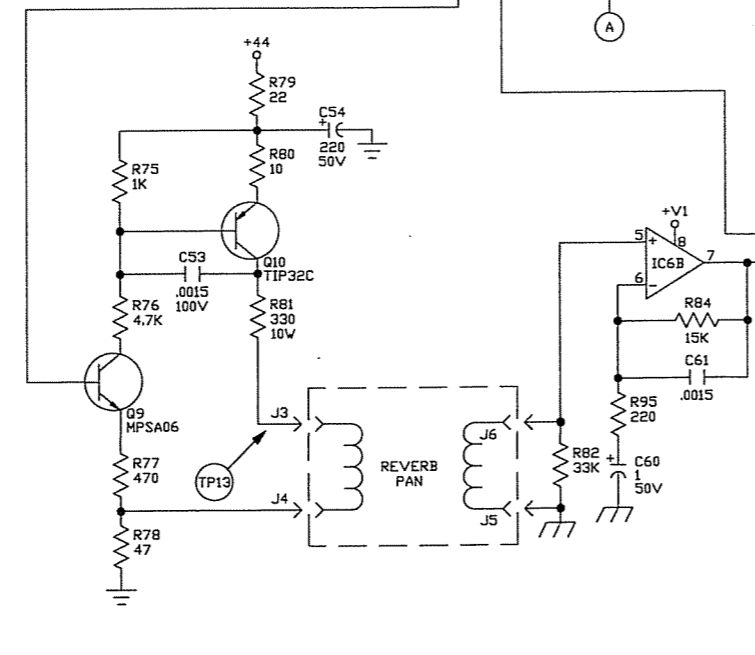
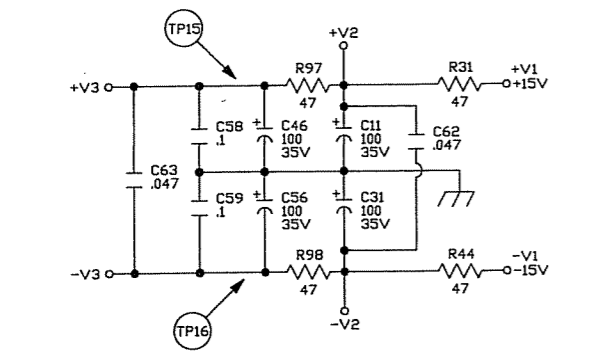
