

Revision	Date	Who	ECN #	Description of Change(s)
0.1	16-Aug-2008	MP/CW/RB	-	Initial version.
0.2	14-Oct-2008	MP	-	Major changes: wiring changes on switches and muxes, 4 independent preamp regulator sets, new power filter, component consolidation, eliminated tantalum caps
1.0	16-Dec-2008	MP	-	AS BUILT: tuning on Preamps, DC coupled output, add missing load resistors, connect control nets to switches, notes on thermal pads to -V supply on analog parts.



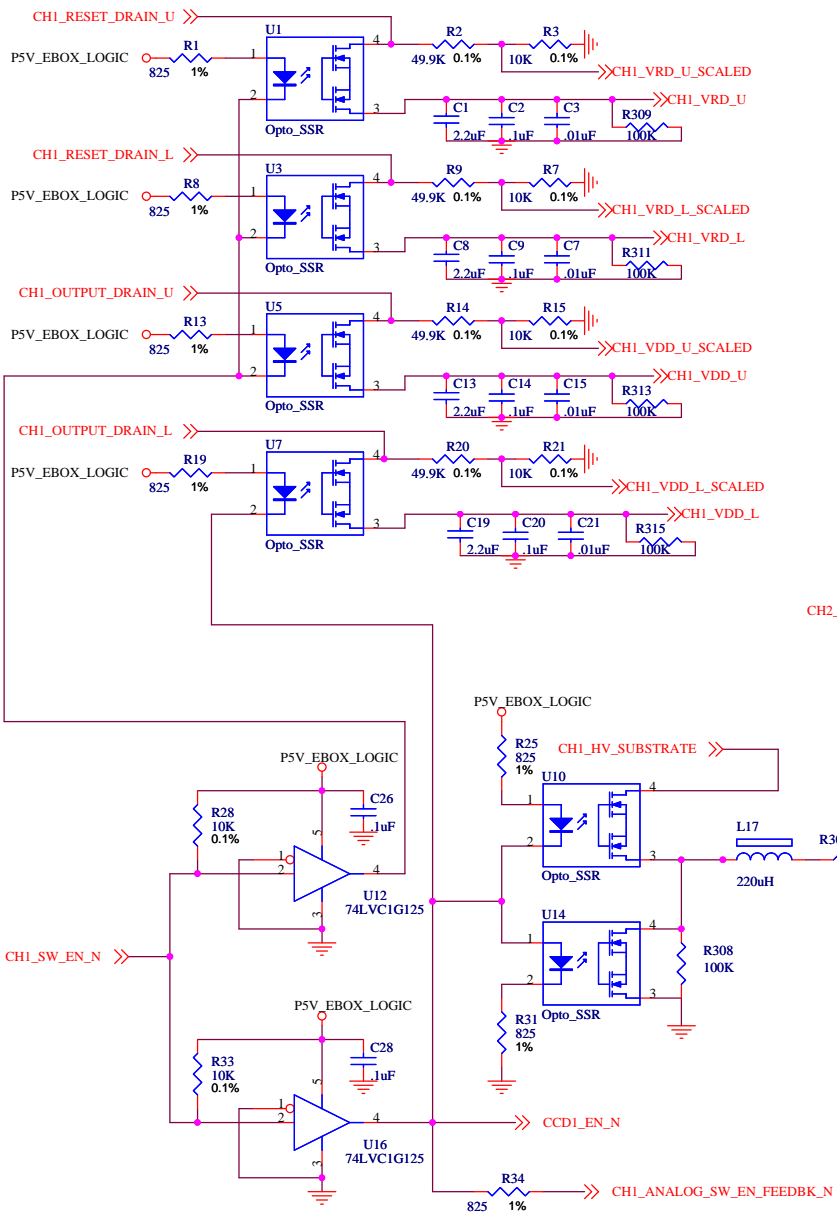
University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064

Schematic, PCB, LRIS Dewar Electronics

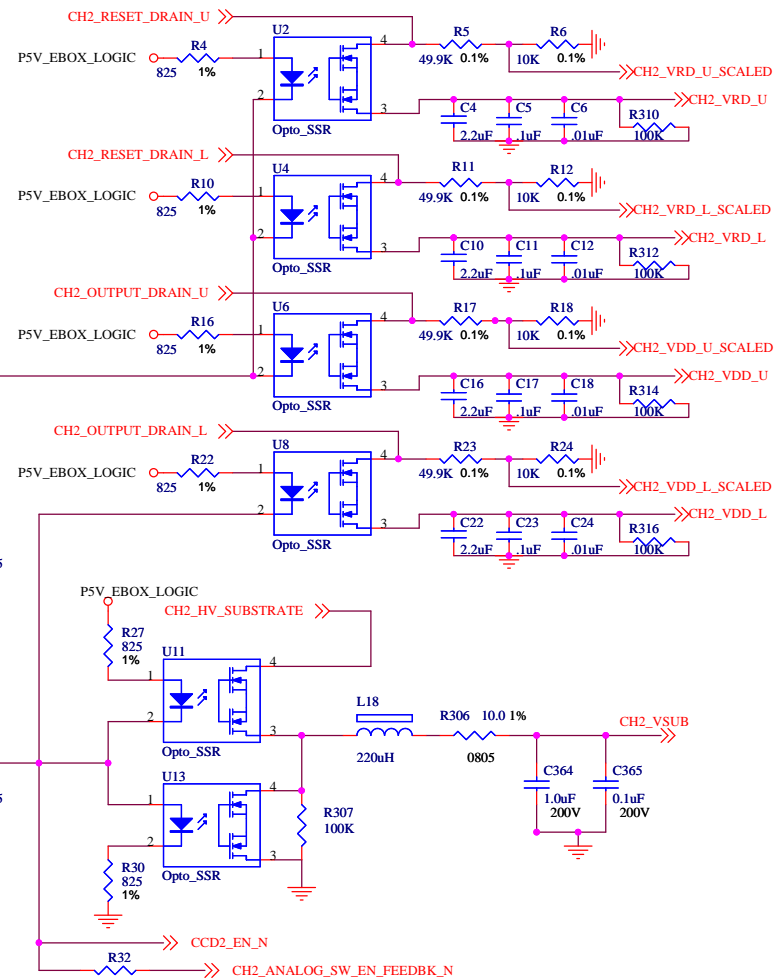
Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
-----------	-----------	--------------------------	------------


Tuesday, December 16, 2008	Scale	Sheet 1 of 20
----------------------------	-------	------------------

CCD1 BIAS VOLTAGES



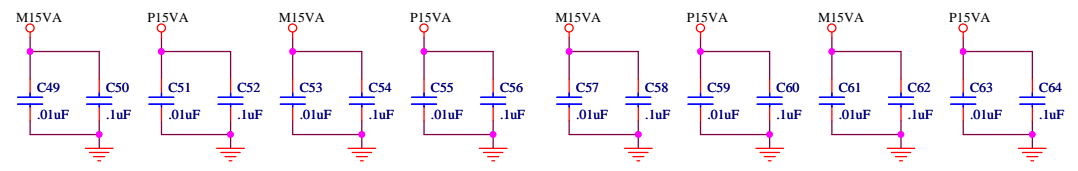
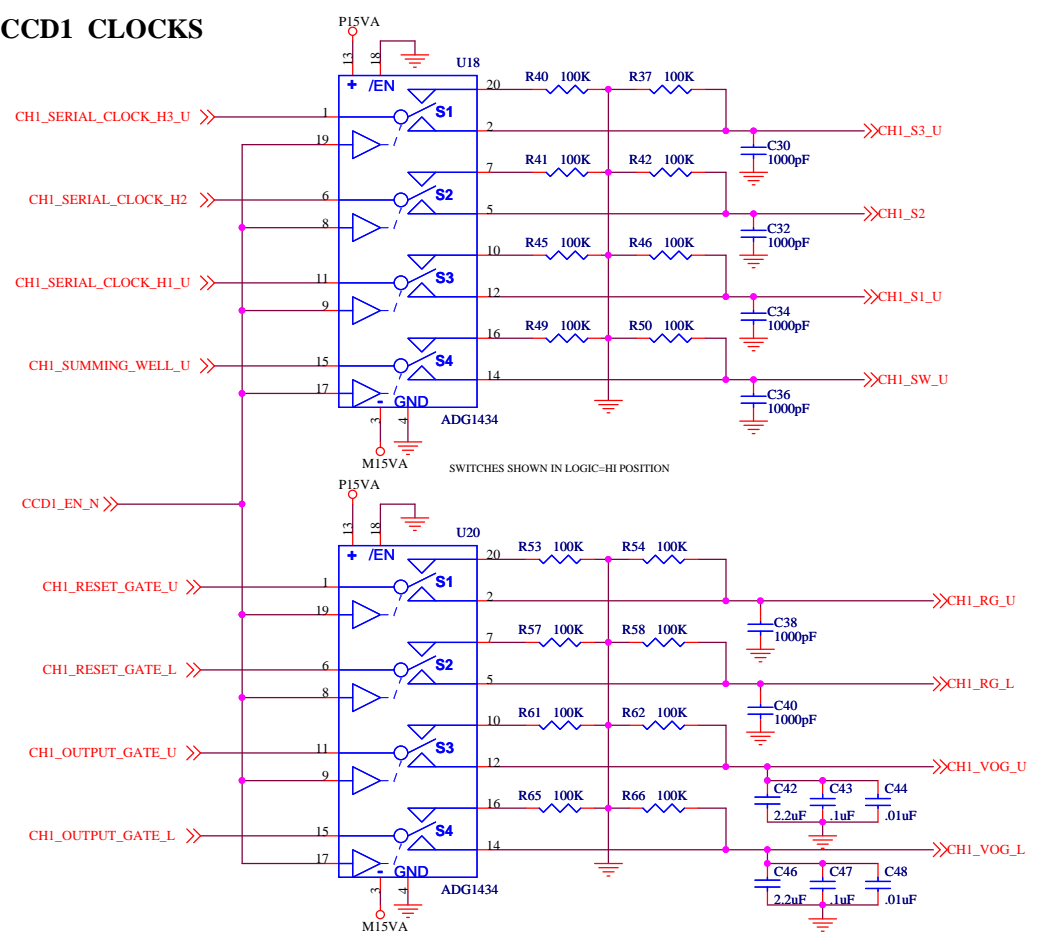
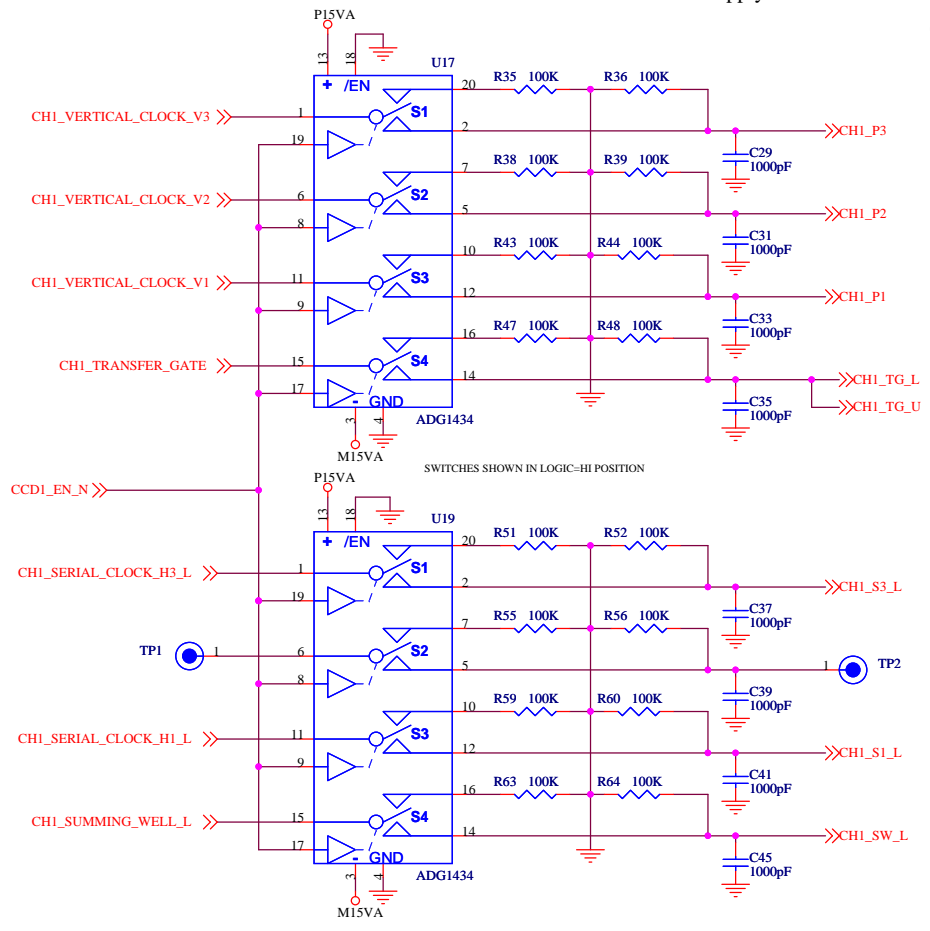
CCD2 BIAS VOLTAGES




