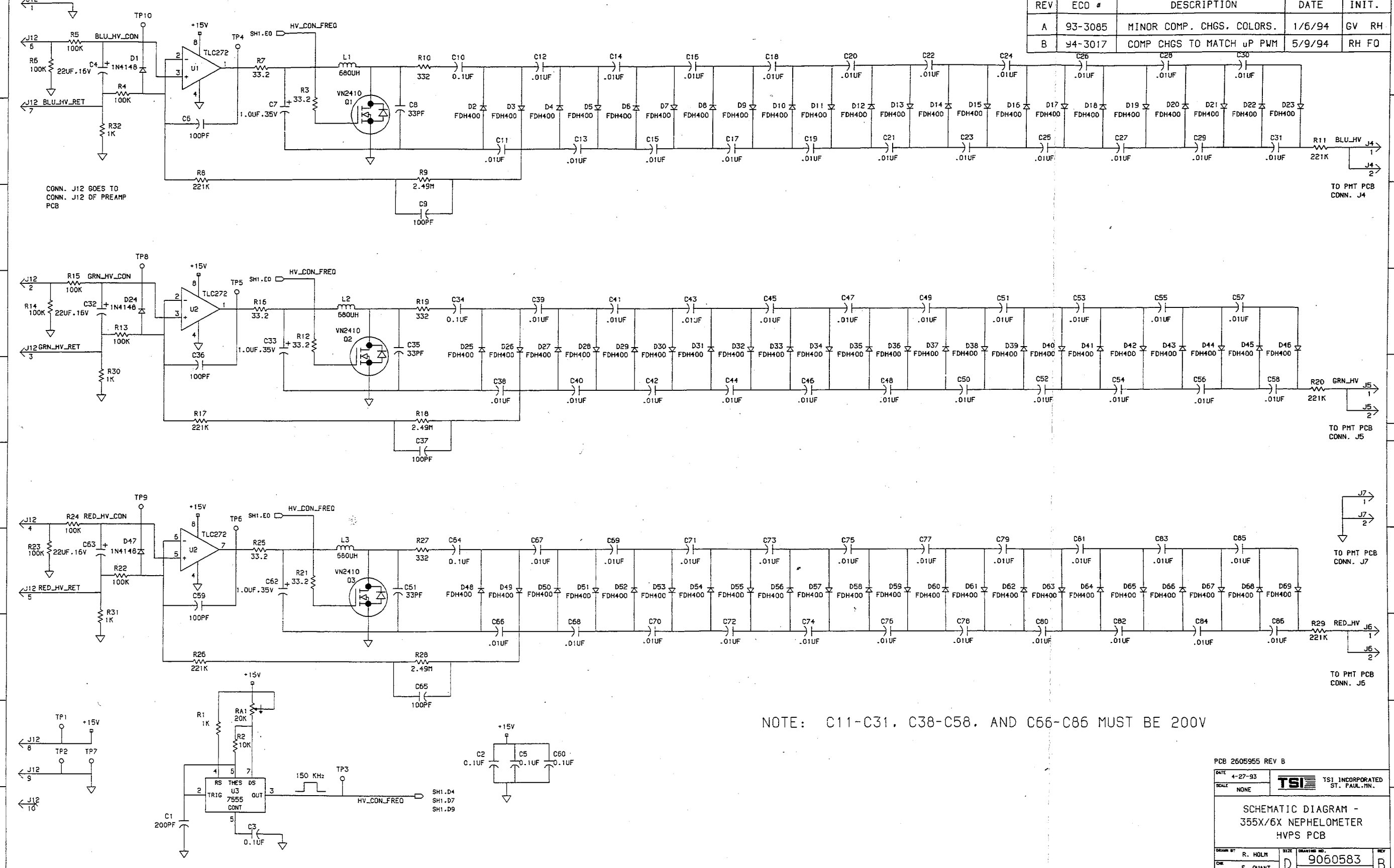


REVISIONS				
REV	ECO #	DESCRIPTION	DATE	INIT.
A	93-3085	MINOR COMP. CHGS. COLORS.	1/6/94	GV RH
B	94-3017	COMP CHGS TO MATCH uP PWM	5/9/94	RH FQ



CONN. J12 GOES TO
CONN. J12 OF PREAMP
PCB

TO PMT PCB
CONN. J4

TO PMT PCB
CONN. J5

TO PMT PCB
CONN. J7

TO PMT PCB
CONN. J6

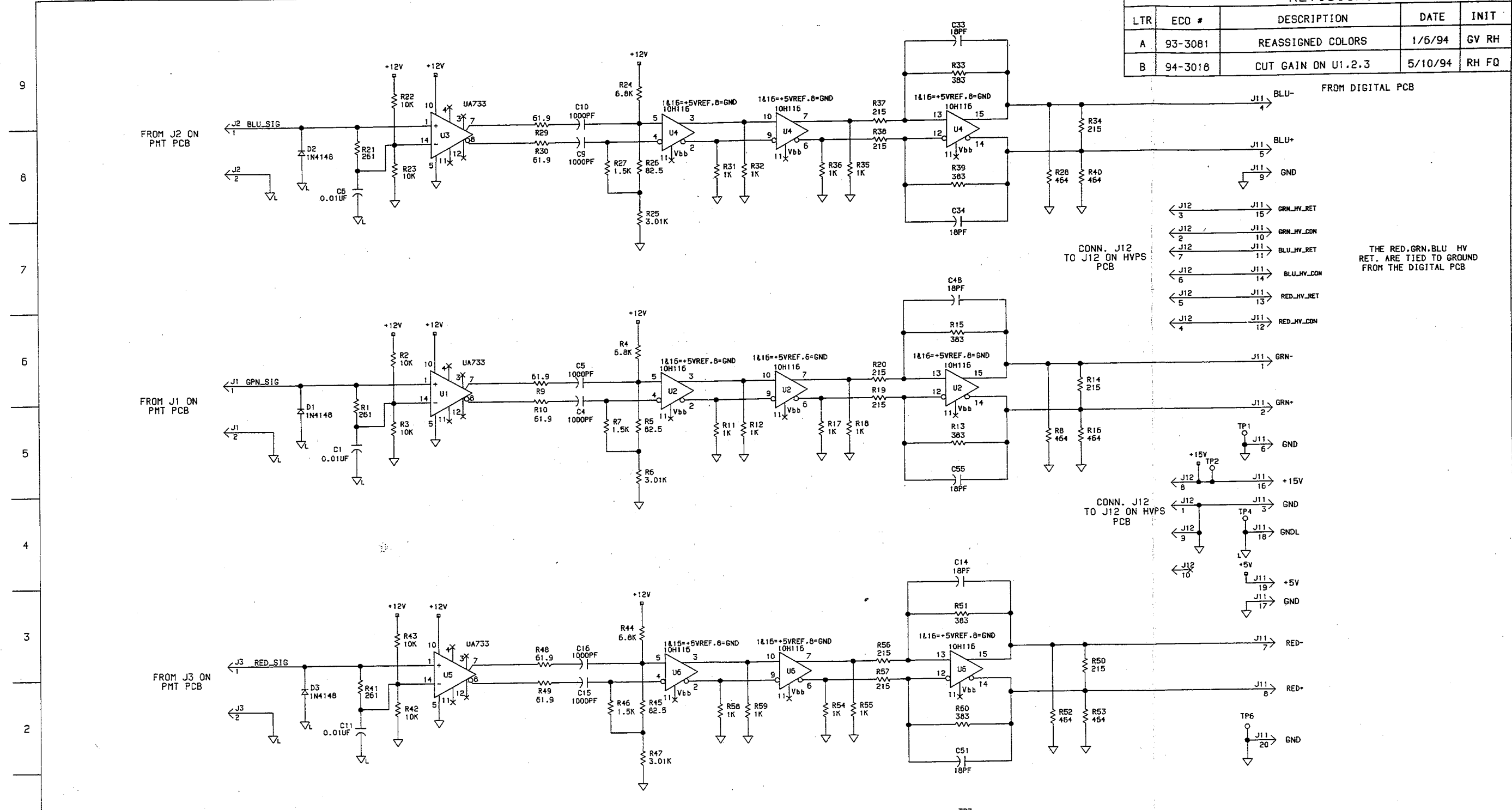
NOTE: C11-C31, C38-C58, AND C66-C86 MUST BE 200V

