wire ribbon cable coming out of the stick handle:

Green ----- Ground

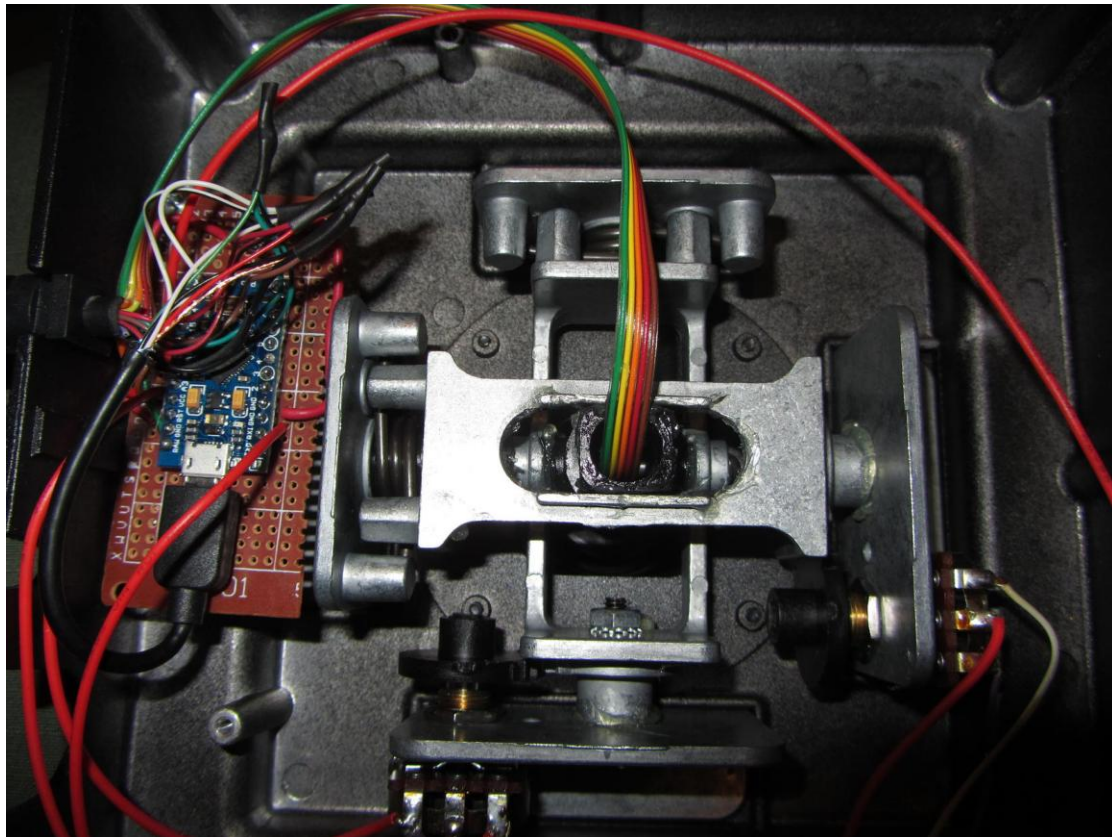**Yellow** ----- MISO

Orange ----- SPI SCK

Red ----- CS (Your Axis)

Brown ----- VCC or +5v

Literally, it takes longer to build the mounting boards for the arduino than to solder the connections for the 22 switches on the FLCS (thank you shift registers and Mega_Mozg!)

Here is the bottom of an F-22 Pro - you only need to open the four screws at the base, remove the old circuit board and you're good to go. No need to open the stick.