	University of California, Lick Observatory 1156 High Street Santa Cruz, CA 95064		
	Schematic, PCB, LRIS Dewar Electronics		
Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
Tuesday, December 16, 2008		Scale	Sheet 2 of 20

NOTE: THERMAL PAD ON ADG1434 is to Minus Supply!!!

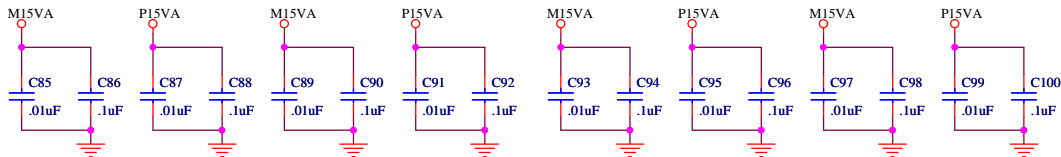
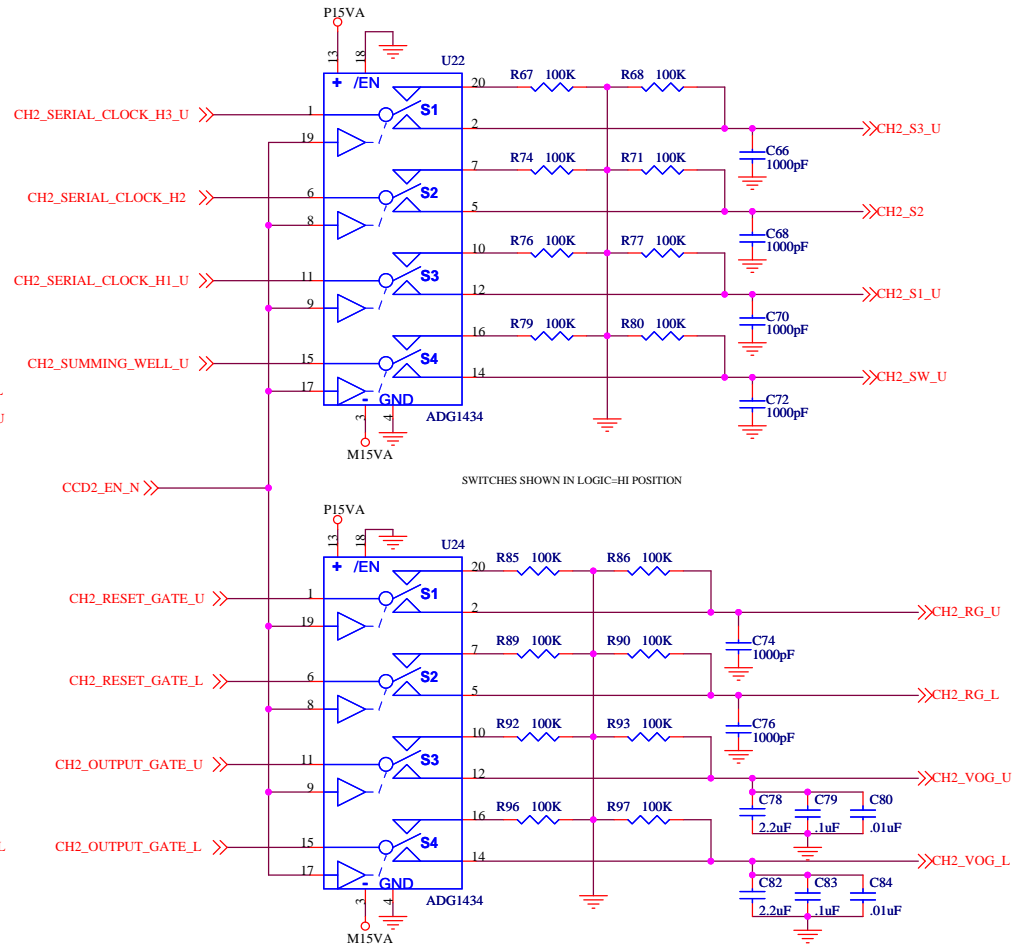
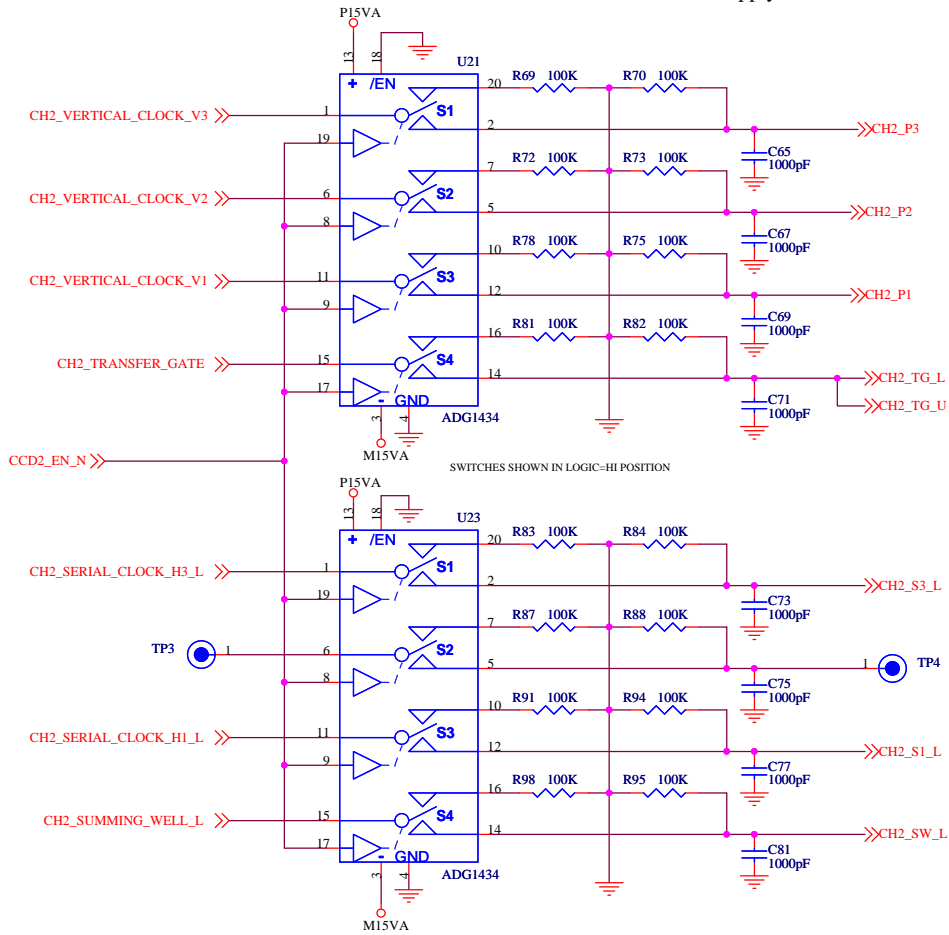
CCD1 CLOCKS



	University of California, Lick Observatory 1156 High Street Santa Cruz, CA 95064		
	Schematic, PCB, LRIS Dewar Electronics		
Size B	CAGE Code	DWG NO	Rev 1.0
Tuesday, December 16, 2008		Scale	Sheet 3 of 20
		EL-4221	

CCD2 CLOCKS

NOTE: THERMAL PAD ON ADG1434 is to Minus Supply!!!



