

Service Manual

3-WAY ELECTRONIC CROSSOVER MODEL NO: ACR-300

FEATURES

- 6-channel electronic crossover
- Continuously variable crossover frequency with Multiplier Switch
- Separate inputs for front, rear and subwoofer
- Front and rear high-pass outputs
- Non-fade low-pass output
- Adjustable low-pass gain
- Subwoofer Bass Boost; Remote Subwoofer Level Control
- Ground loop isolation input circuit; Gold-plated RCA input/output connectors
- Remote turn-on circuit; Power-on LED

SPECIFICATIONS

- Power Source: 14.4 volts DC negative ground
- Input current: 0.5 amp max
- Distortion: 0.01%THD at 1V output level
- Frequency Response: 10Hz - 30kHz- 3dB
- S/N Ratio: >100dB
- Separation: 60dB
- Crossover Slope Rate: 18dB per octave 3rd order butterworth
- Input Impedance: 20K Ohms
- Output Impedance: 100 Ohms
- Output Gain: 1:2 (+6db)
- Output Voltage level: 5 volts max
- Dimensions: 152mm x 180mm x 43mm

TROUBLESHOOTING

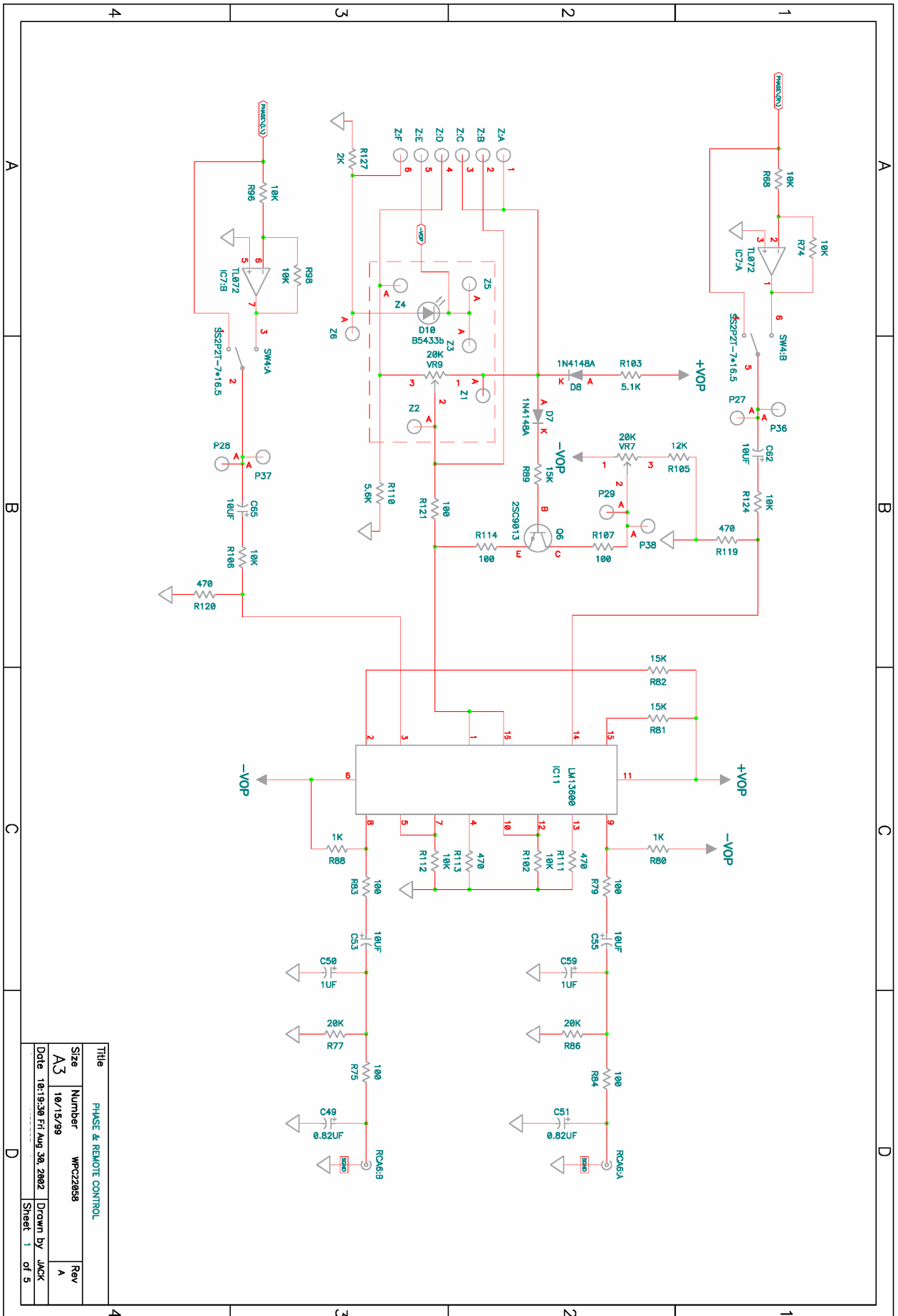
PROBLEM	SOLUTION
UNIT DOES NOT WORK; NO LIGHTS.	POWER WIRES ARE NOT CONNECTED. CHECK BATTERY AND GROUND WIRING AT UNIT; CHECK BATTERY CONNECTIONS
SOUND IS DISTORTED.	- SOURCE UNIT VOLUME IS SET TOO HIGH. REDUCE SOURCE UNIT VOLUME. - EQ CONTROLS ARE SET TOO HIGH. TURN EQ CONTROLS TO THE CENTER POSITION AND LISTEN FOR DISTORTION AGAIN. IF PROBLEM STILL OCCURS, SEE YOUR AUTHORIZED CLARION DEALER. - SPEAKERS MAY BE DAMAGED. CONSULT YOUR AUTHORIZED CLARION DEALER.
NO SOUND FROM UNIT.	WRONG INPUT IS SELECTED. PRESS AUX SWITCH SO THAT MAIN INPUTS ARE ON. NO REMOTE-ON. USING A VOLTMETER, CHECK FOR +12V FROM REMOTE-ON SOURCE.