PCB 2605955 REV B

DATE	4-27-93	TSI INCORPORATED ST. PAUL, MN.		
SCALE	NONE			
SCHEMATIC DIAGRAM - 355X/6X NEPHELOMETER HVPS PCB				
DRAWN BY	R. HOLM	SIZE	DRAWING NO.	REV
CHK	F. QUANT	D	9060583	B
		SHEET 1 OF 1		

A B C D E F G H J K L M N P Q R

REVISIONS				
LTR	ECO #	DESCRIPTION	DATE	INIT
A	93-3081	REASSIGNED COLORS	1/6/94	GV RH
B	94-3018	CUT GAIN ON U1,2,3	5/10/94	RH FQ



FROM DIGITAL PCB

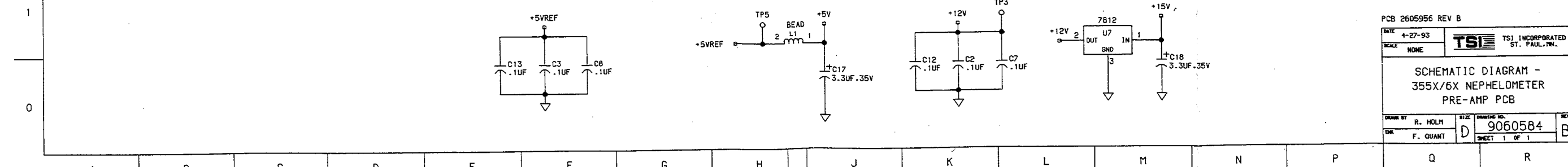
CONN. J12 TO J12 ON HVPS PCB

THE RED, GRN, BLU HV RET. ARE TIED TO GROUND FROM THE DIGITAL PCB

J11 4 BLU-
 J11 5 BLU+
 J11 9 GND
 J12 3 J11 15 GRN_HV_RET
 J12 2 J11 10 GRN_HV_CON
 J12 7 J11 11 BLU_HV_RET
 J12 6 J11 14 BLU_HV_CON
 J12 5 J11 13 RED_HV_RET
 J12 4 J11 12 RED_HV_CON

J11 1 GRN-
 J11 2 GRN+
 J11 6 GND
 J12 8 J11 16 +15V
 J12 1 J11 3 GND
 J12 9 J11 18 GNDL
 J12 10 J11 19 +5V
 J11 17 GND
 J11 7 RED-
 J11 8 RED+
 J11 20 GND