University of California, Lick Observatory
1156 High Street
Santa Cruz, CA 95064

Schematic, PCB, LRIS Dewar Electronics

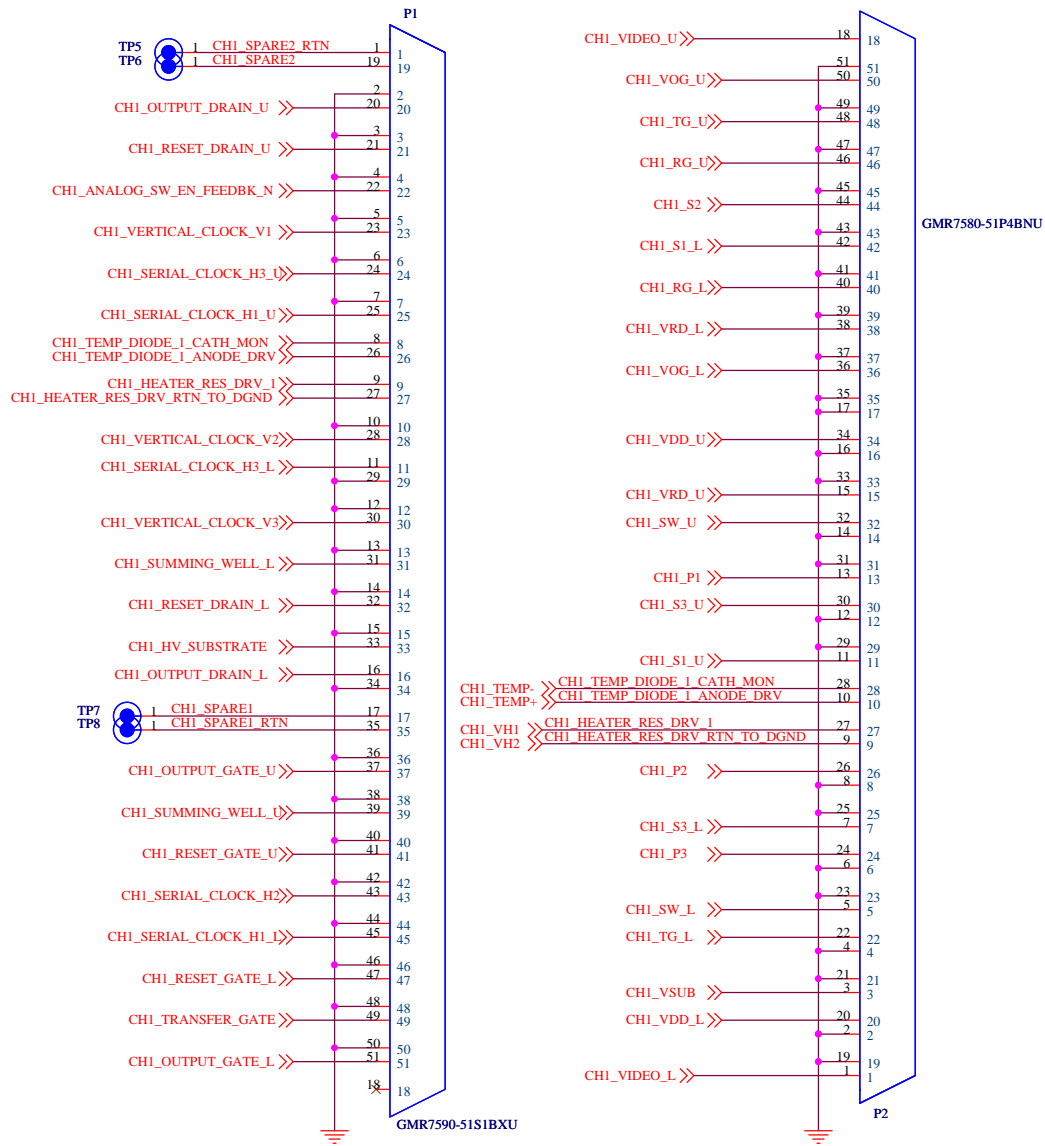
Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
-----------	-----------	--------------------------	------------


Tuesday, December 16, 2008

Scale	Sheet 4 of 20
-------	------------------

CH1 FROM CONTROLLER

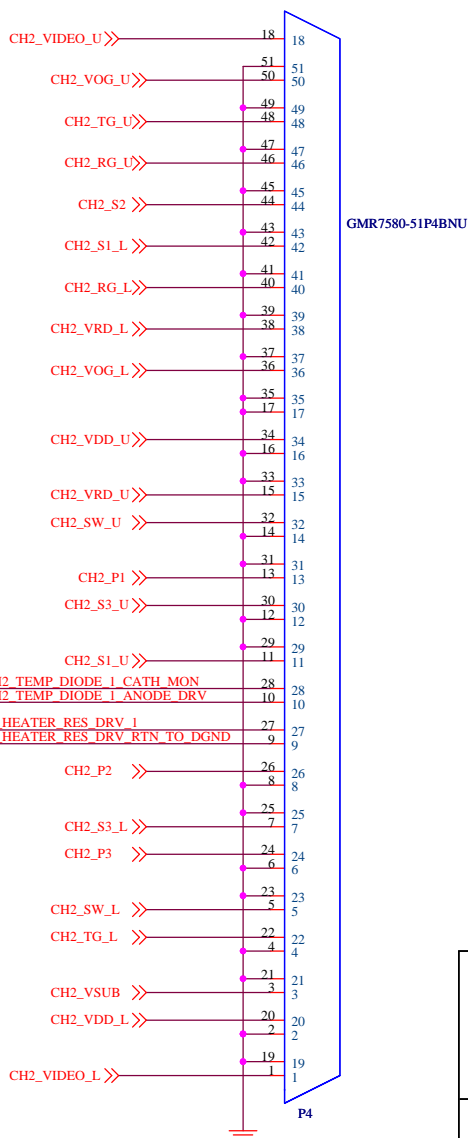
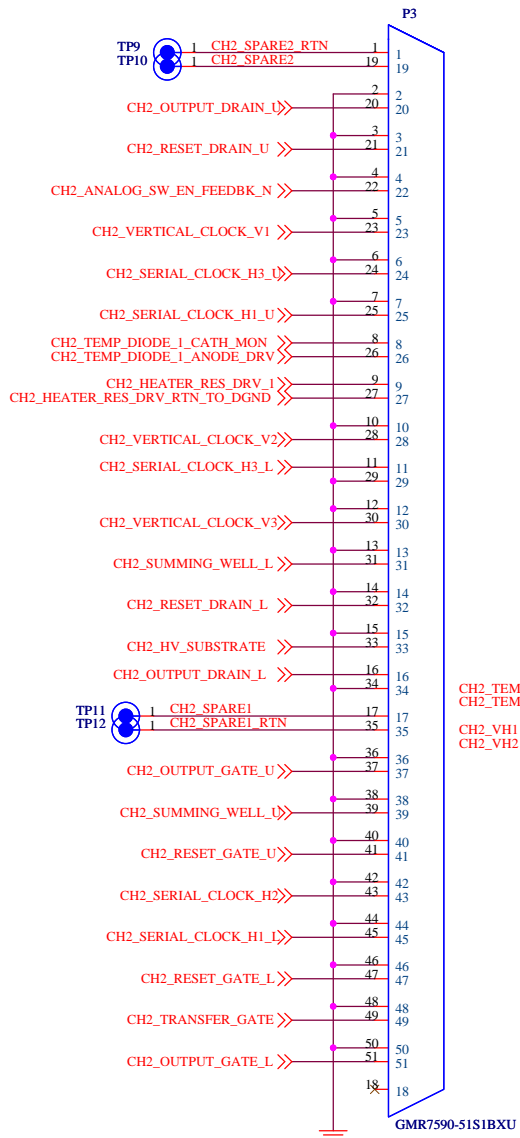
CH1 TO HERMETIC MICRO-D




	University of California, Lick Observatory 1156 High Street Santa Cruz, CA 95064		
	Schematic, PCB, LRIS Dewar Electronics		
Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
Tuesday, December 16, 2008		Scale	Sheet 5 of 20