ELECTRICAL PART LIST

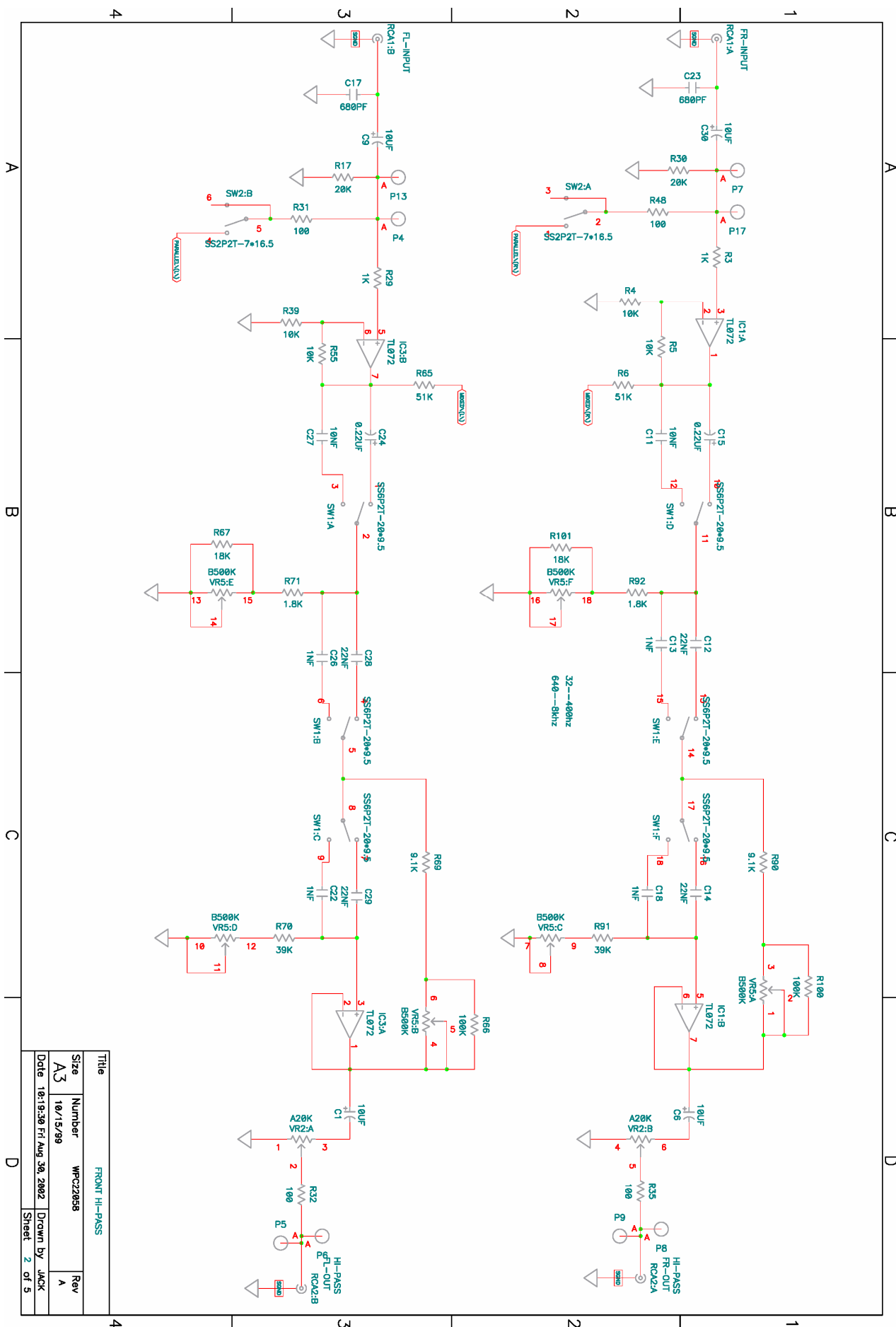
REF. NUMBER	PARTNO	Description	SPEC	Qty	Unit
C1, C6, C9, C30,C31,C36, C43, C47, C52~C55, C60, C61, C62, C64, C65, C67	02-21001-34	ELE. CAPACITOR	10uf/25V Mini	18	PCS
C11C11, C25, C27	03-21030-01	MYLAR CAPACITOR	103J	3	PCS
C12, C14, C28, C29, C38, C39, C45, C46, C56, C66	03-22230-01	MYLAR CAPACITOR	223J	10	PCS
C13, C18, C19, C21, C22, C26	03-21020-01	MYLAR CAPACITOR	102J	6	PCS
C15, C24, C37, C44, C58, C68	02-20220-54	ELE. CAPACITOR	0.22uf/35V Mini	6	PCS
C17, C23, C35, C42	04-26800-01	CERAMIC	680P 250V	4	PCS
C2, C20	03-23320-01	MYLAR CAPACITOR	332J	2	PCS
C3, C4, C10, C34	03-21040-05	Capacitor	104 "K" 50V	5	PCS
C32, C40	02-24702-22	ELE. CAPACITOR	470uf/16V	2	PCS
C33	02-23302-34	ELE. CAPACITOR	33uf/25V mini	1	PCS
C48	02-21003-52	ELE. CAPACITOR	1000uf/35V Slim	1	PCS
C49, C51	02-20820-54	ELE. CAPACITOR	0.82uf/35V Mini	2	PCS
C5, C16	02-20100-54	ELE. CAPACITOR	0.1uf/35V Mini	2	PCS
C50, C59	02-21000-54	ELE. CAPACITOR	1uf/35V Mini	2	PCS
C57, C69	02-22200-54	ELE. CAPACITOR	2.2uf/35V Mini	2	PCS
C63, C70	04-28200-01	CERAMIC	820P	2	PCS
C7, C8	02-21002-24	ELE. CAPACITOR	100uf/16V Mini	2	PCS
D1, D2	09-14001-01	DIODE	1N4001 1A 50V	2	PCS
D3, D4, D5, D6	09-00152-00	F DIODE	FR152	4	PCS
D7, D8	09-14148-01	DIODE	1N4148	2	PCS
D9, D10	19-00298-00	LED red light	3mm pan head B5433B	1	PCS
IC1, IC3~IC10	07-00072-01	I.C	TL072	9	PCS
IC11	07-13600-00	I.C.	LM13600N	1	PCS
IC2	07-00594-00	I.C.	TL594CN	1	PCS
J1~J32	01-00007-00	JUMP WIRE	leg 7mm	30	PCS
