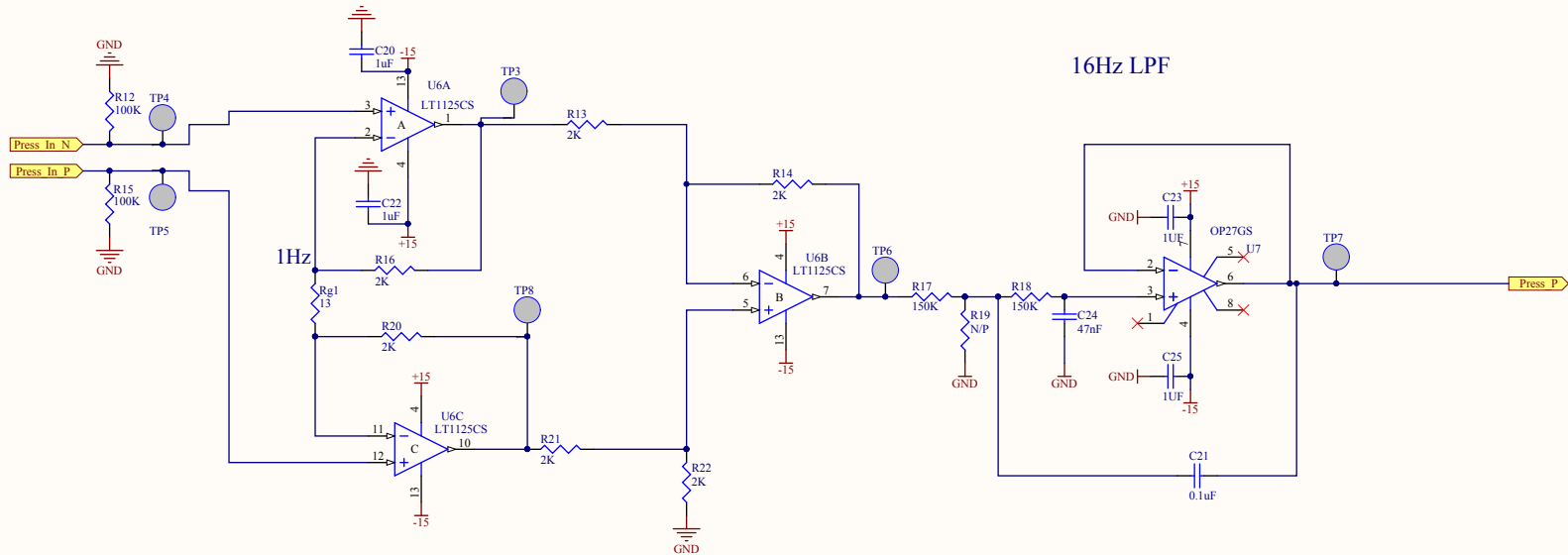


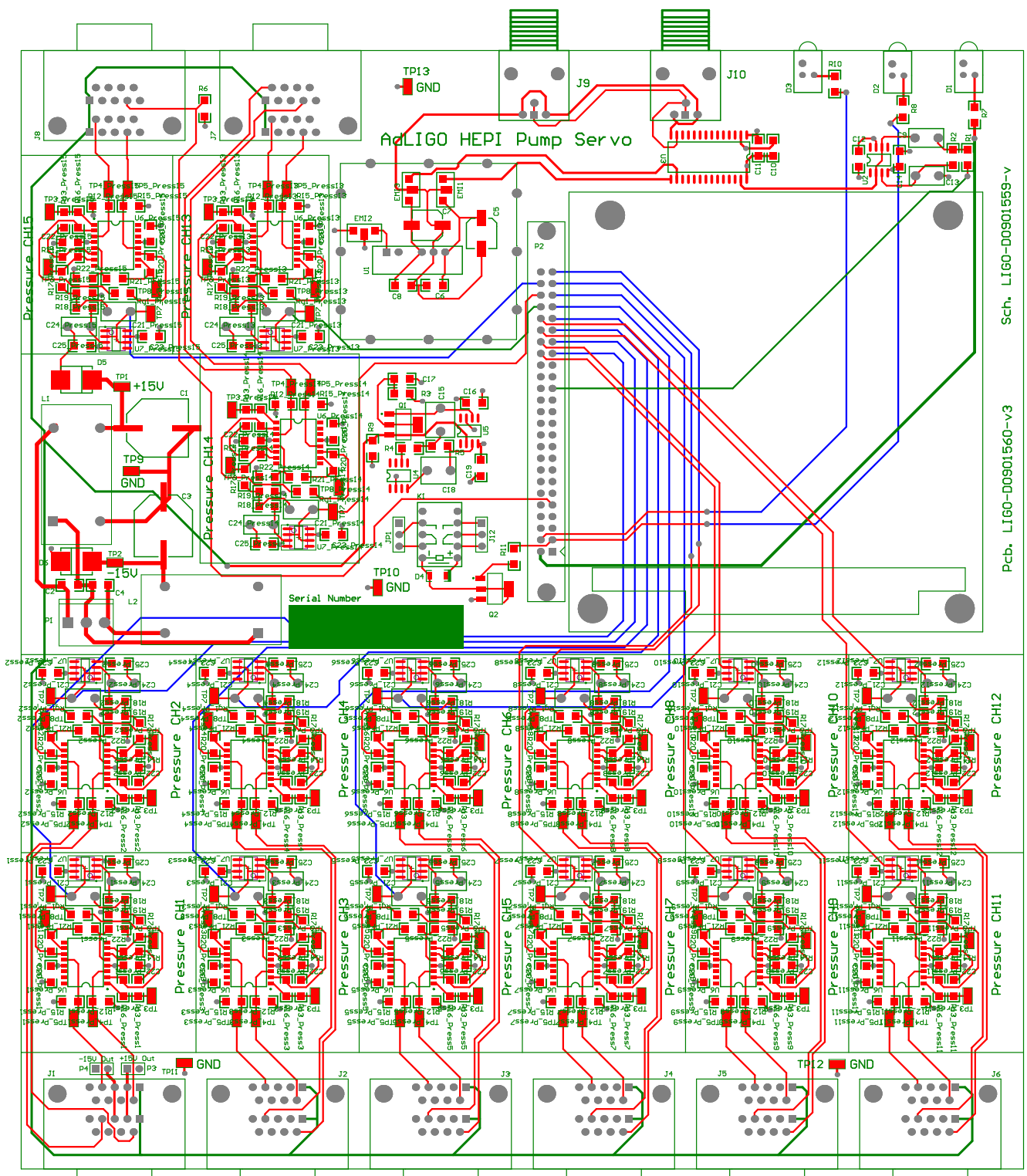
Panel	Signal	Relay
Panel 1	1	Relay 1
Panel 1	2	Relay 1
Panel 1	3	Relay 1
Panel 1	4	Relay 1
Panel 1	5	Relay 1
Panel 1	6	Relay 1
Panel 1	7	Relay 1
Panel 1	8	Relay 1
Panel 1	9	Relay 1
Panel 1	10	Relay 1
Panel 1	11	Relay 1
Panel 1	12	Relay 1
Panel 1	13	Relay 1
Panel 1	14	Relay 1
Panel 1	15	Relay 1
Panel 1	16	Relay 1
Panel 1	17	Relay 1
Panel 1	18	Relay 1
Panel 1	19	Relay 1
Panel 1	20	Relay 1
Panel 1	21	Relay 1
Panel 1	22	Relay 1
Panel 1	23	Relay 1
Panel 1	24	Relay 1
Panel 1	25	Relay 1
Panel 1	26	Relay 1
Panel 1	27	Relay 1
Panel 1	28	Relay 1
Panel 1	29	Relay 1
Panel 1	30	Relay 1
Panel 1	31	Relay 1
Panel 1	32	Relay 1
Panel 1	33	Relay 1
Panel 1	34	Relay 1
Panel 1	35	Relay 1
Panel 1	36	Relay 1
Panel 1	37	Relay 1
Panel 1	38	Relay 1
Panel 1	39	Relay 1
Panel 1	40	Relay 1
Panel 1	41	Relay 1
Panel 1	42	Relay 1
Panel 1	43	Relay 1
Panel 1	44	Relay 1
Panel 1	45	Relay 1
Panel 1	46	Relay 1
Panel 1	47	Relay 1
Panel 1	48	Relay 1
Panel 1	49	Relay 1
Panel 1	50	Relay 1
Panel 1	51	Relay 1
Panel 1	52	Relay 1
Panel 1	53	Relay 1
Panel 1	54	Relay 1
Panel 1	55	Relay 1
Panel 1	56	Relay 1
Panel 1	57	Relay 1
Panel 1	58	Relay 1
Panel 1	59	Relay 1
Panel 1	60	Relay 1
Panel 1	61	Relay 1
Panel 1	62	Relay 1
Panel 1	63	Relay 1
