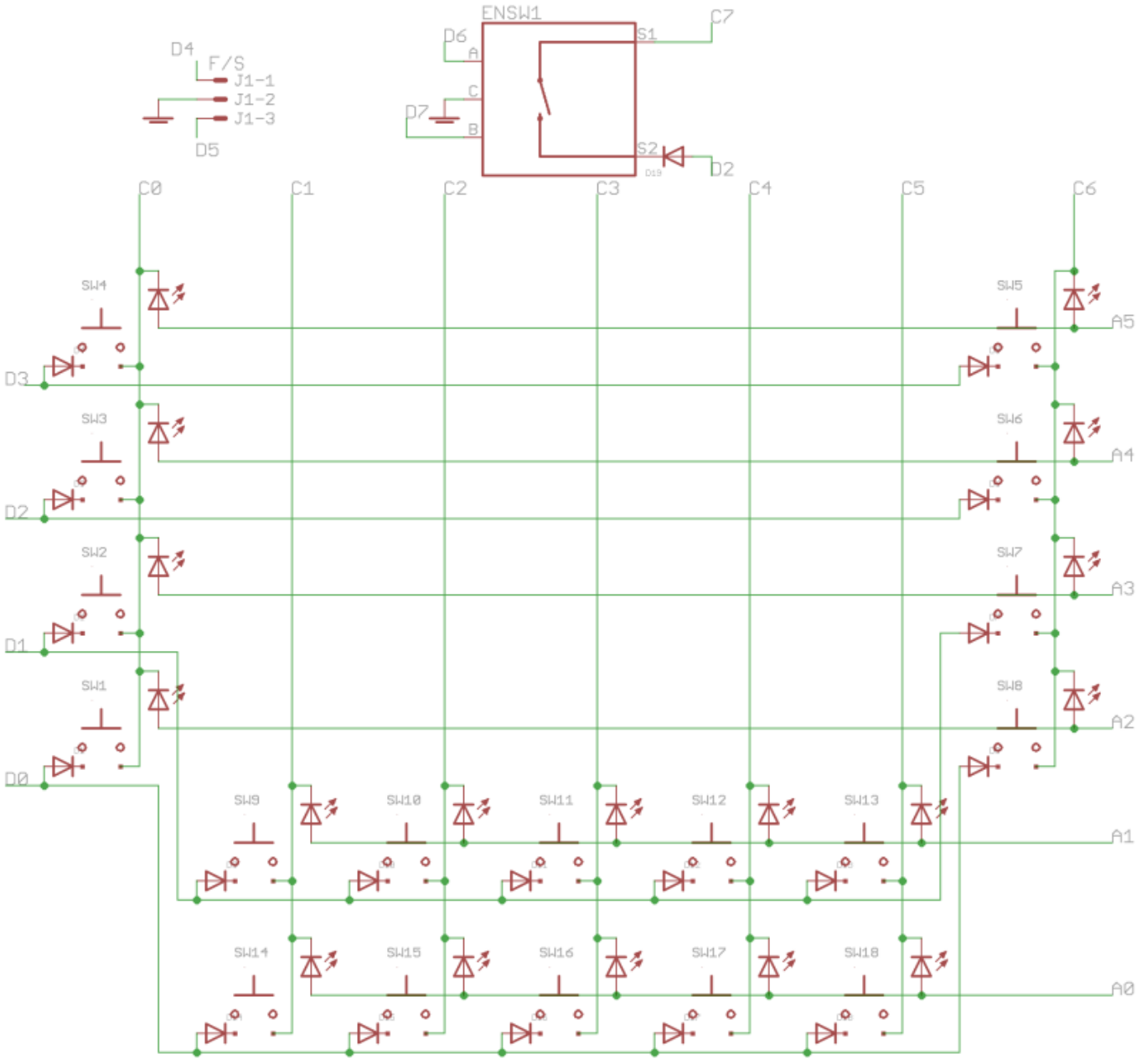
SEQv4+ Jog module

A BLM using 18 illuminated MEC switches placed around an encoder (datawheel). Two spare DIN pins can accommodate a footswitch and a modular gate.

Schematic

The circuit is a BLM, but only four DIN columns are used. The other four DIN pins scan an encoder and two inputs intended as footswitch/gate. Standard SRIO in on J89 and chained out on J89A.

The BLM is as follows:



Note the encoder connected to pins D7 and D6, and header J1 connected directly to D5 and D4. All of the cathode rows are used, even C7 just for the encoder push switch.

Only six DOUT anode columns are used. These are current limited by resistors R1-6.

BOM v1.0 placeholder

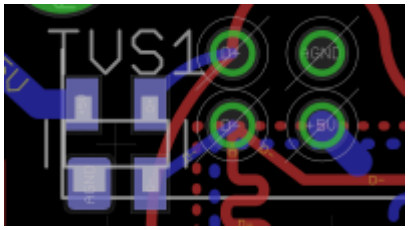
Type	Qty	Value	Package	Parts	Mouser	Reichelt	Conrad	Other	Notes
Resistors									
	2	22R 5%	1206	R1, R2					
	1	330R 5%	1206	R3					
	2	10k 5%	THT	R4, R5					
Diodes									
	1	1N4148	THT						
	1	TVS	SOT-143	TVS1	PRTR5V0U2X,215				
Transistor									
	1	BC337	TO-92	T1					
Switch									
	1	SPDT		SW1	1101M2S3AV2BE2	SS 13LSP			Mouser one is better quality
					1101M2S4AV2BE2				Longer actuator (recommended).
Headers									
	1	1*2	male						
	5	1*3	male						
	1	1*5	male						or wire directly
Sockets									
	1	USB B	horizontal	USB1	538-67068-7041	USB BW			
	1	USB A	upright	USB2	538-89485-8000				
	1	3.5mm		SOCK1	CUI SJ1-3535NG				other variants are possible (different pins switched etc.)
Hardware									
	2	M3 PCB mount		534-7695					

Versions

v1.0: first release.

Assembly placeholder

Solder the SMT parts first. Ensure the TVS diode is aligned with the larger pin on the larger pad and that the wide edge of the body fits between the silkscreen indicators:



Note this is the board viewed from the bottom; the larger pin is on the bottom-left.

To have a through-hole USB A socket, the pins are quite close together. Be careful to avoid bridges when soldering and **test with a multimeter to ensure no adjacent pins are connected afterwards!**

It goes without saying, but ensure none of the metal parts are touching (e.g. the outside of the USB sockets with J7, the 1N4148 diode with the mounting brackets etc.).

License

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