L1	20-00106-00	T COIL	T044	1	PCS
P1~P38	26-00355-00	Jumper wire	3e-WB	1	KIT
P39	32-30000-00	TERMINAL BLOCKS	HD-83-3P golden	1	PCS
Q1, Q2, Q3, Q4, Q6	08-19013-01	T.R	9013	5	PCS
Q5	08-19012-01	T.R	9012	1	PCS
R1, R2	01-11001-22	RESISTOR	1 ohm 1/2W	2	PCS
R10, R16, R21	01-11000-43	RESISTOR	10 ohm 1/4W	3	PCS
R103	01-15120-63	RESISTOR	5.1K 1/8W	1	PCS
R105	01-11230-63	RESISTOR	12K 1/8W	1	PCS
R11, R12, R38, R60, R71, R92	01-11820-63	RESISTOR	1.8 K 1/8W	6	PCS
R113, R116, R119, R120, R94	01-14710-63	RESISTOR	470 ohm 1/8W	6	PCS
R117, R118	01-11240-63	RESISTOR	120K 1/16W	2	PCS
R127	01-12020-63	RESISTOR	2K 1/8W	1	PCS
R15, R24	01-13340-63	RESISTOR	330K 1/8W	2	PCS
R17, R30, R52, R72, R77, R86	01-12030-63	RESISTOR	20 K 1/8W	6	PCS
R18	01-12230-43	RESISTOR	22 K 1/4W	1	PCS
R19	01-11230-43	RESISTOR	12 K 1/4W	1	PCS
R20, R43	01-14720-43	RESISTOR	4.7 K 1/4W	2	PCS
R27, R63, R66, R100	01-11040-63	RESISTOR	100K 1/8W	4	PCS
R28, R64, R67, R101	01-11830-63	RESISTOR	18 K 1/8W	4	PCS
R3, R29, R49, R50, R80, R87, R88, R108	01-11020-63	RESISTOR	1 K 1/8W	8	PCS
R31, R32, R35, R44, R47, R48, R75, R79, R83, R84, R107, R111, R114, R121	01-11010-63	RESISTOR	100 ohm 1/8W	13	PCS
R33	01-16220-43	RESISTOR	6.2K 1/4W	1	PCS
R34, R54	01-14730-43	RESISTOR	47 K 1/4W	2	PCS
R36, R58, R69, R90, R93, R95	01-19120-63	RESISTOR	9.1 K 1/8W	6	PCS
R37, R59, R70, R91	01-13930-63	RESISTOR	39 K 1/8W	4	PCS
R4, R5, R39, R40, R51, R55, R56, R57, R68, R73, R74, R85, R96, R97, R98, R102, R106,	01-11030-63	RESISTOR	10 K 1/8W	22	PCS