TP1 J11 6
 TP2 J11 16
 TP4 J11 18
 TP3 J11 19
 TP6 J11 20



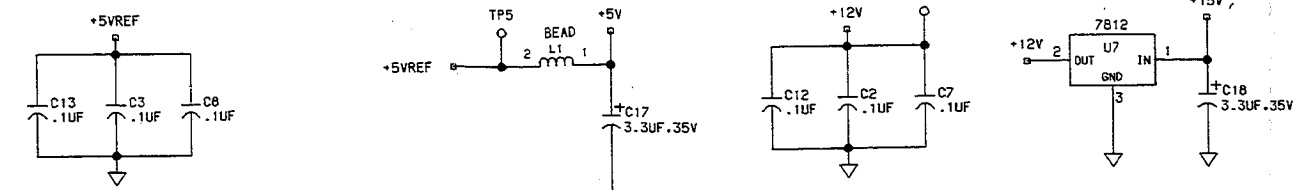
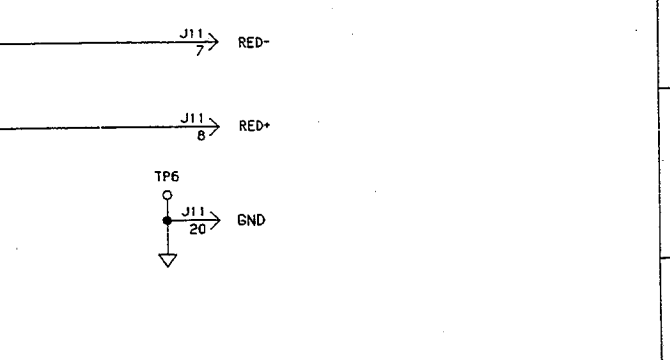
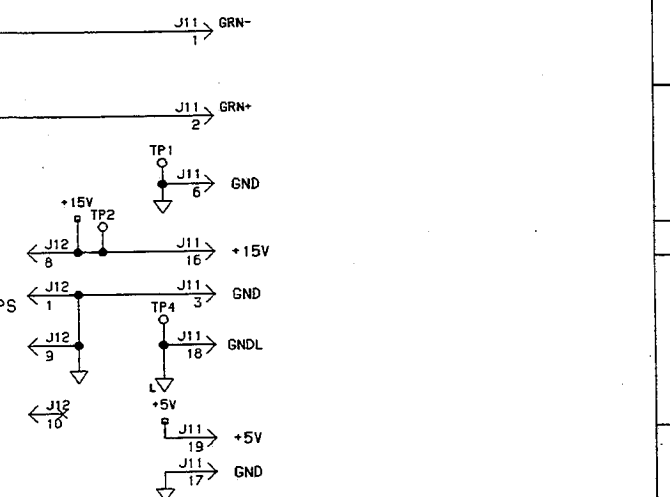
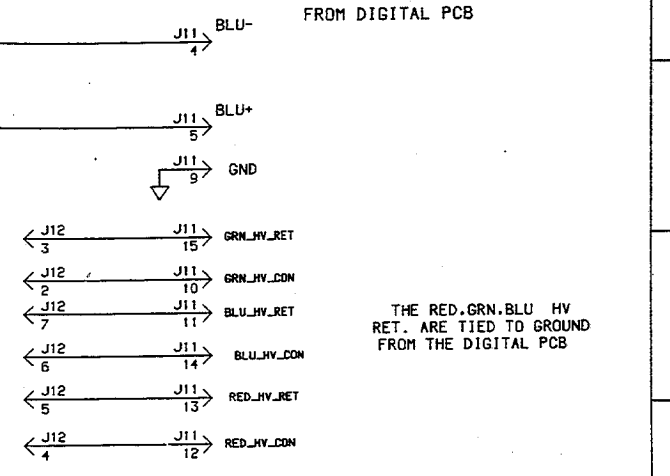
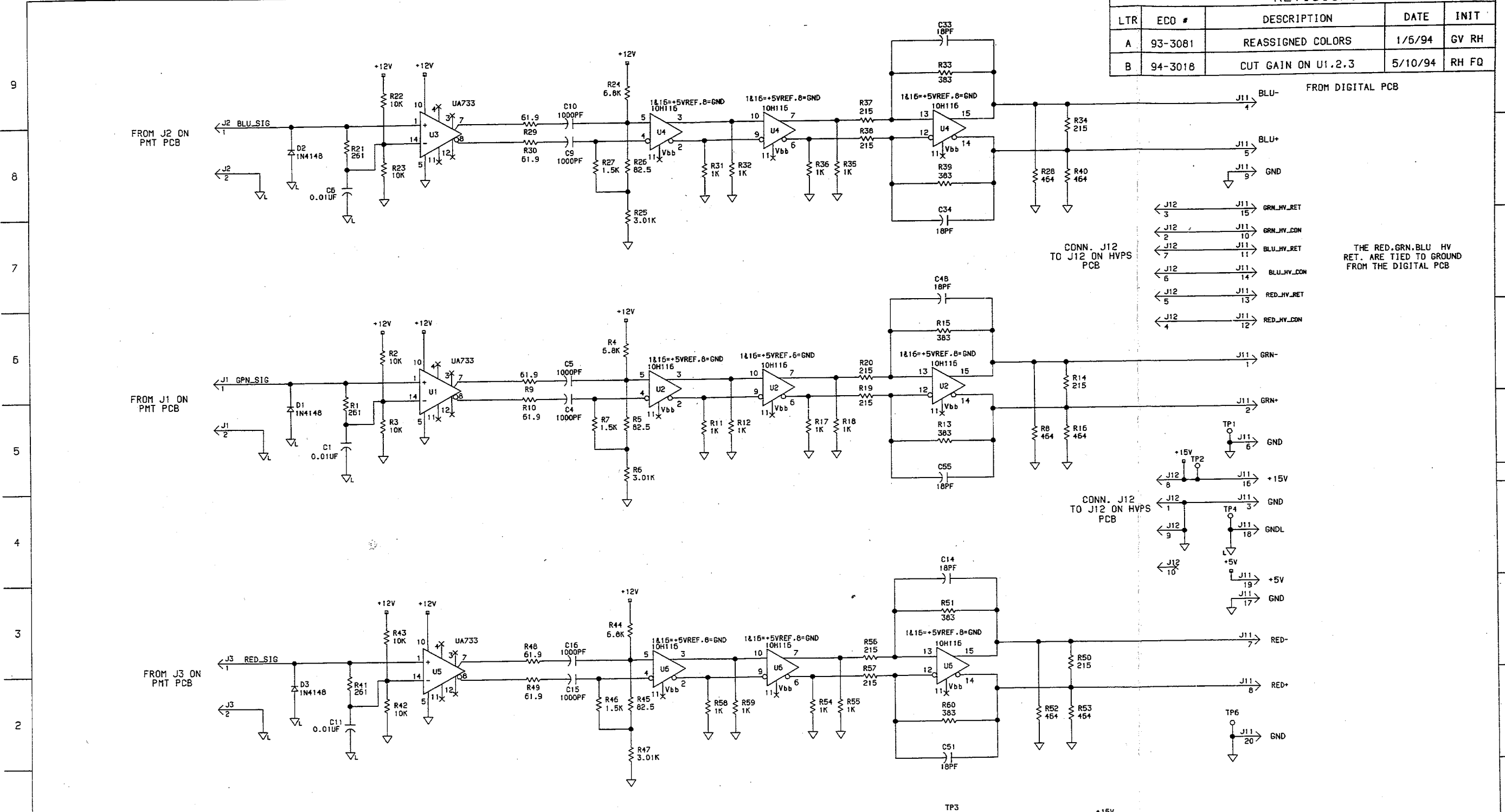
PCB 2605956 REV B

DATE	4-27-93	TSI	TSI INCORPORATED ST. PAUL, MN.
SCALE	NONE		
SCHEMATIC DIAGRAM - 355X/6X NEPHELOMETER PRE-AMP PCB			
DRAWN BY	R. HOLM	SIZE	D
CHK	F. QUANT	MANUFACT. NO.	9060584
		SHEET	1 OF 1

A B C D E F G H J K L M N P Q R

A B C D E F G H J K L M N P Q R

REVISIONS				
LTR	ECO #	DESCRIPTION	DATE	INIT
A	93-3081	REASSIGNED COLORS	1/6/94	GV RH
B	94-3018	CUT GAIN ON U1,2,3	5/10/94	RH FQ

