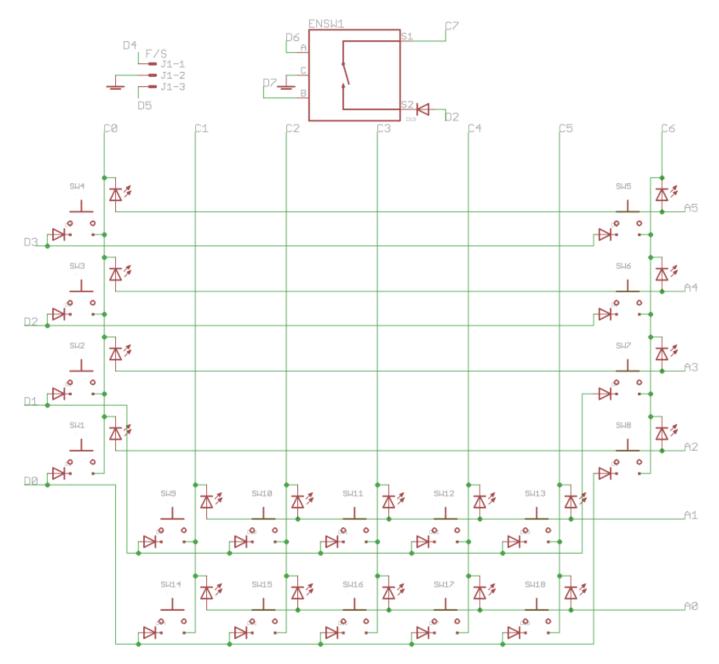
# SEQv4+ Jog module

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

1       74HC165       SOIC16       IC2       595-SN74HC165DR       IC1       IC	Туре	Qty	Value	Package	Parts	Mouser	Reichelt	Conrad	Other	Notes				
6 $5%$ IHI         R1-6         Image: Margina intermed inte	Resis	stors			!	1			!					
1       10k       SOM16       RN1       4816P-T02-103LF       Image: Constraint of the state of t		6		тнт	R1-6									
Capacitories3100n1206C1-3Image: Colspan="4">Colspan="4"18variousSundColspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4"18VariousSundColspan="4">Colspan="4">Colspan="4"18VariousSundColspan="4"1Stel1265SolC16CIC12Sp5-SN74HC165DRColspan="4"ISTEC12E08SolC16CIC12STEC12E081STEC12E08STEC12E08ISTEC12E08I11IIII <th <="" colspan="4" td=""><td>Resis</td><td>stor</td><td>network</td><td></td><td>-</td><td>-</td><td></td><td></td><td>-</td><td>-</td></th>	<td>Resis</td> <td>stor</td> <td>network</td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td>-</td> <td>-</td>				Resis	stor	network		-	-			-	-
3       100n       1206       C1-3       Image: Constraint of the state of the s		1	10k	SOM16	RN1	4816P-T02-103LF								
Diodes         19         1N4148         THT         Image: Constraint of the stress of the stre	Сара	citor	rs			-								
191N4148THTImage: Marcing and marci		3	100n	1206	C1-3									
LEDsLEDs18various3mmImage: stress of the stress of	Diod	es												
18         various $3mm$ $and$ $andd$ $and$ $and$		19	1N4148	THT										
ICS174HC165SOIC16IC2595-SN74HC165DRIC1IC1274HC595SOIC16IC1, IC3IC1IC1IC1Encoder1STEC12IC1IC1STEC12E08IC1SW1-18642-3FTH9STEC12E08IC118MEC/APEM3FTH9SW1-18642-3FTH9IASTER 3FTH9705276 - 62I 1*3maleIC1IC1IC122*5maleIC1IC1IC1IC1HardwrevI M3 spacerTBDIC1IC1IC1IC1IC11datawheelDK-38?IC1IC1IC1IC1IC1IC1	LEDs			-										
$ \begin{array}{ c c c c c c } \hline 1 & 74HC165 & SOIC16 & IC2 & 595-SN74HC165DR & & & & & & & & & & & & & & & & & & &$		18	various	3mm						put LEDs in the switches first!				
274HC595SOIC16IC1, IC3IC1<	ICs						•	•						
Encoder       Image: Stream of the stream of t		1	74HC165	SOIC16	IC2	595-SN74HC165DR								
1STEC12Image: star in the star		2	74HC595	SOIC16	IC1, IC3									
Switches         Image: Switches         Image: Switches         Taster stress         Taster strestrestress         T	Enco	der	-		-					-				
18         MEC/APEM         3FTH9         SW1-18         642-3FTH9         TASTER 3FTH9         705276 - 62           Headers         Image: Second s		1	STEC12				STEC12E08							
18       MEC/APEM       3F1H9       SW1-18       642-3F1H9       3FTH9       62         Headers         1       1*3       male	Swite	ches	-		-	-	2	-	-	2				
1       1*3       male       Image: Second		18	MEC/APEM	3FTH9	SW1-18	642-3FTH9								
2       2*5       male       Image: Constraint of the second se	Head	ers	-			-			-					
Hardware       6     M3 spacer       1     datawheel       DK-38?		1	1*3	male										
6         M3 spacer         TBD         Image: Constraint of the space o		2	2*5	male										
1 datawheel DK-38?	Hard	ware	9	-	-		-	-	-	-				
		6	M3 spacer	TBD										
18 switchcaps 22.5mm 642-1511-22.5 1511-22.5		1	datawheel	DK-38?										
		18	switchcaps	22.5mm		642-1S11-22.5		1S11-22.5						

## 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!** 

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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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