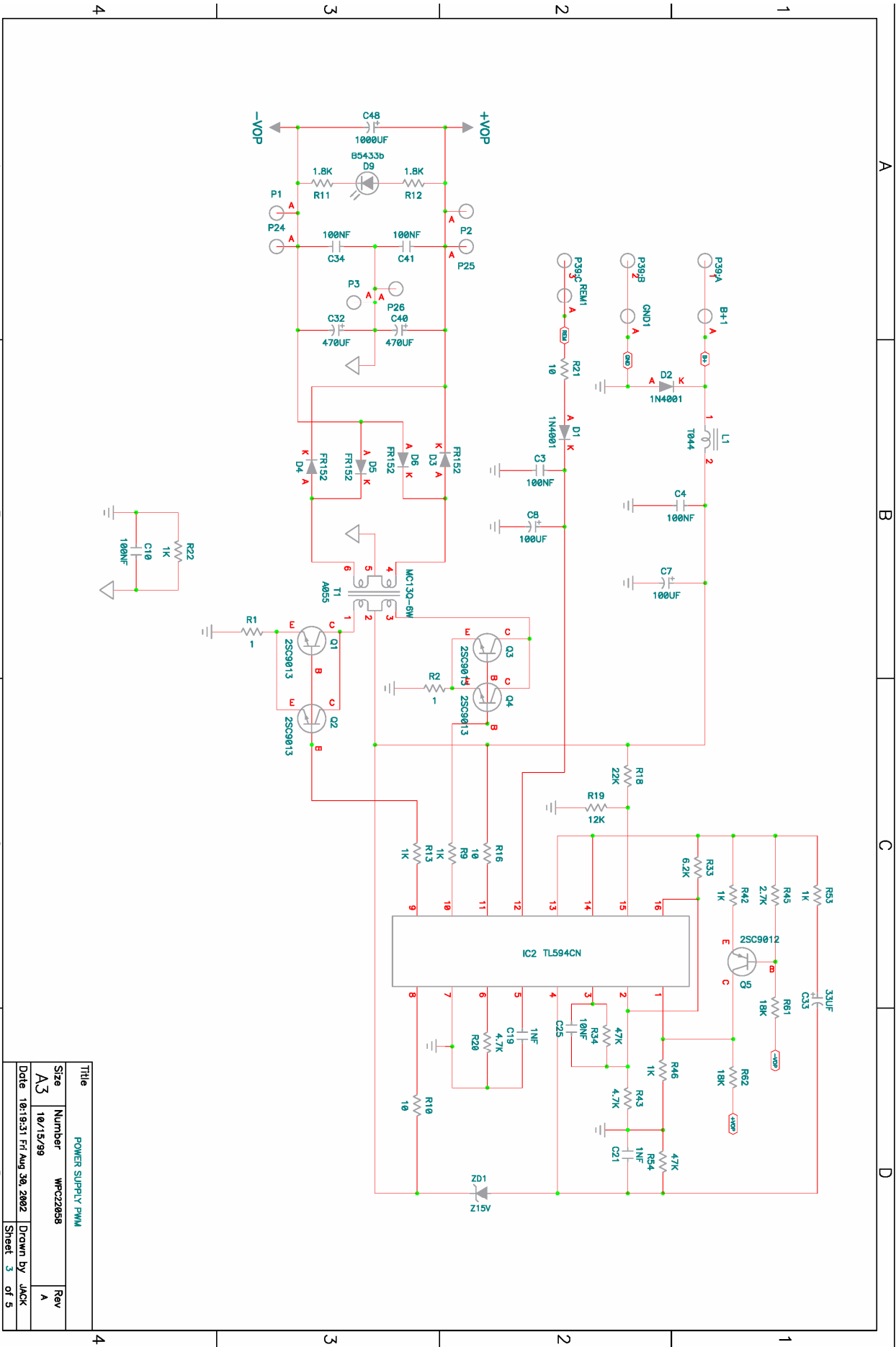
R112, R123, R124, R125, R126, R45	01-12720-43	RESISTOR	2.7 K 1/4W	1 PCS
R6, R41, R65, R76	01-15130-63	RESISTOR	51 K 1/8W	4 PCS
R61, R62	01-11830-43	RESISTOR	18 K 1/4W	2 PCS
R7, R25	01-17520-63	RESISTOR	7.5 K 1/8W	2 PCS
R78, R115	01-13330-63	RESISTOR	33 K 1/8W	2 PCS
R8, R14, R23, R26	01-17530-63	RESISTOR	75 K 1/8W	4 PCS
R81, R82, R89	01-11530-63	RESISTOR	15K 1/8W	3 PCS
R9, R13, R22, R42, R46, R53	01-11020-43	RESISTOR	1 K 1/4W	6 PCS
R99, R104, R109, R110, R122	01-15620-63	RESISTOR	5.6 K 1/8W	5 PCS
RCA1~RCA6	32-20223-02	RCA JACK 2P	RL-1416-2G golden	6 PCS
SW1	18-00103-00	SWITCH SS93010	0602-6T-SN	1 PCS
SW2, SW3, SW4	18-00310-01	SWITCH SS	70050-0202-7.5T	3 PCS
T1	20-00105-00	T COIL	A055	1 PCS
VR1, VR3, VR5	15-60504-15	VR 500K*6	RKO97161000D	3 PCS
VR2, VR4	15-22031-06	A20K*2 RV112B	-40-15A-A24	2 PCS
VR6	15-20154-00	VR B150K RV112B	-40-15A-BC5	1 PCS
VR7	15-12031-04	B20K*1 RV09BC	-40-25K-B24	1 PCS
VR8	15-22031-07	B20K*2 RV112B	-40-15A-B24	1 PCS
VR9	15-12031-05	VR B20K*1 RV09B	-40-15F-B24	1 PCS
Z	30-00104-00	Connector	6PIN	1 PCS
ZD1	09-20150-03	Z DIODE	15V	1 PCS