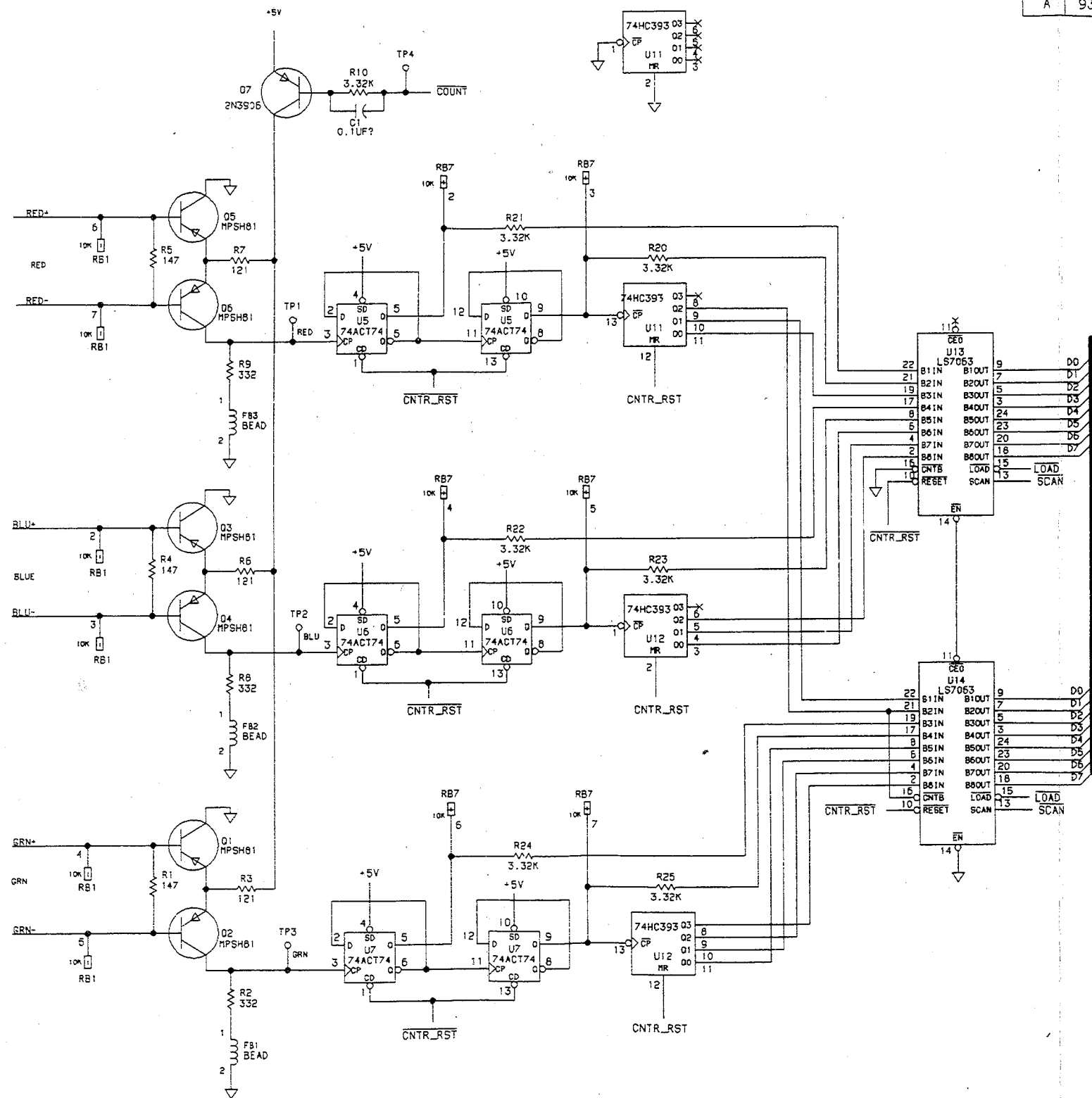


PCB 2605956 REV B

DATE	4-27-93	TSI	TSI INCORPORATED ST. PAUL, MN.
SCALE	NONE		
SCHEMATIC DIAGRAM - 355X/6X NEPHELOMETER PRE-AMP PCB			
DESIGN BY	R. HOLM	SIZE	D
CHK	F. QUANT	REV	9060584
			SHEET 1 OF 1

A B C D E F G H J K L M N P Q R

REVISIONS				
REV	ECO #	DESCRIPTION	DATE	APPROVED
A	93-3083	UPDATE: CHG NAME FR. MAIN	1/10/94	GV FQ



PCB 2605957 REV A
 DATE 7-19-93
 SCALE NONE

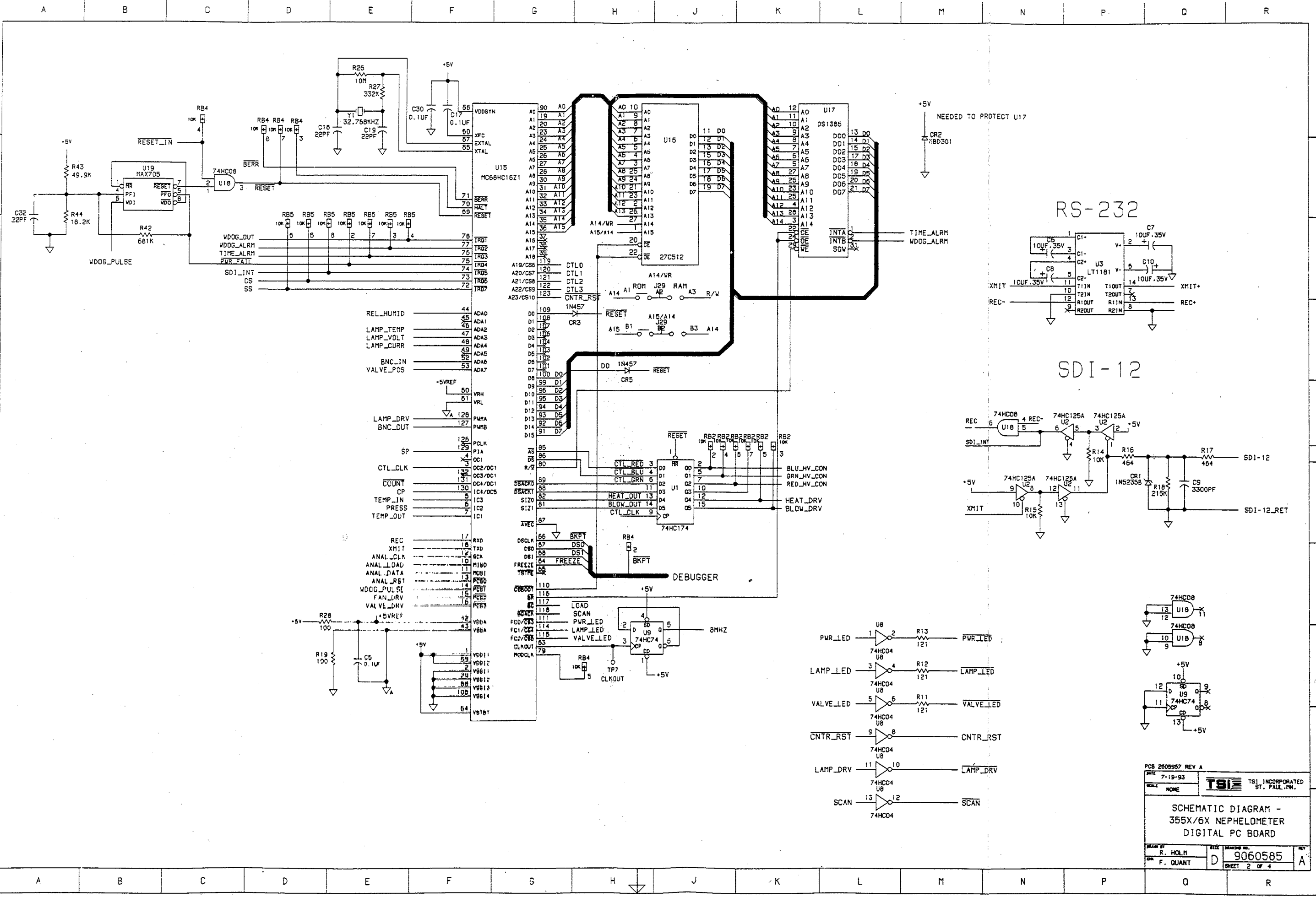
TBI TSI INCORPORATED
 ST. PAUL, MN.