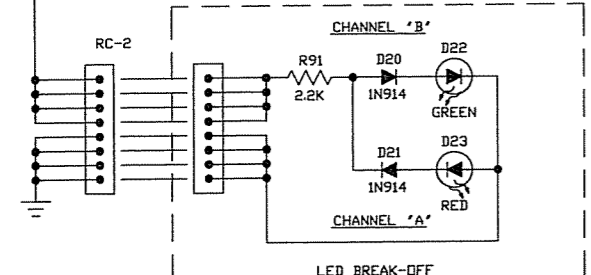
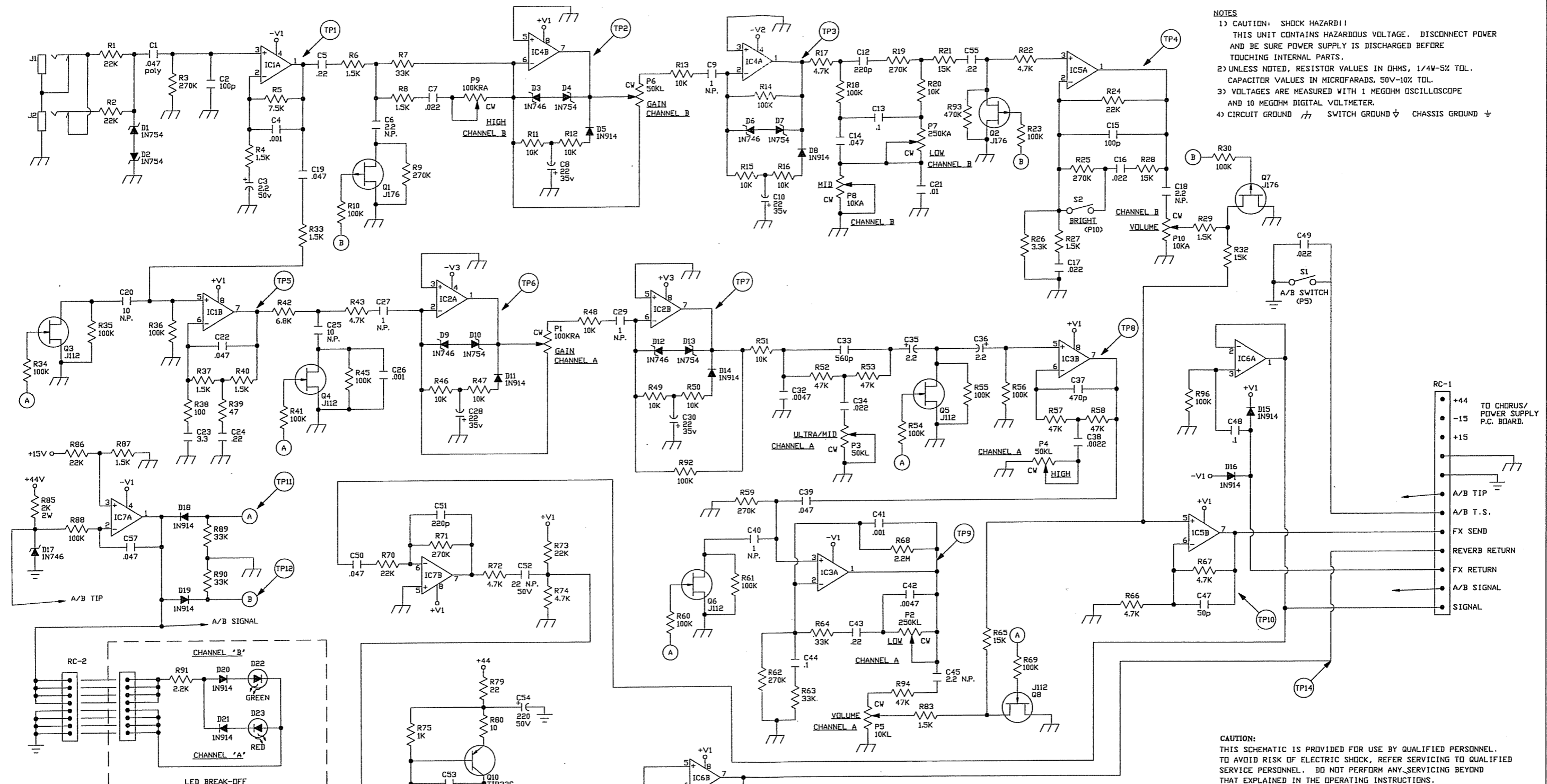