Panel 1	64	Relay 1
Panel 1	65	Relay 1
Panel 1	66	Relay 1
Panel 1	67	Relay 1
Panel 1	68	Relay 1
Panel 1	69	Relay 1
Panel 1	70	Relay 1
Panel 1	71	Relay 1
Panel 1	72	Relay 1
Panel 1	73	Relay 1
Panel 1	74	Relay 1
Panel 1	75	Relay 1
Panel 1	76	Relay 1
Panel 1	77	Relay 1
Panel 1	78	Relay 1
Panel 1	79	Relay 1
Panel 1	80	Relay 1
Panel 1	81	Relay 1
Panel 1	82	Relay 1
Panel 1	83	Relay 1
Panel 1	84	Relay 1
Panel 1	85	Relay 1
Panel 1	86	Relay 1
Panel 1	87	Relay 1
Panel 1	88	Relay 1
Panel 1	89	Relay 1
Panel 1	90	Relay 1
Panel 1	91	Relay 1
Panel 1	92	Relay 1
Panel 1	93	Relay 1
Panel 1	94	Relay 1
Panel 1	95	Relay 1
Panel 1	96	Relay 1
Panel 1	97	Relay 1
Panel 1	98	Relay 1
Panel 1	99	Relay 1
Panel 1	100	Relay 1

Gain = $1 + 2 * (2K / Rg)$
 Gain = 308 when $Rg1 = 13 \text{ Ohms}$

In the End Station, the gain is 1 ($Rg = \text{Open}$) on this stage only for channels 1&2,
 The gain is 150 in the satellite box. After differential conversion, this becomes 300.



Title AdL HEPI Pump Servo		Ligo Project California Institute of Technology Massachusetts Institute of Technology		
Size: B	DCC Number: LIGO-D0901559			
Drawn by: Ben Abbott	Date: 6/24/2014	Revision: V2		
File: C:\restored\Ben\HEPI\New HEPI\pumpservo\PressCh1.SchDoc			Time: 4:33:58 PM Sheet 2 of 2	



Sch. LI60-D0901569-v

Pcb. LI60-D0901560-v3