SCHEMATIC DIAGRAM -
 355X/6X NEPHELOMETER
 DIGITAL PCB

DESIGNED BY R. HOLM
 DRA. F. QUANT

SIZE D
 DRAWING NO. 9060585
 SHEET 1 OF 4

REV A



REL_HUMID	44	ADA0
LAMP_TEMP	45	ADA1
LAMP_VDLT	47	ADA2
LAMP_CURR	48	ADA3
LAMP_CURR	49	ADA4
BNC_IN	52	ADA5
VALVE_POS	53	ADA7
-5VREF		
VRH	50	VRH
VRL	51	VRL
LAMP_DRV	128	PWMA
BNC_OUT	129	PWMB
SP	126	PCLK
CTL_CLK	127	PJA
COUNT	130	OC3/OC1
CP	131	OC4/OC5
TEMP_IN	5	IC3
PRESS	6	IC2
TEMP_OUT	7	IC1
REC	17	RXD
XMIT	18	TXD
ANAL_CLK	19	ACK
ANAL_LDA0	10	MIB0
ANAL_DATA	11	MIB1
ANAL_RST	12	PC0
WDOG_PULSE	14	PE0
FAN_DRV	15	PE2
VALVE_DRV	16	PE3
+5VREF		
VBD1	42	VBD1
VBD2	43	VBD2
VBD3	44	VBD3
VBD4	45	VBD4
VBD5	46	VBD5
VBD6	47	VBD6
VBD7	48	VBD7
VBD8	49	VBD8
VBD9	50	VBD9
VBD10	51	VBD10
VBD11	52	VBD11
VBD12	53	VBD12
VBD13	54	VBD13
VBD14	55	VBD14
VBD15	56	VBD15
VBD16	57	VBD16
VBD17	58	VBD17
VBD18	59	VBD18
VBD19	60	VBD19
VBD20	61	VBD20
VBD21	62	VBD21
VBD22	63	VBD22
VBD23	64	VBD23
VBD24	65	VBD24
VBD25	66	VBD25
VBD26	67	VBD26
VBD27	68	VBD27
VBD28	69	VBD28
VBD29	70	VBD29
VBD30	71	VBD30
VBD31	72	VBD31
VBD32	73	VBD32
VBD33	74	VBD33
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VBD35	76	VBD35
VBD36	77	VBD36
VBD37	78	VBD37
VBD38	79	VBD38
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VBD40	81	VBD40
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VBD44	85	VBD44
VBD45	86	VBD45
VBD46	87	VBD46
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VBD48	89	VBD48
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VBD51	92	VBD51
VBD52	93	VBD52
VBD53	94	VBD53
VBD54	95	VBD54
VBD55	96	VBD55
VBD56	97	VBD56
VBD57	98	VBD57
VBD58	99	VBD58
VBD59	100	VBD59
VBD60	101	VBD60
VBD61	102	VBD61
VBD62	103	VBD62
VBD63	104	VBD63
VBD64	105	VBD64
VBD65	106	VBD65
VBD66	107	VBD66
VBD67	108	VBD67
VBD68	109	VBD68
VBD69	110	VBD69
VBD70	111	VBD70
VBD71	112	VBD71
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VBD78	119	VBD78
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VBD81	122	VBD81
VBD82	123	VBD82
VBD83	124	VBD83
VBD84	125	VBD84
VBD85	126	VBD85
VBD86	127	VBD86
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VBD93	134	VBD93
VBD94	135	VBD94
VBD95	136	VBD95
VBD96	137	VBD96
VBD97	138	VBD97
VBD98	139	VBD98
VBD99	140	VBD99
VBD100	141	VBD100

RS-232

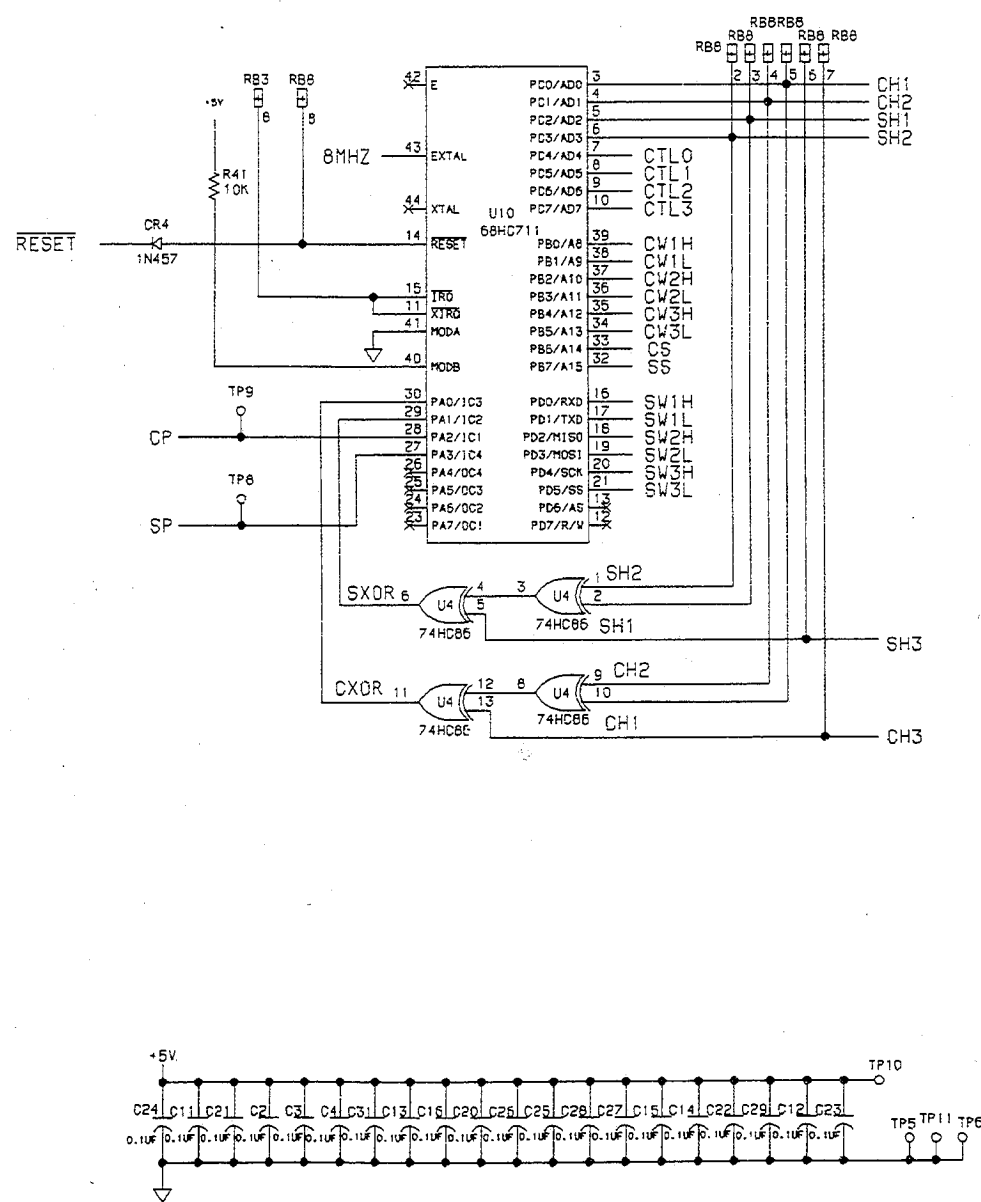
SDI-12

PCB 2609557 REV A
 DATE 7-19-93
 SCALE NONE
 TSI TSI INCORPORATED ST. PAUL, MN.
 SCHEMATIC DIAGRAM -
 355X/6X NEPHELOMETER
 DIGITAL PC BOARD
 DRAWN BY R. HOLM
 CHECKED BY F. QUANT
 DESIGNED BY D
 PART NO. 9060585
 SHEET 2 OF 4
 REV A