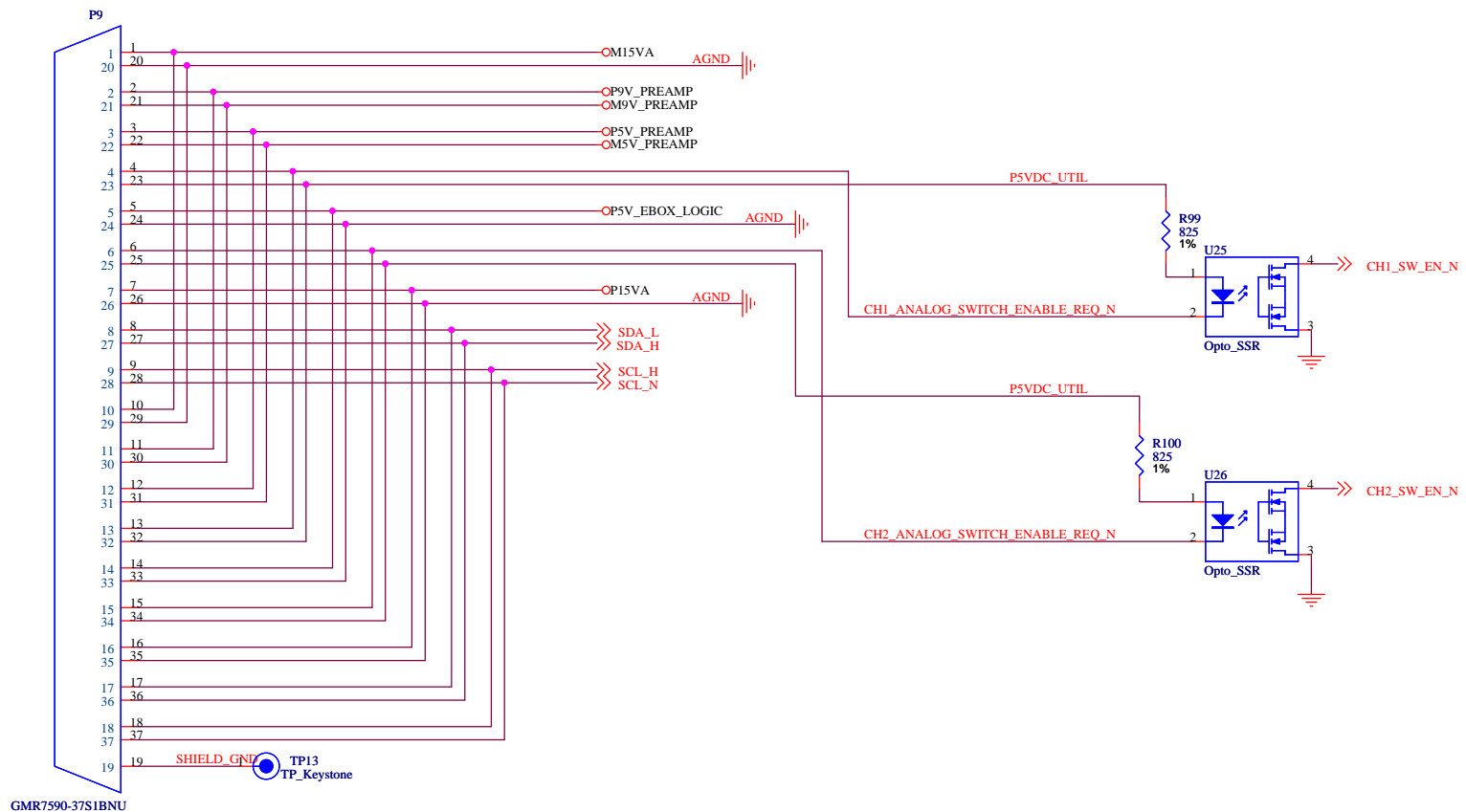
CH2 FROM CONTROLLER

CH2 TO HERMETIC MICRO-D




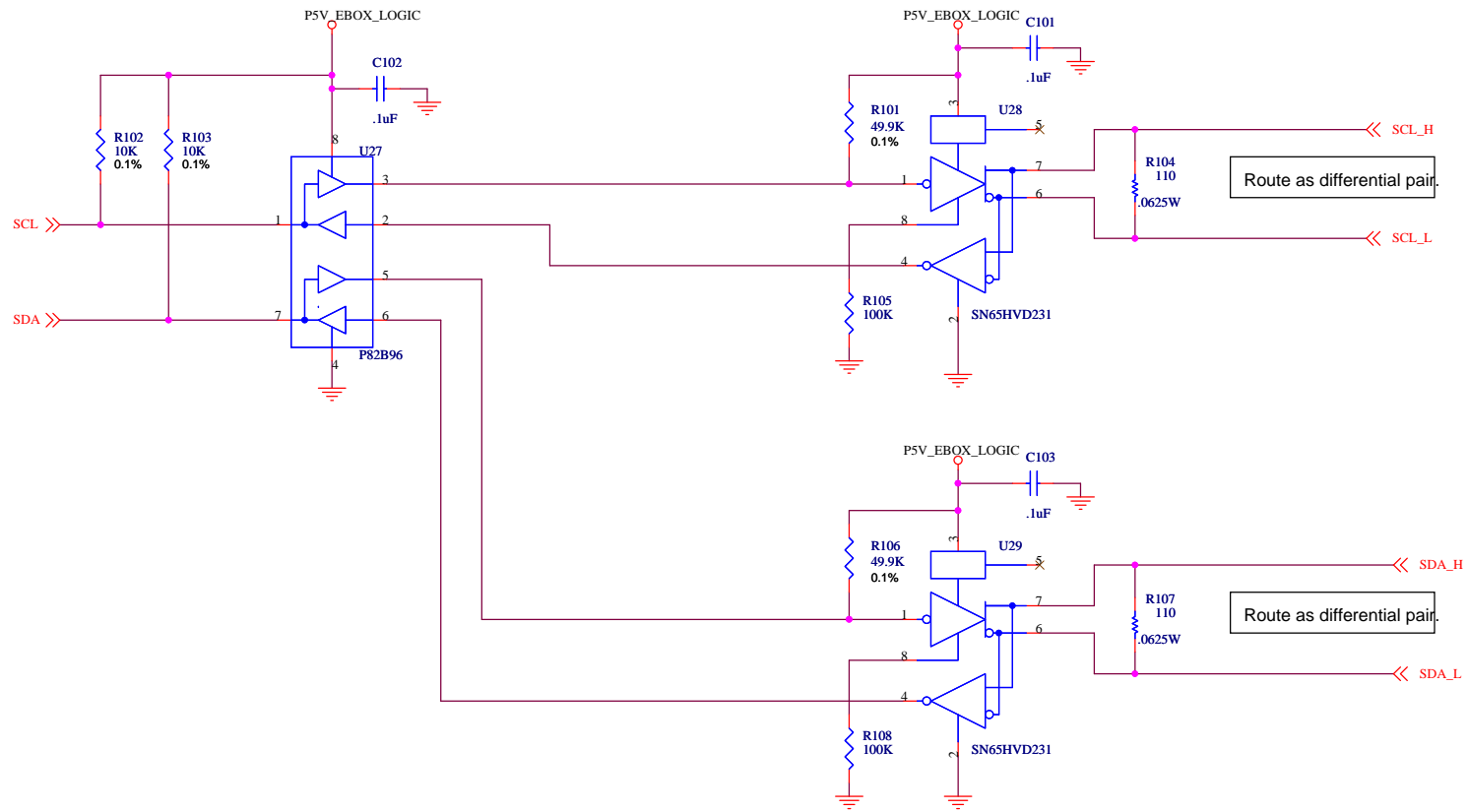
	University of California, Lick Observatory 1156 High Street Santa Cruz, CA 95064		
	Schematic, PCB, LRIS Dewar Electronics		
Size B	CAGE Code	DWG NO	Rev 1.0
Tuesday, December 16, 2008		Scale	Sheet EL-4221 6 of 20

POWER/DIGITAL I2C 37-PIN MICRO-D



GMR7590-37SIBNU

	University of California, Lick Observatory 1156 High Street Santa Cruz, CA 95064		
	Schematic, PCB, LRIS Dewar Electronics		
Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
Tuesday, December 16, 2008		Scale	Sheet 7 of 20



University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064

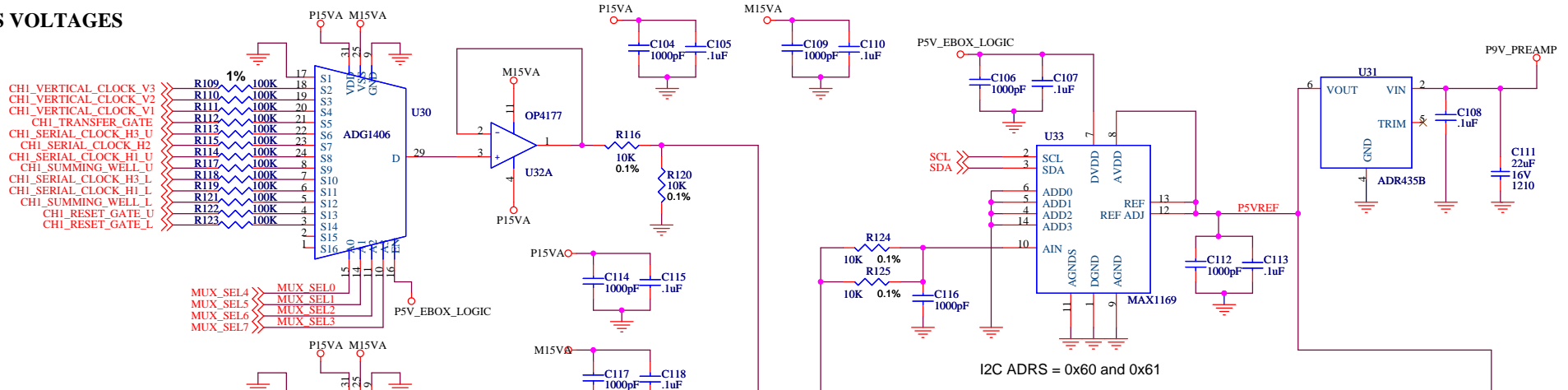
Schematic, PCB, LRIS Dewar Electronics

Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
-----------	-----------	--------------------------	------------

