

## M4 Force control Board, Parts List, MIT Leg Laboratory, 1999

qty	part #	\$\$	description	use
<b><u>Digikey</u></b>				
1	179-1025-ND	\$ 68.00	(pos/neg) 12V DC/DC converter DFC10U48D12	convert from 48V
1	NJM7805FA-ND	\$ 0.60	(pos) 5V regulator	convert from 12V
1	NJM7905FA-ND	\$ 0.60	(neg) 5V regulator	convert from 12V
5	DRV134PA-ND	\$ 2.65	differential line driver gain=2	send pot signals and copley signal
1	INA2137PA-ND	\$ 3.10	differential line driver gain=1/2	receive command from DSP
4	LF347N-ND	\$ 0.96	operational amplifiers	PID and buffers
1	P6298-ND	\$ 1.04	20uf capacitor	bypass for 12V
2	P5253-ND	\$ 0.22	cap 10uf	bypass for 5V
2	P4907-ND	\$ 0.22	.033uf caps	pot V roll off
2	P4669-ND	22.50/100	.33uF caps	pot P roll off
5	P4675-ND	53.30/100	1uF V-series cap	pot V roll off / D roll off / by-pass for INA2137PA
1	P4525-ND	13.75/100	0.1uF V-series cap	Force pot roll off
1	P4513-ND	10.00/100	0.01uF V-series cap	D roll off
15	5012K-ND	\$ 0.16	test points	test point
3	LT1139-ND	\$ 0.18	red LED	joint pots and force display
3	LT1144-ND	\$ 0.23	green LED	joint pots and force display
1	3296Y-502-ND	\$ 2.70	5K trim pot	trim pot
14	4.99KXBK-ND	\$ 0.11	4.99 Kohm 1% 1/4W resistor	various gains
1	357XBK-ND	\$ 0.11	357ohm 1% 1/4W resitor	P gain 2nd stage
1	402XBK-ND	\$ 0.11	402 ohm 1% resitor	D gain 1st stage
1	40.2KXBK-ND	\$ 0.11	40.2 Kohm 1% resitor	D gain 1st stage
3	200KXBK-ND	\$ 0.11	200ohm 1% 1/4watt	pull-ups for LEDs
2	47.5KXBK-ND	\$ 0.11	47.5 1% 1/4Watt resistor	pot V gain
2	1.65KXBK-ND	\$ 0.11	1.65 Kohm 1% 1/4W resistor	pot V gain
1	10.0KXBK-ND	\$ 0.11	10 Kohm 1% 1/4 Watt resistor	PID summing junction
1	4.42KXBK-ND	\$ 0.11	4.42 Kohm 1% 1/4 Watt resistor	D gain 2nd stage
1	WM4301-ND	\$ 0.70	Waldom 3 pin 90deg locking header	pot receive
4	WM4201-ND	\$ 0.44	Waldom 3 pin straight friction header	pot receive / dsp receive / copley send
5	WM2602-ND	\$ 0.19	Waldom 3 pin female houseing	pot send and recieves
1	WM4208-ND	\$ 0.86	Waldom 10 pin straight friction header	pot send
1	WM2609-ND	\$ 0.66	Waldom 10 pin female houseing	pot send

**NEWARK**

1	94F5101	1.08	screw header	48V connection terminal
18	98F3561	0.09	ceramic caps .1uf	bypass caps
1	67F5795	1.16	trimmer tool	trim pot tool