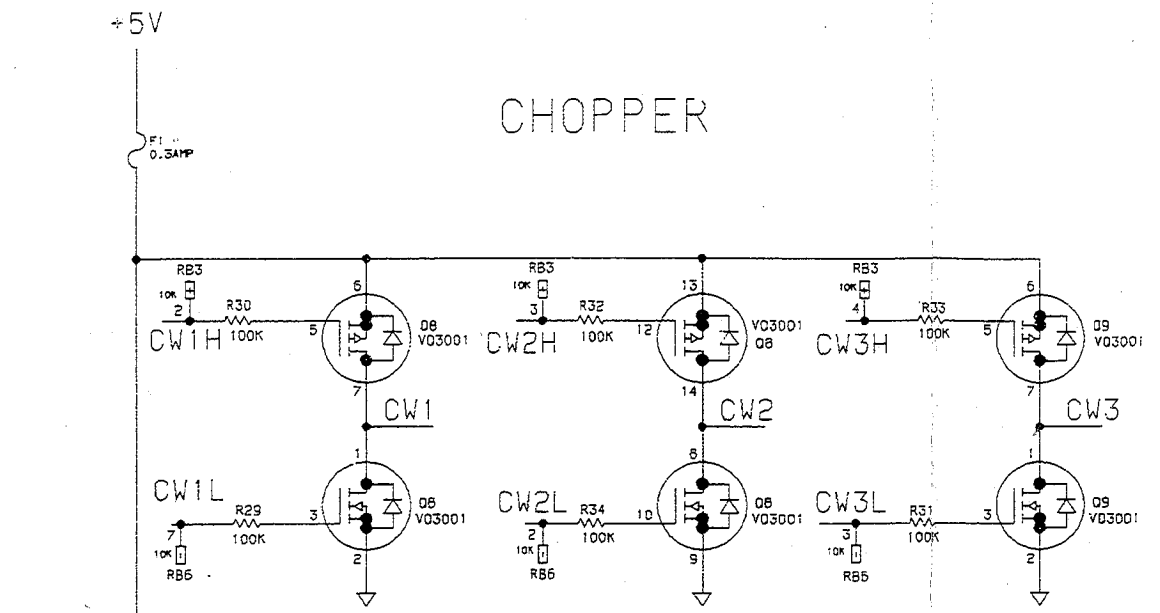
A B C D E F G H J K L M N P Q R

9
8
7
6
5
4
3
2
1
0

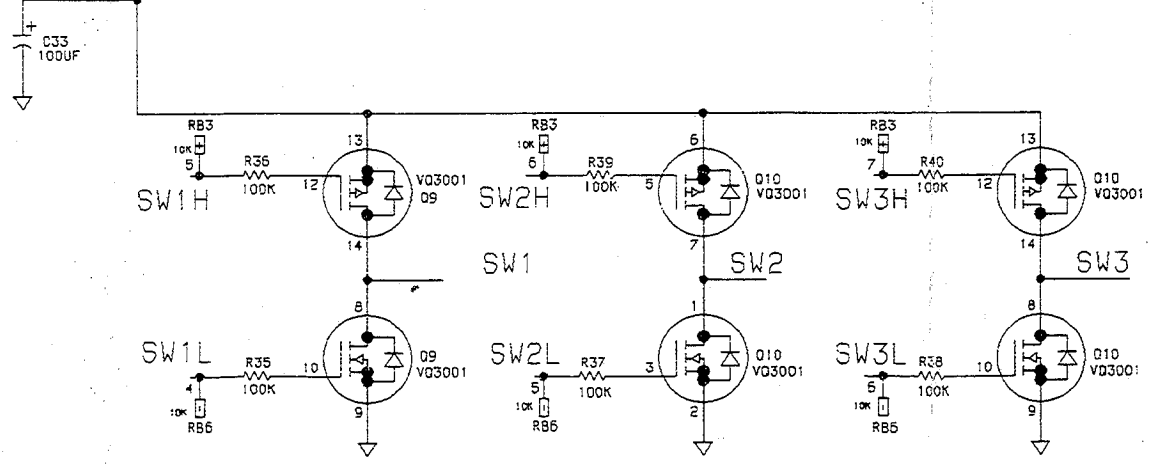
MOTOR CONTROLLER



CHOPPER



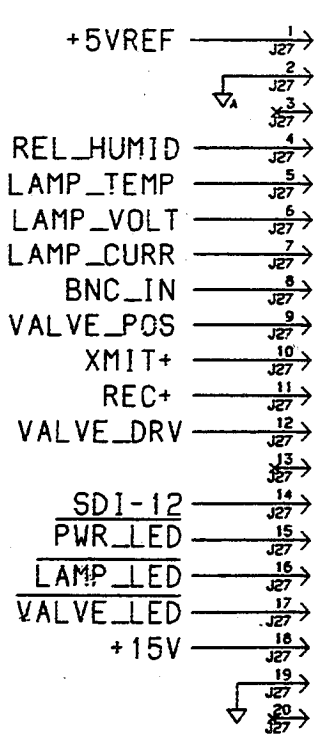
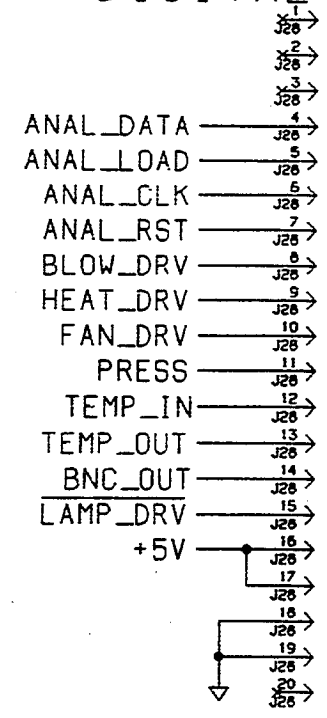
SHUTTER



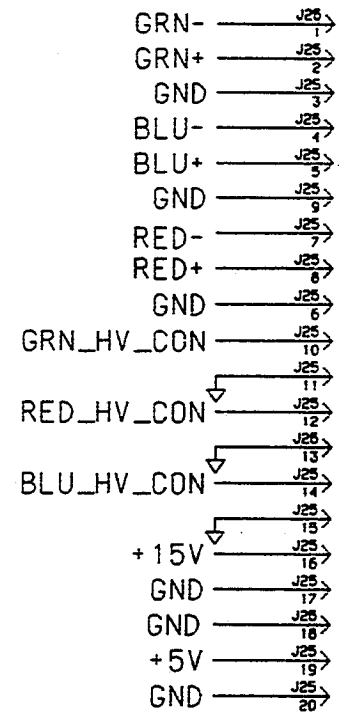
PDB 2605967 REV A
 DATE 7-19-93
 SCALE NONE
 TSI TSI INCORPORATED ST. PAUL, MN.
 SCHEMATIC DIAGRAM -
 355X/6X NEPHELOMETER
 DIGITAL PCB
 DRAWN BY R. HOLM
 CHECKED F. QUANT
 SIZE D
 DRAWING NO. 9060585
 SHEET 3 OF 4
 REF A