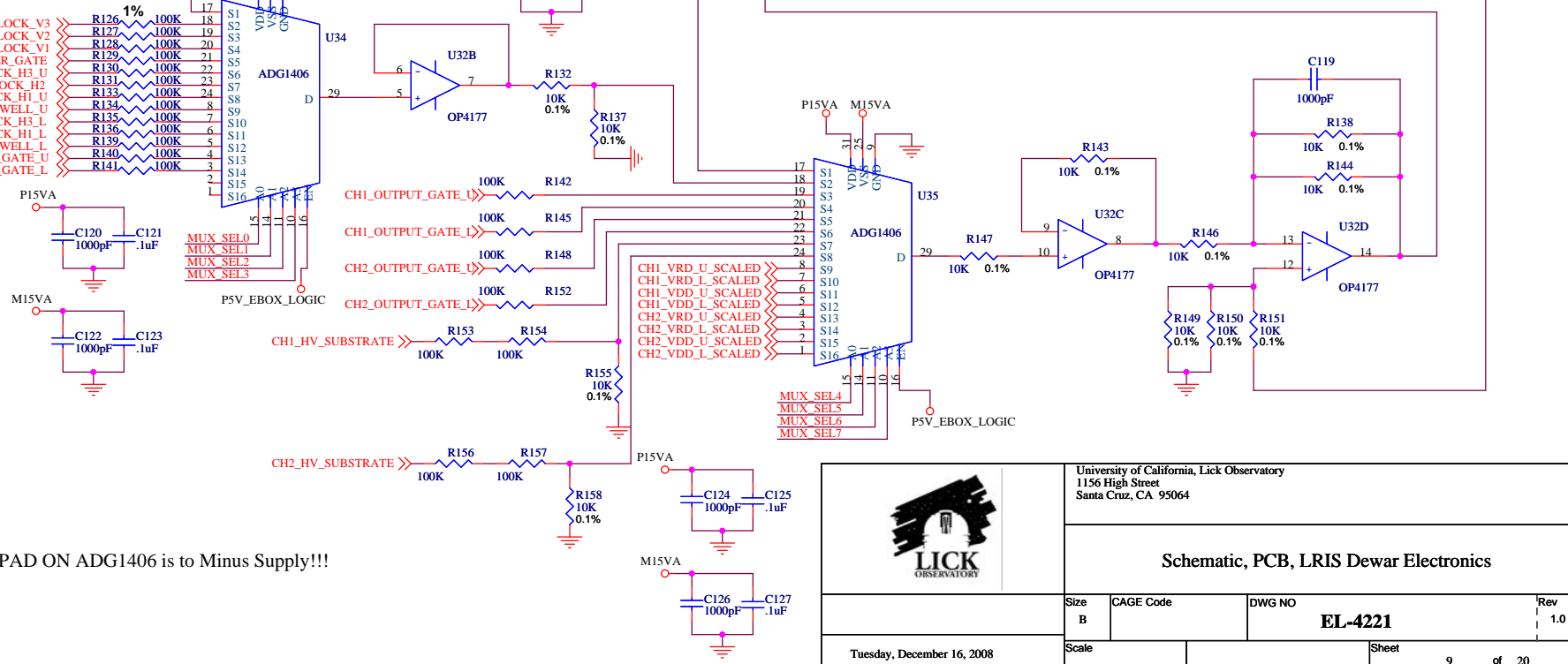
Tuesday, December 16, 2008

Scale	Sheet 8 of 20
-------	------------------


BIAS VOLTAGES



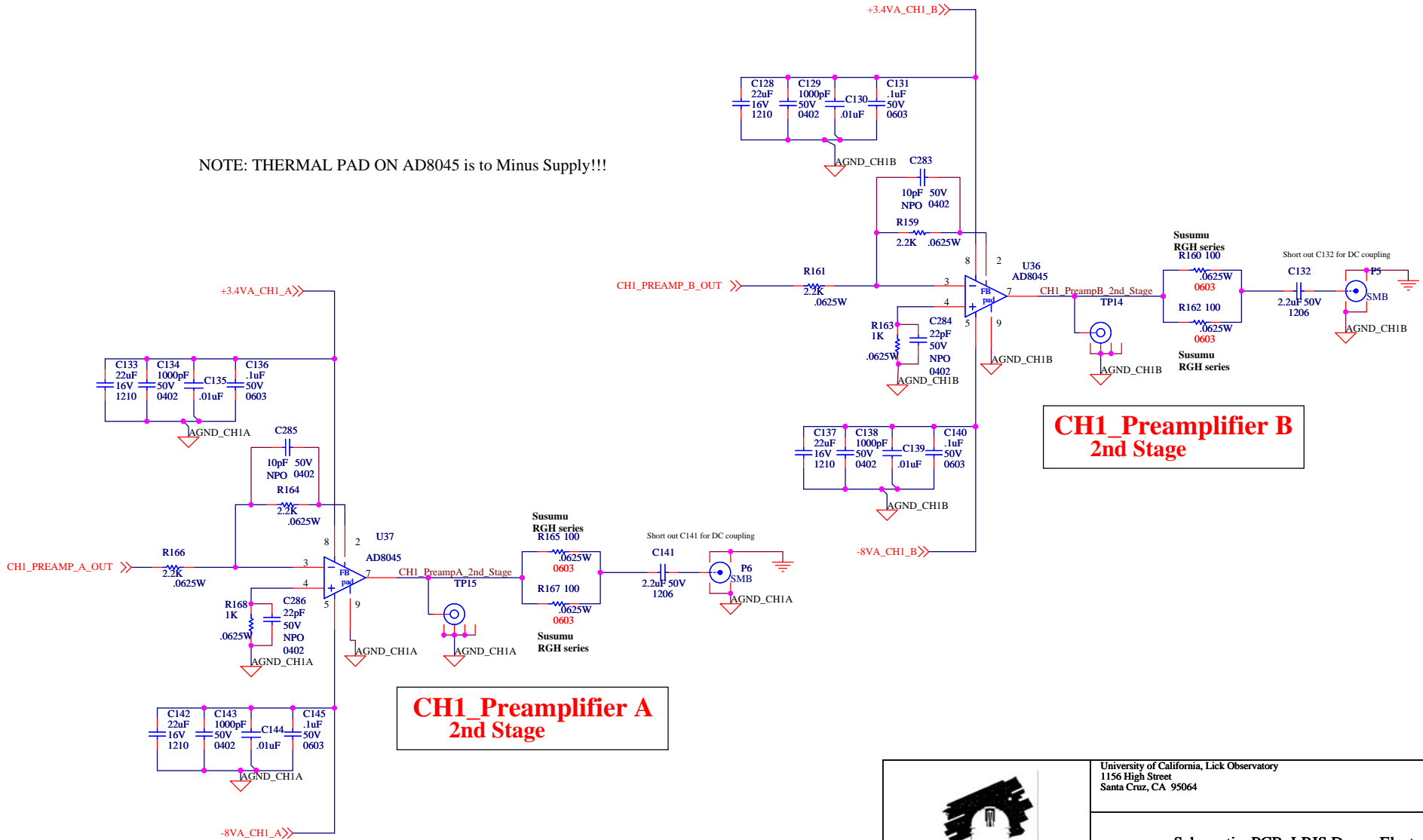
CLOCKS



NOTE: THERMAL PAD ON ADG1406 is to Minus Supply!!!

	University of California, Lick Observatory 1156 High Street Santa Cruz, CA 95064		
	Schematic, PCB, LRIS Dewar Electronics		
Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
Tuesday, December 16, 2008		Scale	Sheet 9 of 20


NOTE: THERMAL PAD ON AD8045 is to Minus Supply!!!



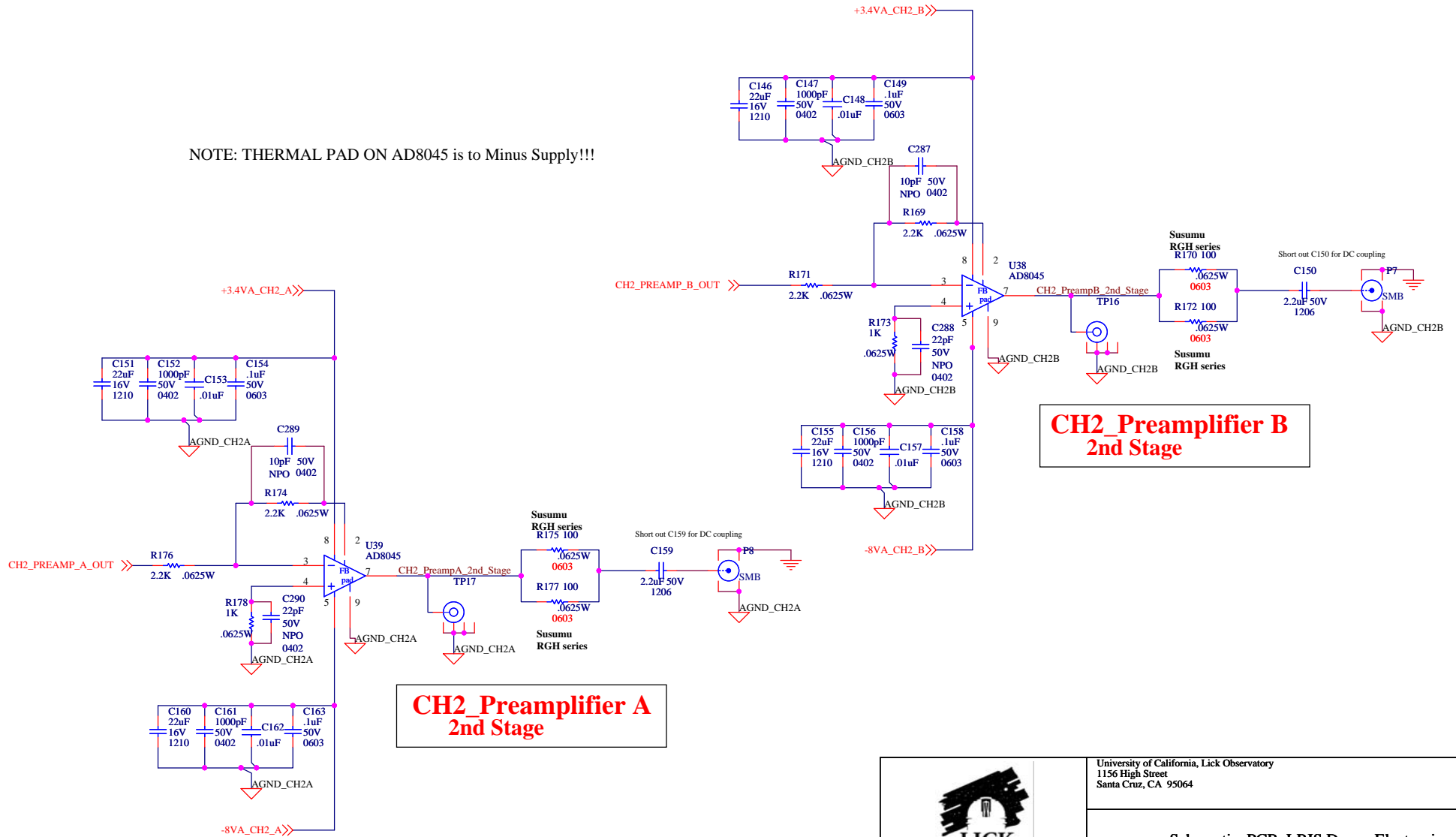
**CH1_Preamplifier A
2nd Stage**

**CH1_Preamplifier B
2nd Stage**

NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are X7R dielectric, unless otherwise noted

	University of California, Lick Observatory 1156 High Street Santa Cruz, CA 95064		
	Schematic, PCB, LRIS Dewar Electronics		
Size B	CAGE Code	DWG NO	Rev 1.0
Tuesday, December 16, 2008		Scale	Sheet 10 of 20


NOTE: THERMAL PAD ON AD8045 is to Minus Supply!!!



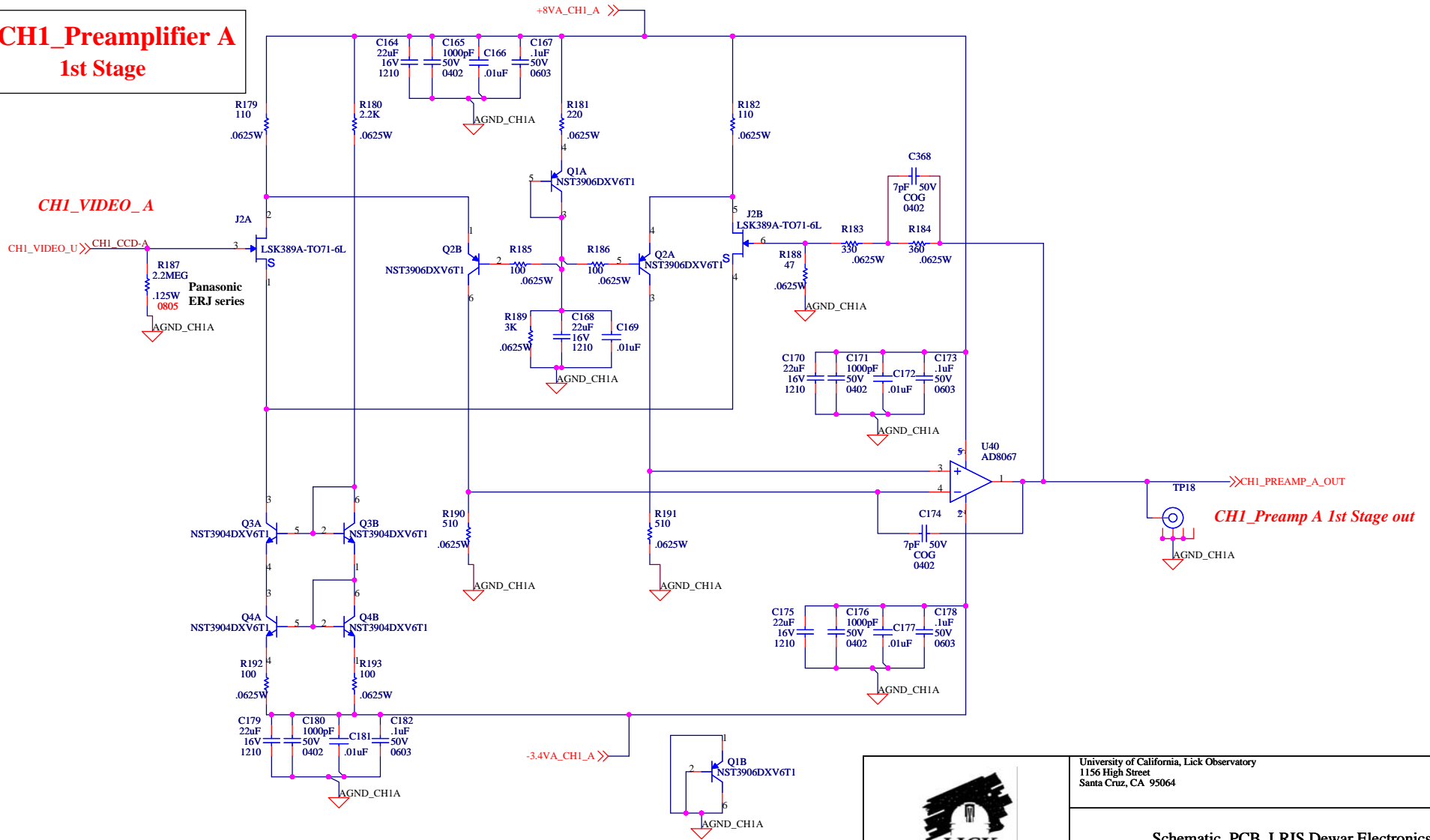
**CH2_Preamplifier A
2nd Stage**

**CH2_Preamplifier B
2nd Stage**

NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are X7R dielectric, unless otherwise noted

	University of California, Lick Observatory 1156 High Street Santa Cruz, CA 95064		
	Schematic, PCB, LRIS Dewar Electronics		
Size B	CAGE Code	DWG NO	Rev 1.0
Tuesday, December 16, 2008		Scale	Sheet 11 of 20

CH1_Preamplifier A 1st Stage



NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are 50V, 0402 case, unless otherwise noted