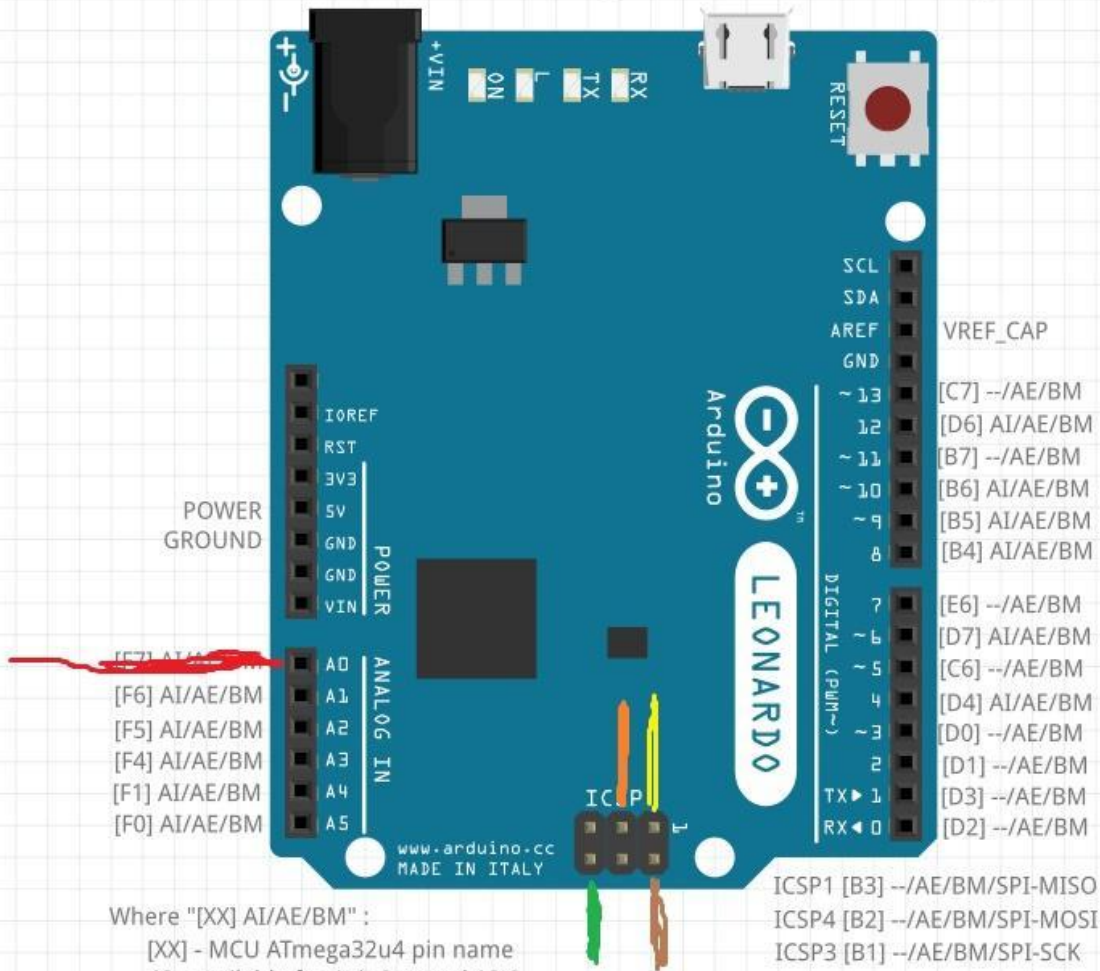You can see the five wires and the arduino on the left.

To hook to your Leonardo you'll need to do something like the image below....

I didn't do anything with your Axis. Basically, they will go into two AI pins on the board and the pots get Ground on one side and +5v on the other. Hooking the Grounds and 5V parts of the pot is fine - less wiring. Just make sure that the middle pins go to separate wires and board pins.

From there, set that F7 pin as your shift register input. Set the shift register to 3 in the software and you should be able to see all 22 buttons once you upload and allow the device to reboot.

Arduino Leonardo pinout for MMJoy2:

Where "[XX] AI/AE/BM" :

[XX] - MCU ATmega32u4 pin name
AI - available for Axis Internal ADC
AE - available for Axis External ADC (SPI)
BM - available for Button Matrix

MMJoy2 (c) mega_mozg.

FREE. PERSONAL DIY ONLY. NOT FOR COMMERCIAL.

Read more: http://simhq.com/forum/ubbthreads.php/topics/4326554#ixzz4VD2sZbrI

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