A B C D E F G H J K L M N P Q R

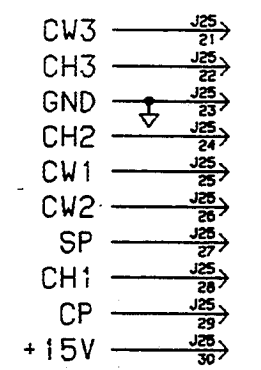
DIGITAL-ANALOG



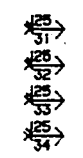
PMT BOX



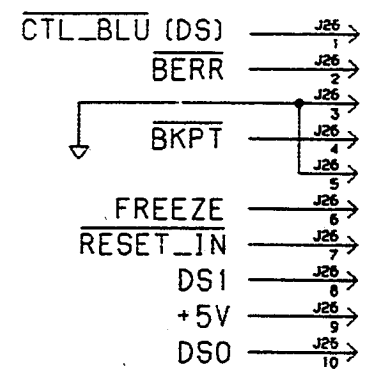
CHOPPER



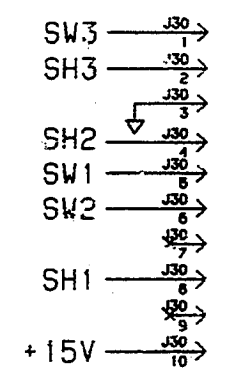
SPARES



DEBUGGER

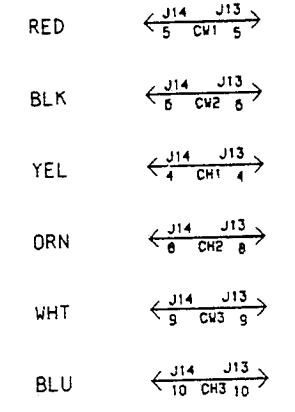
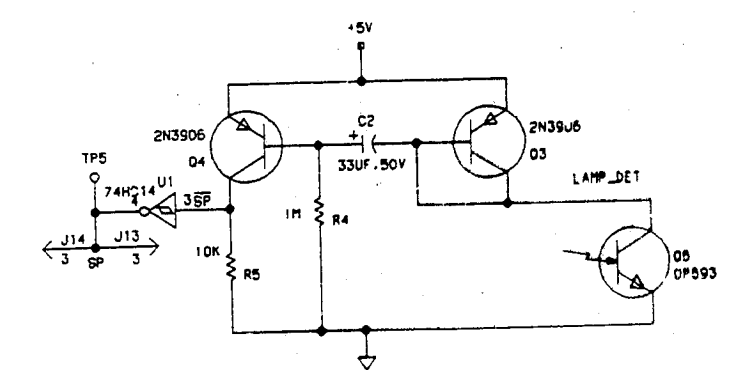
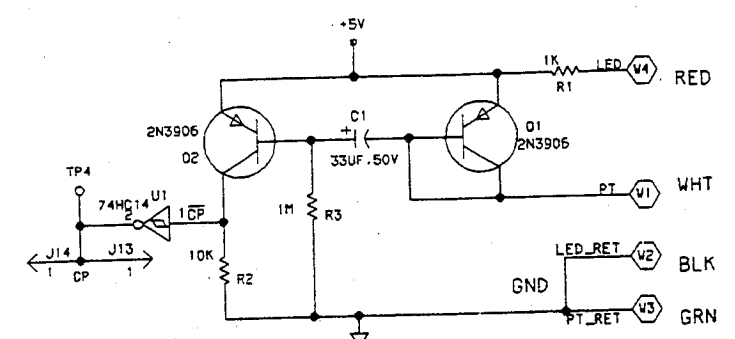
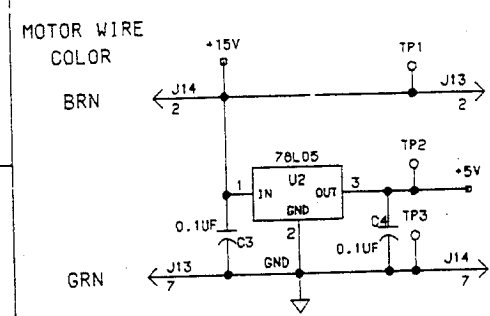


SHUTTER



PCB 250597 REV A
 7-15-93
 NONE
 TOL INCORPORATED ST. PAUL, MN.
 SCHEMATIC DIAGRAM -
 355X/6X NEPHELOMETER
 DIGITAL PCB
 R. HOLM
 F. QUANT
 D
 9060585
 A

REVISIONS				
REV	ECO #	DESCRIPTION	DATE	INIT
A	93-3082	ADDED SCHMITT TRIGGER	1/6/94	GV RH

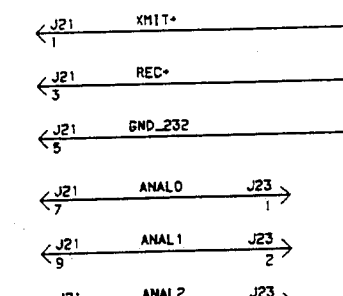
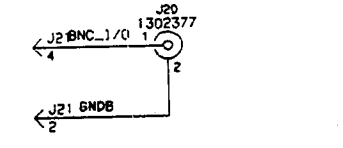
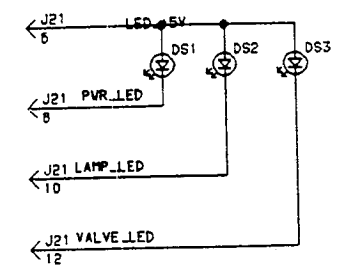
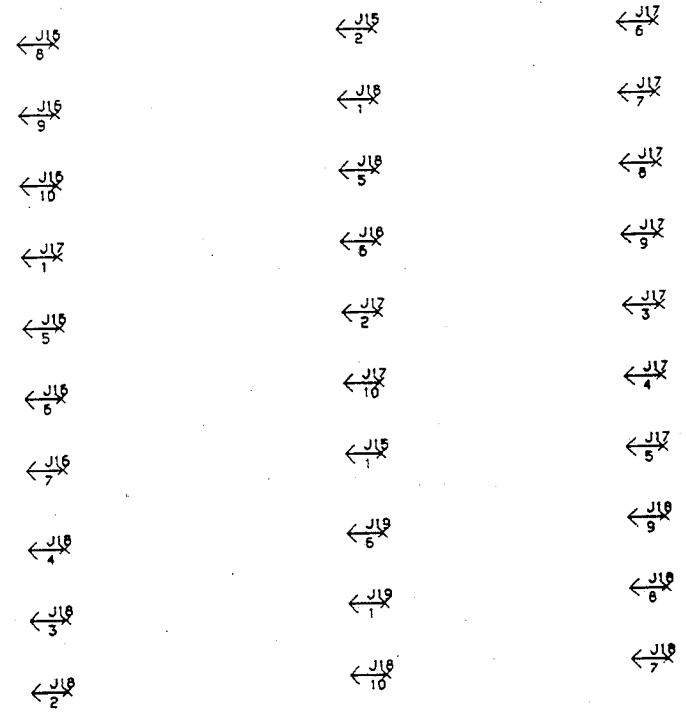