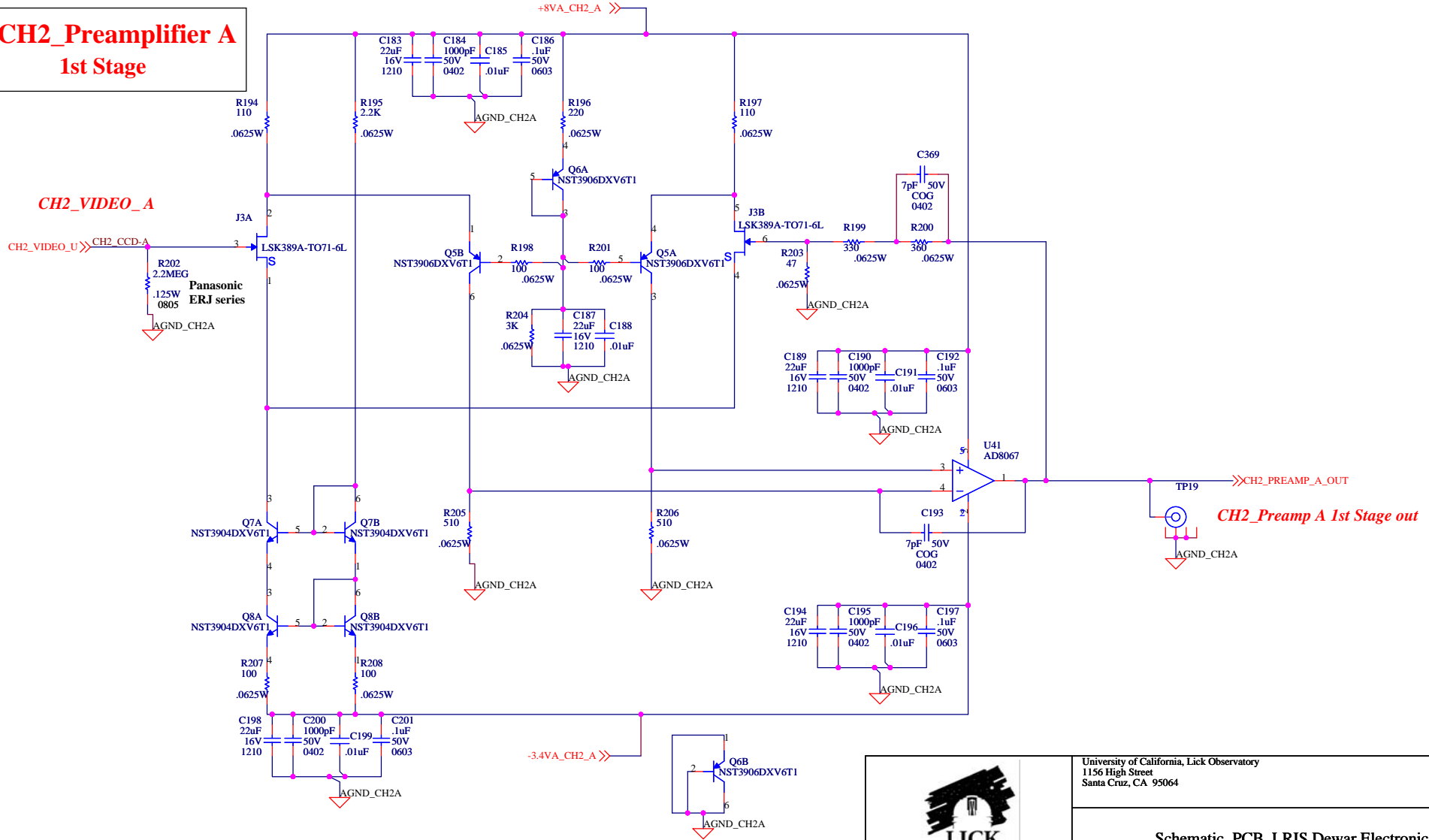
University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064

Schematic, PCB, LRIS Dewar Electronics

Size B	CAGE Code	DWG NO	Rev 1.0
Scale		EL-4221	Sheet 12 of 20

Tuesday, December 16, 2008

CH2_Preamplifier A 1st Stage



NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are 50V, 0402 case, unless otherwise noted

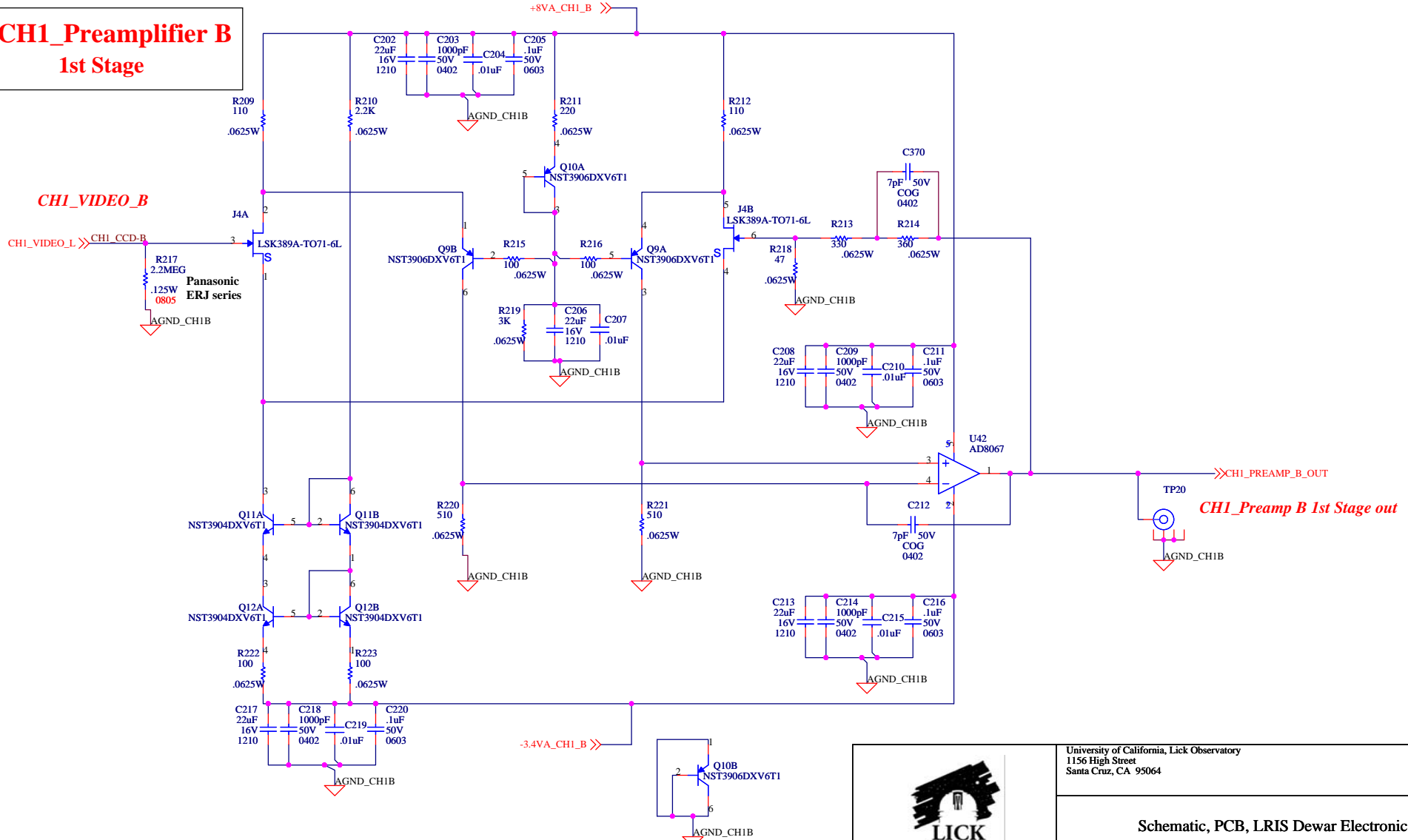


University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064

Schematic, PCB, LRIS Dewar Electronics

Size B	CAGE Code	DWG NO	Rev 1.0
Scale		EL-4221	
Tuesday, December 16, 2008		Sheet	13 of 20

CH1_Preamplifier B 1st Stage



NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are 50V, 0402 case, unless otherwise noted



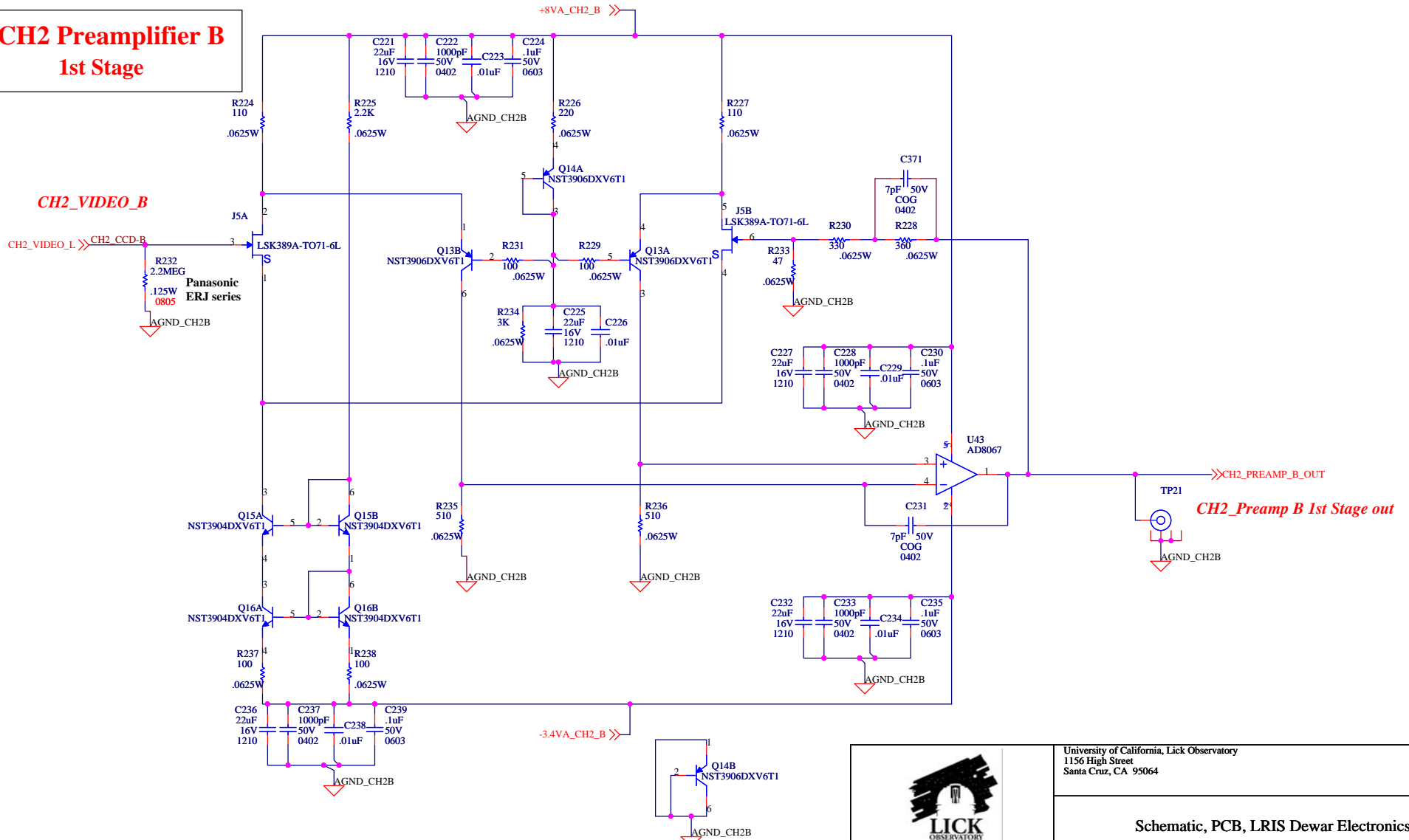
University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064