SCHEMATIC DIAGRAM

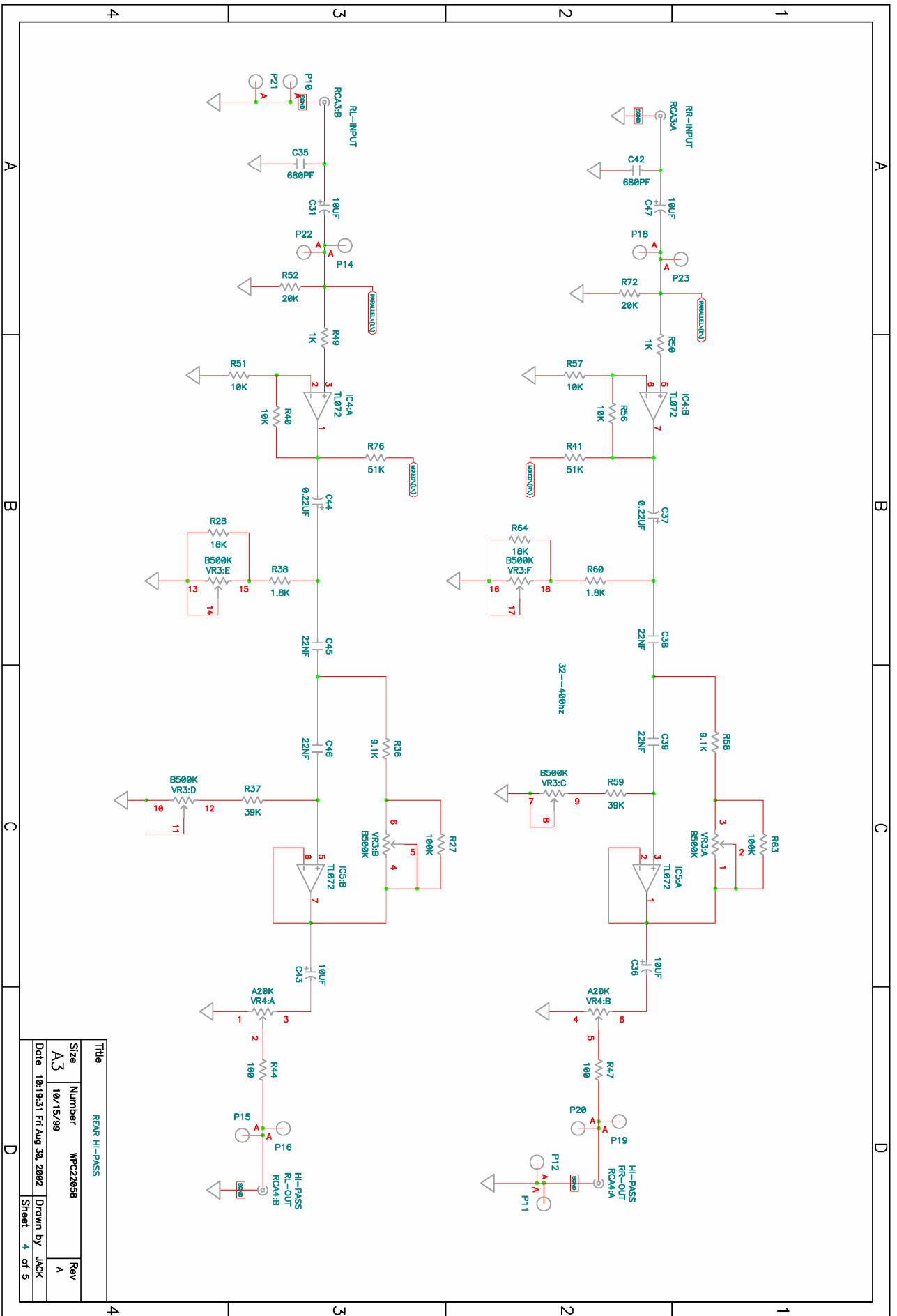


Title			
PHASE & REMOTE CONTROL			
Size	Number	Rev	
A3	WPC2058	A	
Date	Drawn by JACK		
10-19-98 Fri Aug 30, 2002	Sheet 1 of 5		

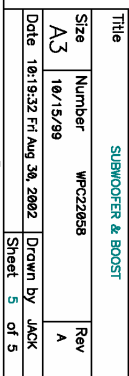




Title		
POWER SUPPLY PWM		
Size	Number	Rev
A3	WPC22058	A
Date	Drawn by	
10/15/99	JACK	
10/19/01 Fri Aug 30, 2002	Sheet 3 of 5	



Title REAR HI-PASS			
Size	Number	Rev	
A3	10/15/99	WPC22058	A
Date 10:19:31 Fri Aug 28, 2002 Drawn by JACK			
Sheet 4 of 5			



PRINTED WIRING BOARD