SHUTTER MOTOR

TEMP IN SENSOR

SPARE

BACK PANEL PCB

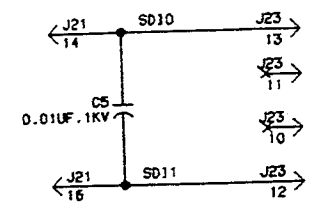
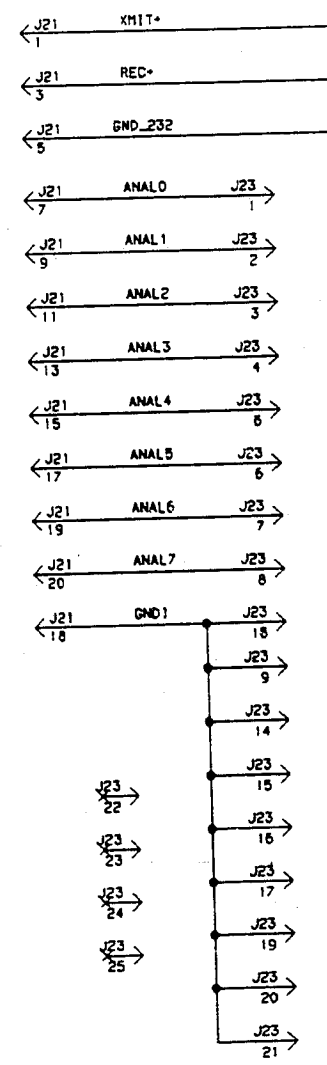
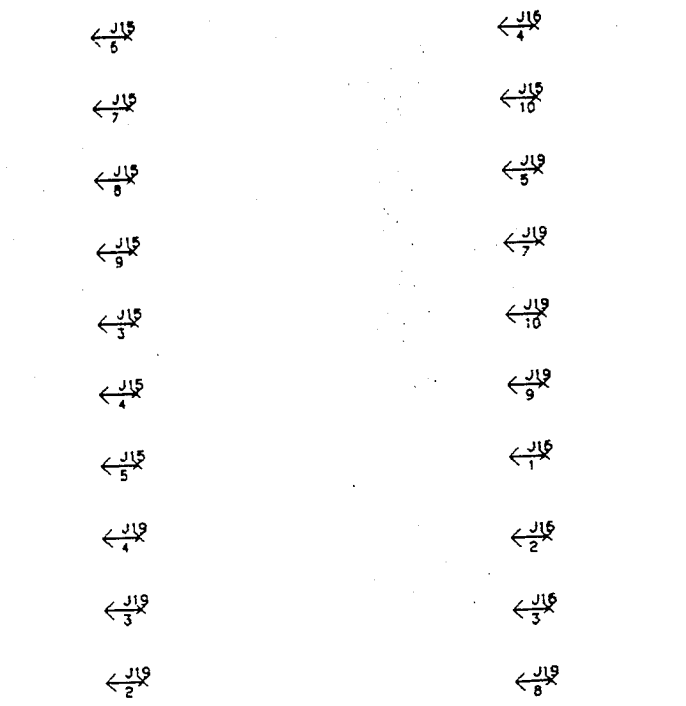


RS-232 CONN

8 CHANNEL DIGITAL OUTPUT

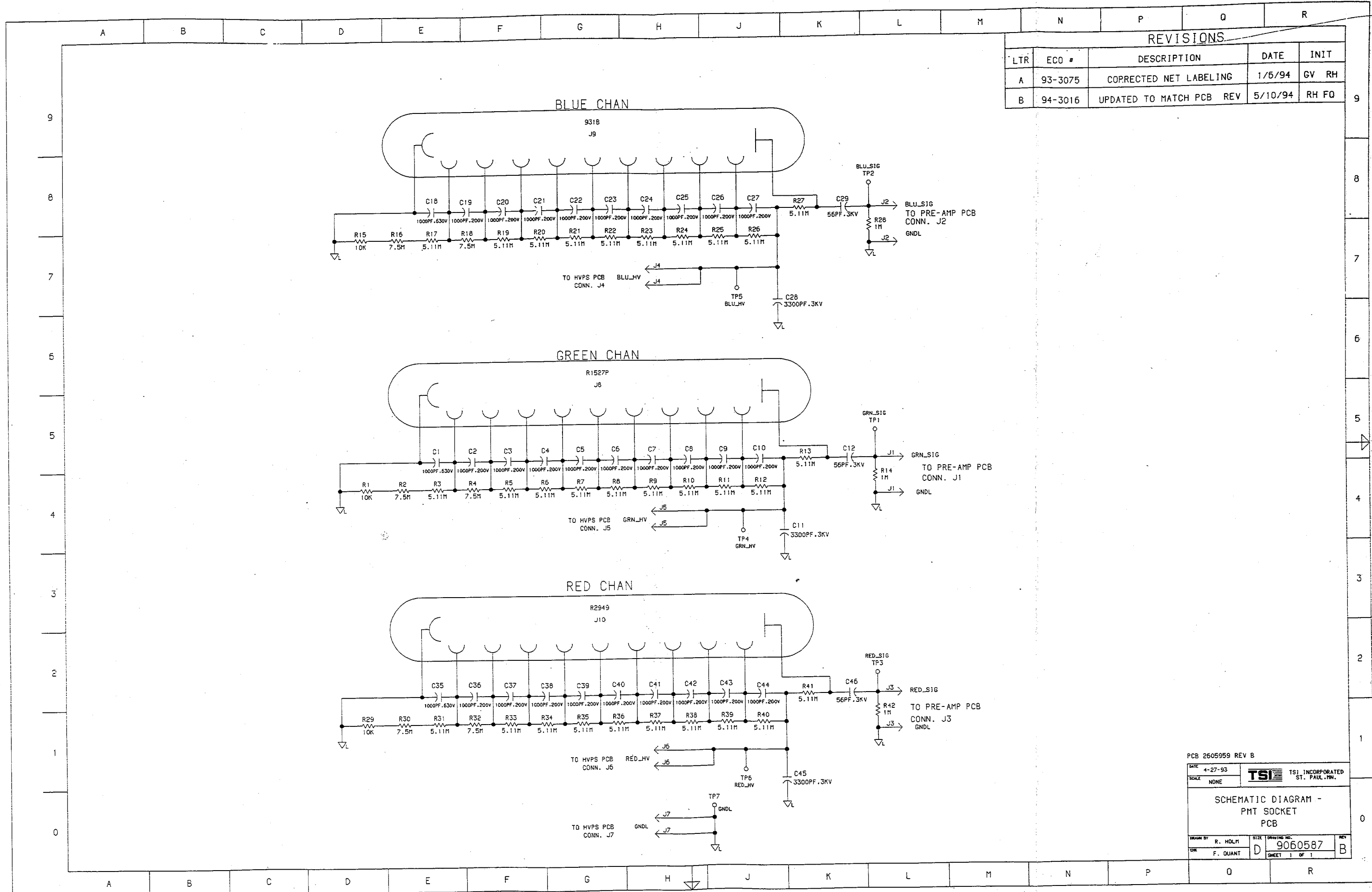
CHOPPER MOTOR

TEMP & RH OUT SENSOR



SDI INTERFACE

PCB 2606958 REV A			
DATE	7-6-93	TBI TBI INCORPORATED ST. PAUL, MN.	
SCALE	NONE		
SCHEMATIC DIAGRAM - 355X/6X NEPHELOMETER MOTOR PCB			
DESIGN BY	R. HOLM	DATE	9060586
CHK	F. QUANT	SHEET	1 OF 1



REVISIONS				
LTR	ECO #	DESCRIPTION	DATE	INIT
A	93-3075	CORRECTED NET LABELING	1/6/94	GV RH
B	94-3016	UPDATED TO MATCH PCB REV	5/10/94	RH FQ

PCB 2605959 REV B

DATE	4-27-93	TSI INCORPORATED ST. PAUL, MN.		
SCALE	NONE			
SCHEMATIC DIAGRAM - PMT SOCKET PCB				
DESIGNED BY	R. HOLM	SIZE	DRAWING NO.	REV
CHK	F. QUANT	D	9060587	B
		SHEET 1 OF 1		