Schematic, PCB, LRIS Dewar Electronics

Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
Scale	Sheet 14 of 20		

Tuesday, December 16, 2008

CH2 Preamplifier B 1st Stage



NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are 50V, 0402 case, unless otherwise noted



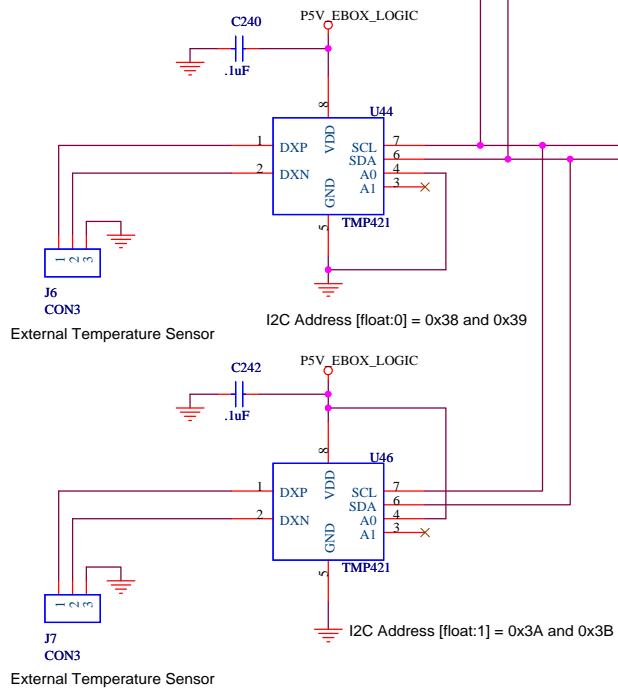
University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064

Schematic, PCB, LRIS Dewar Electronics

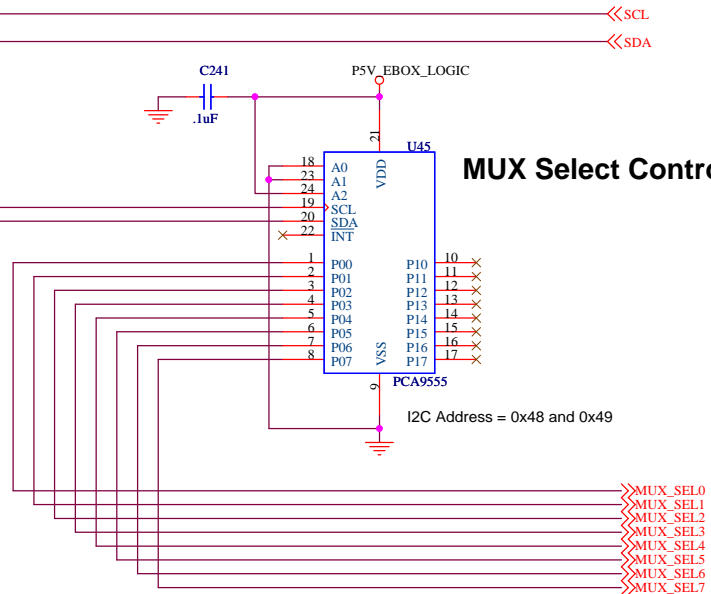
Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
Scale	Sheet 15 of 20		

Tuesday, December 16, 2008

Temperature Monitors



MUX Select Control

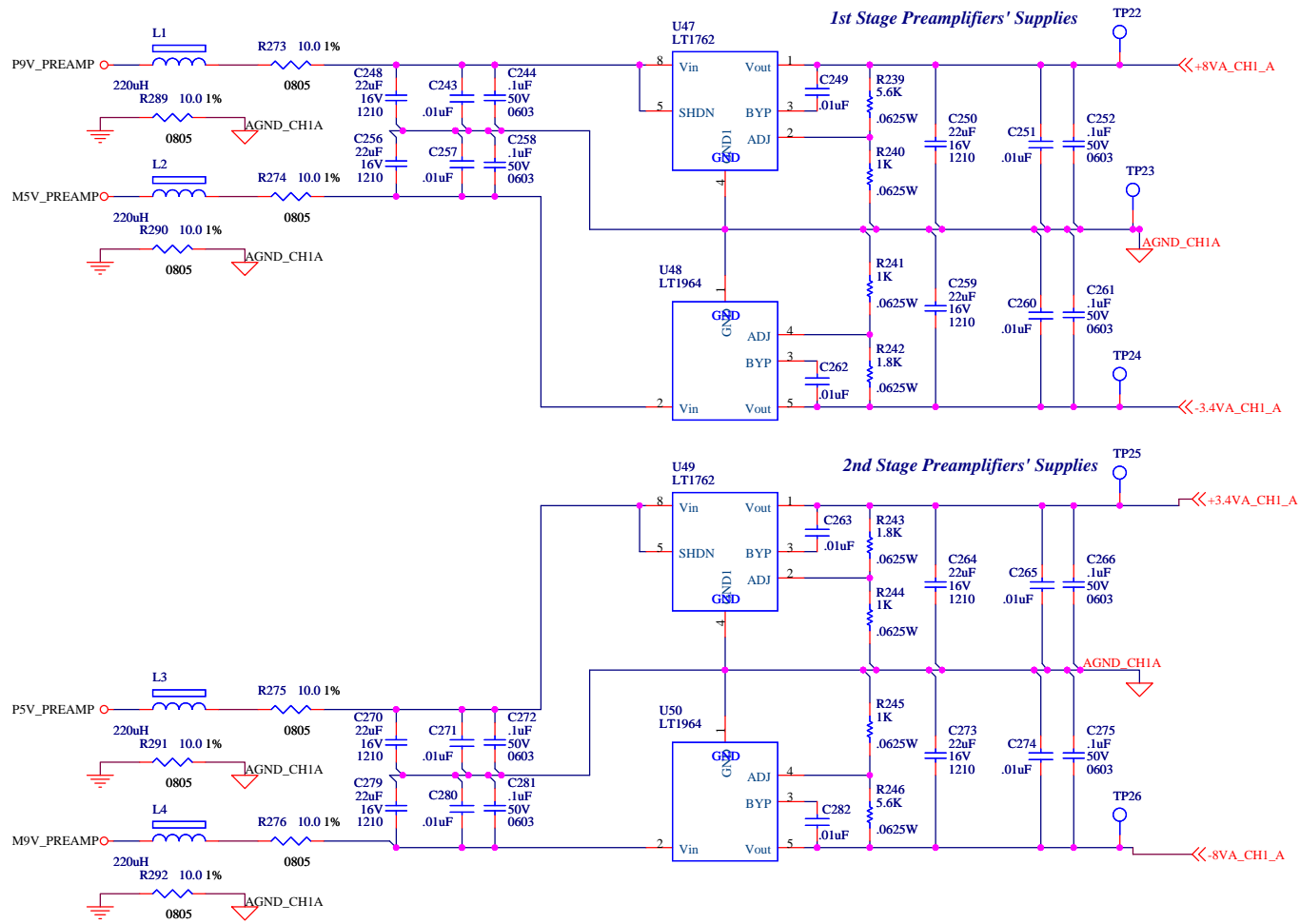


University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064

Schematic, PCB, LRIS Dewar Electronics

Size B	CAGE Code	DWG NO	Rev 1.0
Scale		EL-4221	Sheet 16 of 20

Tuesday, December 16, 2008



NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are 50V, 0402 case, unless otherwise noted

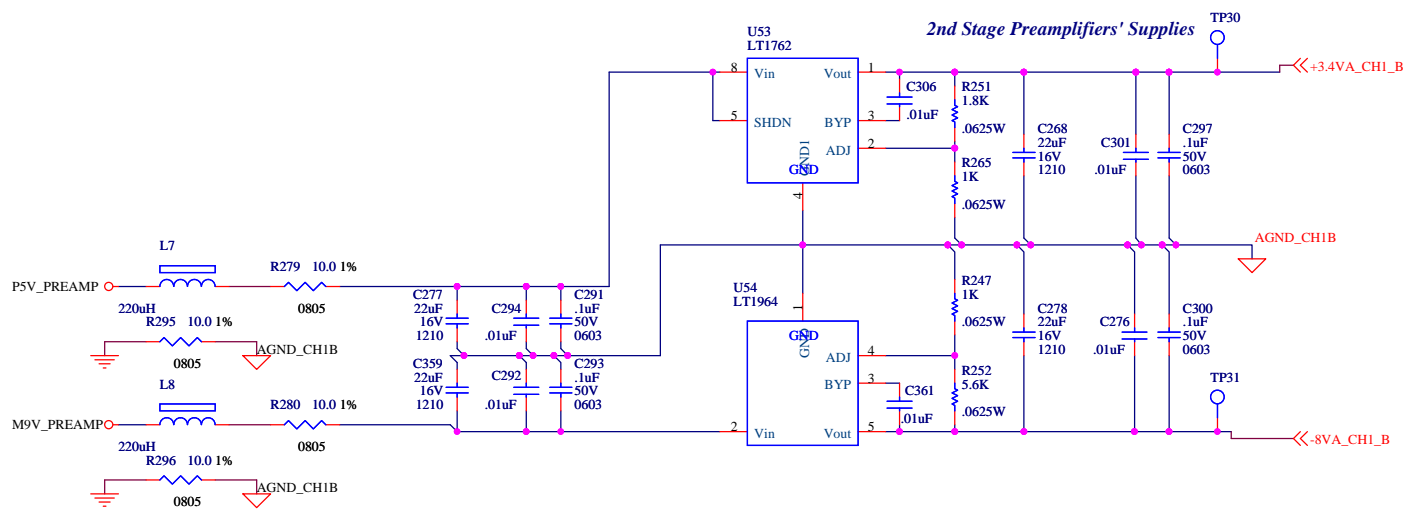
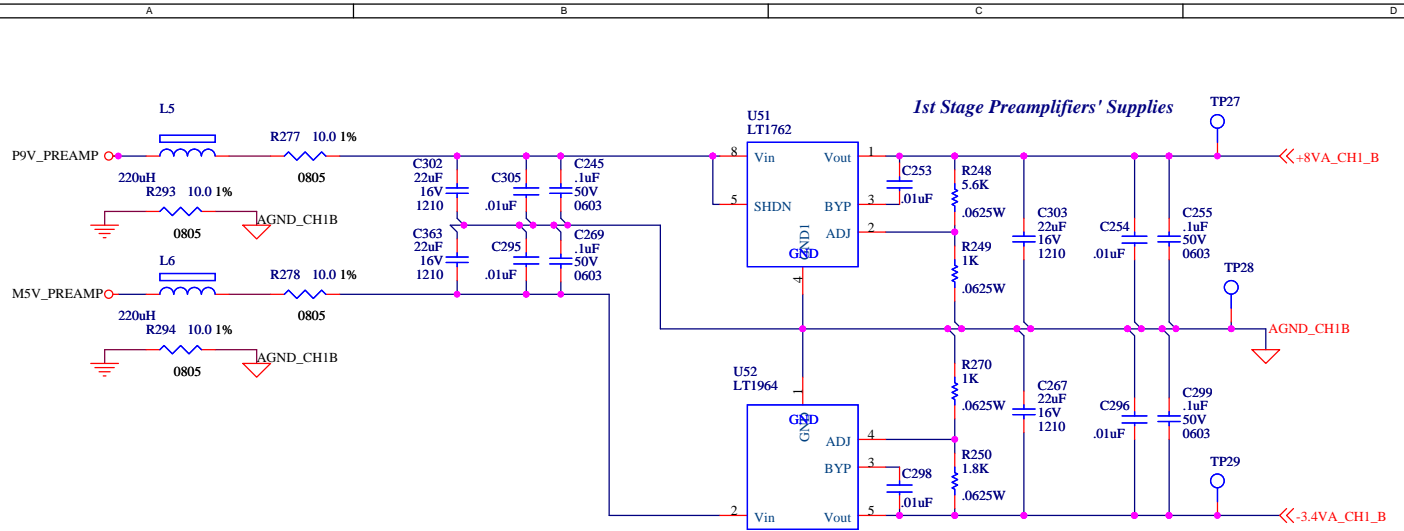


University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064


Schematic, PCB, LRIS Dewar Electronics

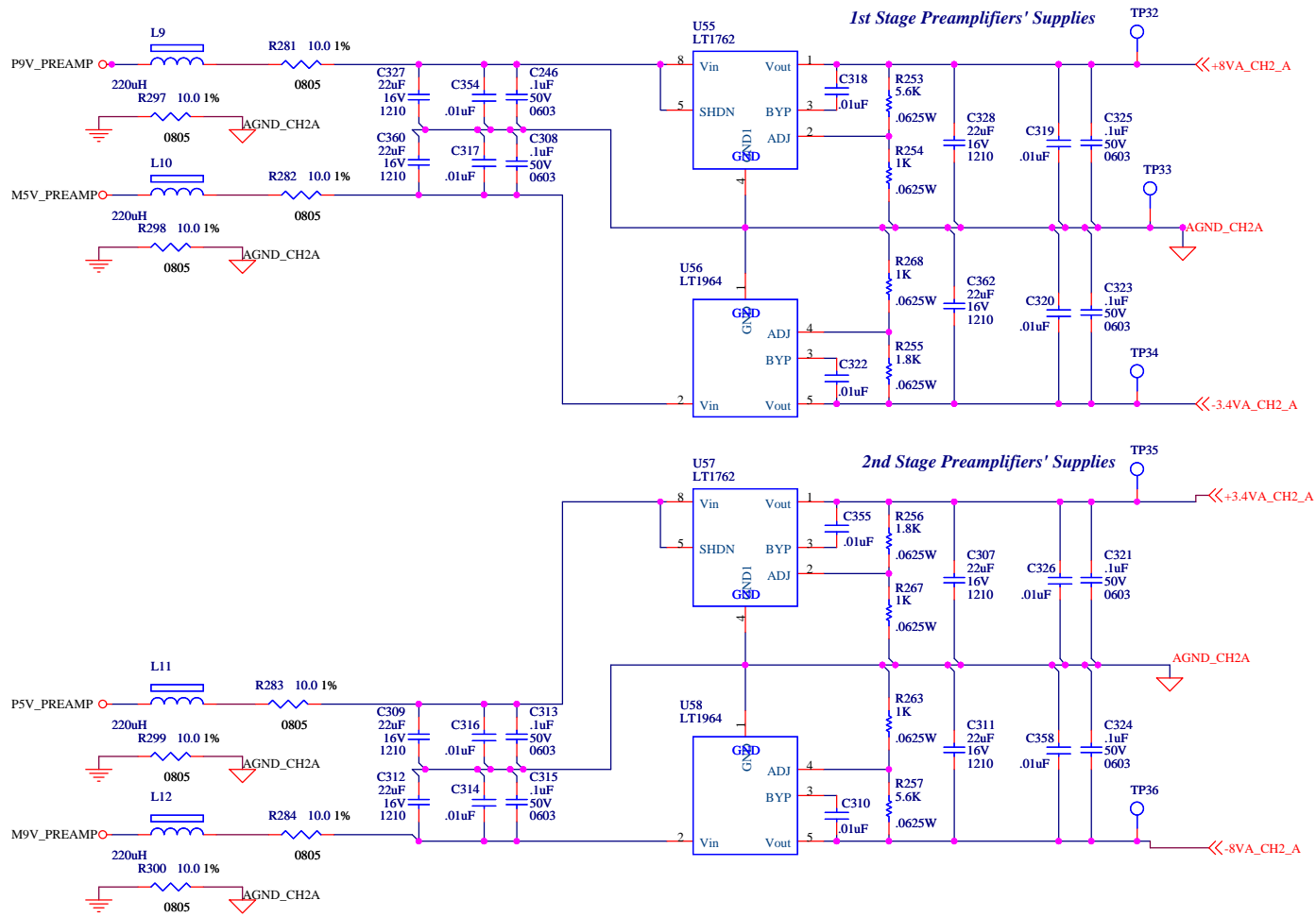
Size B	CAGE Code	DWG NO	Rev 1.0
		EL-4221	

Tuesday, December 16, 2008	Scale	Sheet 17 of 20
----------------------------	-------	----------------



NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are 50V, 0402 case, unless otherwise noted

	University of California, Lick Observatory 1156 High Street Santa Cruz, CA 95064		
	Schematic, PCB, LRIS Dewar Electronics		
Size B	CAGE Code	DWG NO EL-4221	Rev 1.0
Tuesday, December 16, 2008		Scale	Sheet 18 of 20



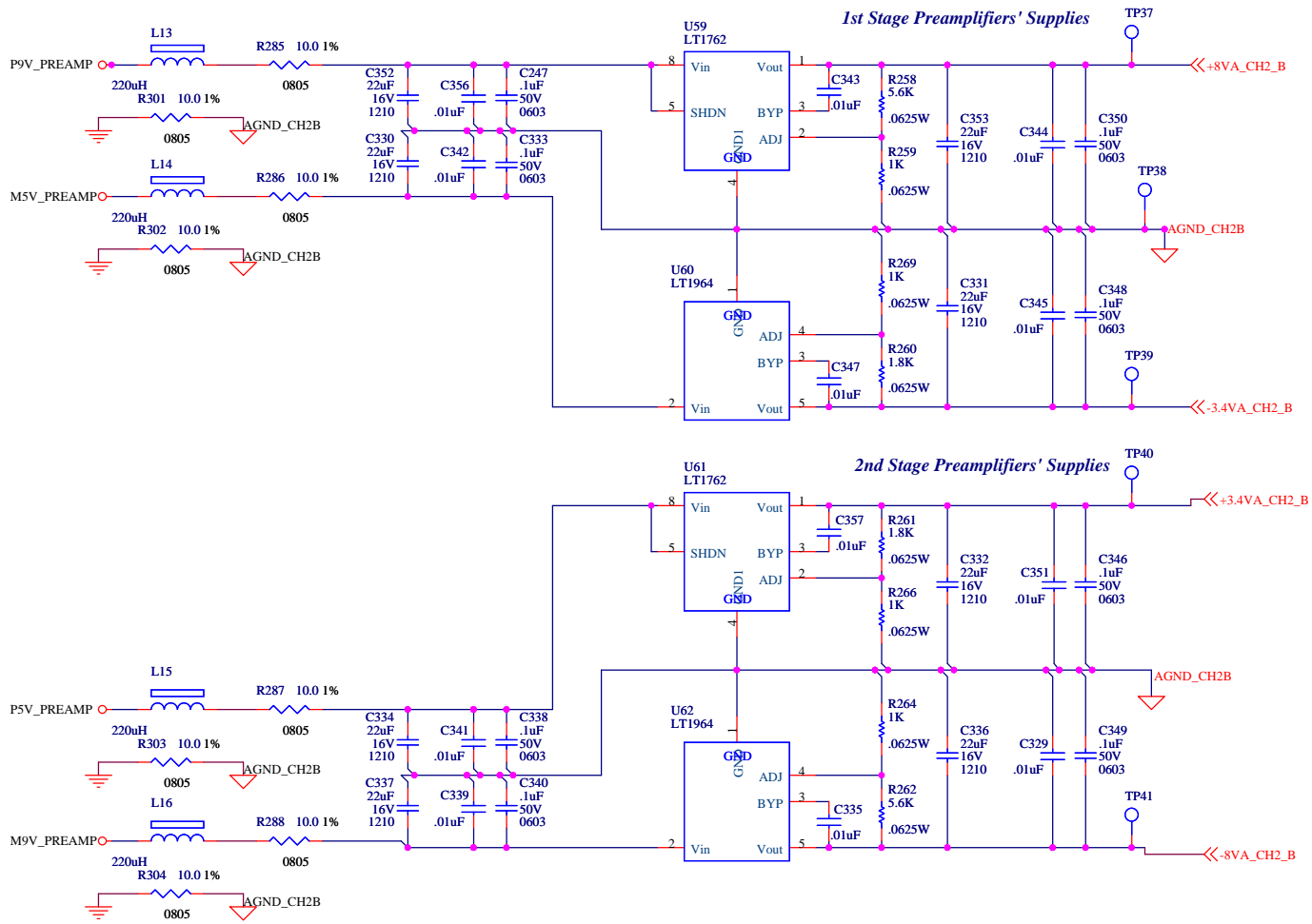
NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are 50V, 0402 case, unless otherwise noted



University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064

Schematic, PCB, LRIS Dewar Electronics

Size B	CAGE Code	DWG NO	Rev 1.0
		EL-4221	
Tuesday, December 16, 2008		Scale	Sheet 19 of 20



NOTE: - all resistors are Susumu RG series: .05 %, 10 ppm/C, 0.625 W, 75 volt, 0603 case unless otherwise noted
 - all non-polarized capacitors are 50V, 0402 case, unless otherwise noted



University of California, Lick Observatory
 1156 High Street
 Santa Cruz, CA 95064

Schematic, PCB, LRIS Dewar Electronics

Size B	CAGE Code	DWG NO	Rev 1.0
		EL-4221	

Tuesday, December 16, 2008	Scale	Sheet 20 of 20
----------------------------	-------	----------------