NOTES
 1) CAUTION: SHOCK HAZARD!!
 THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
 4) CIRCUIT GROUND \perp SWITCH GROUND ∇ CHASSIS GROUND \perp



CHANNEL A			CHANNEL B		
TEST POINT	VOLTAGE	WAVE FORM	TEST POINT	VOLTAGE	WAVE FORM
1	125mV p-p		1		
2	420mV p-p		2		
3	4.2V p-p		3		
4	.7mV p-p		4		
5			5	4.6V p-p	
6			6	9.8Vp-p 3VDC	
7			7	10Vp-p 2.1VDC	
8			8	5V p-p	
9			9	7.4V p-p	
10	640mV p-p		10	1V p-p	
11	0V p-p		11	-12V p-p	
12	+12V p-p		12	0V p-p	
13	9Vp-p 2.2VDC		13	40Vp-p 2.3VDC	
14	250mV p-p		14	70mV p-p	
15	+13V p-p		15	+13V p-p	
16	-13.6V p-p		16	-13.6V p-p	

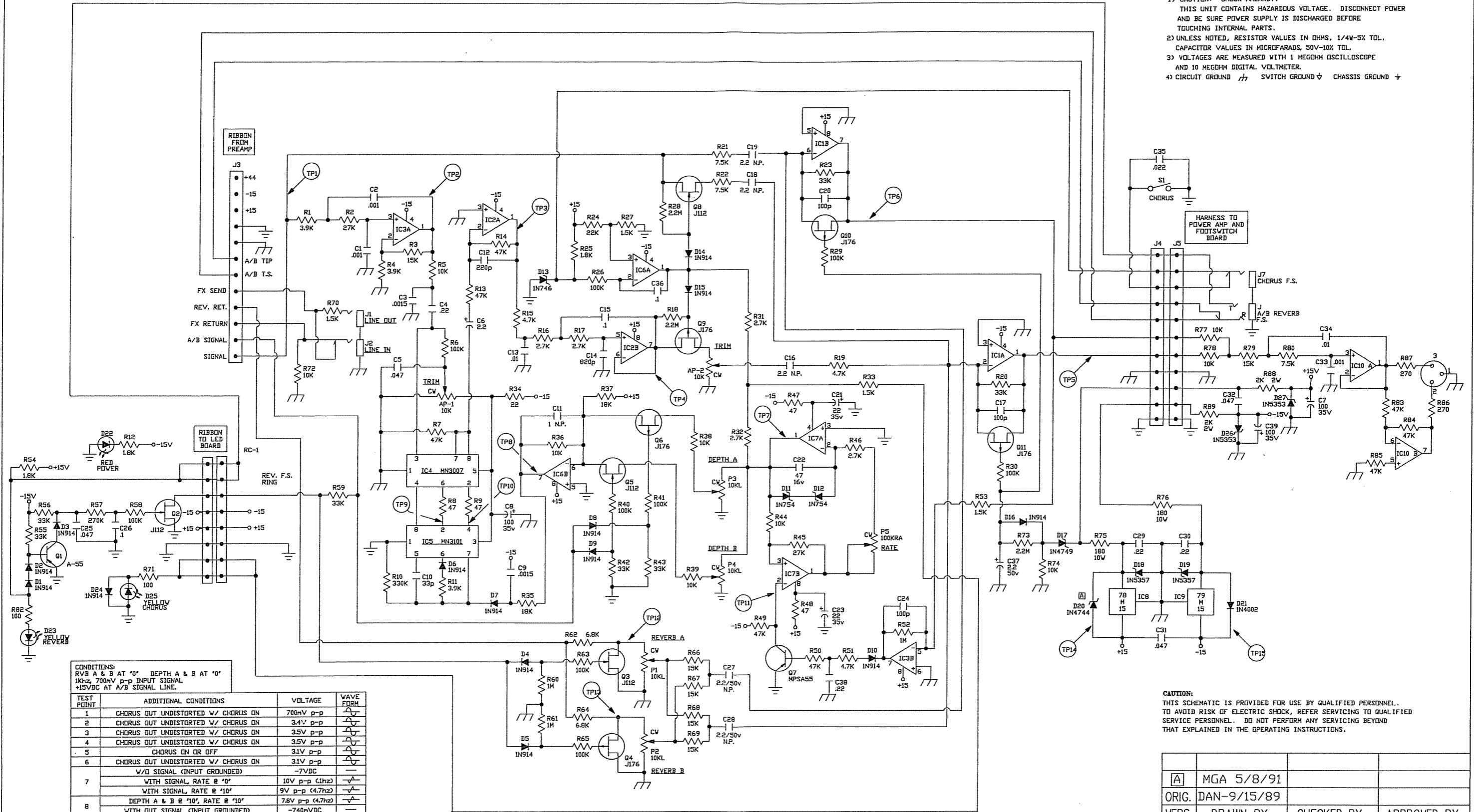
CAUTION:
 THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL. TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

ASS'Y #07-526-01

ORIG. DAN-8/22/89			
VERS.	DRAWN BY	CHECKED BY	APPROVED BY
PAGE #	1 of 3	DRAWING #	16-036-51
DESCRIPTION: VH-140C PRE-AMP SCHEM			

SLM ELECTRONICS
 11880 BORMAN DR.
 ST. LOUIS, MO 63146

- NOTES**
- 1) CAUTION: SHOCK HAZARD!!
THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
 - 4) CIRCUIT GROUND ∇ SWITCH GROUND ∇ CHASSIS GROUND ∇



CONDITIONS:
RVB A & B AT '0' DEPTH A & B AT '0'
1KHz, 700mV p-p INPUT SIGNAL
+15VDC AT A/B SIGNAL LINE.

TEST POINT	ADDITIONAL CONDITIONS	VOLTAGE	WAVE FORM
1	CHORUS OUT UNDISTORTED W/ CHORUS ON	700mV p-p	
2	CHORUS OUT UNDISTORTED W/ CHORUS ON	3.4V p-p	
3	CHORUS OUT UNDISTORTED W/ CHORUS ON	3.5V p-p	
4	CHORUS OUT UNDISTORTED W/ CHORUS ON	3.5V p-p	
5	CHORUS ON OR OFF	3.1V p-p	
6	CHORUS OUT UNDISTORTED W/ CHORUS ON W/O SIGNAL (INPUT GROUNDED)	-7VDC	
7	WITH SIGNAL, RATE @ '0'	10V p-p (1Hz)	
	WITH SIGNAL, RATE @ '10'	9V p-p (4.7Hz)	
8	DEPTH A & B @ '10', RATE @ '10'	7.8V p-p (4.7Hz)	
	WITH OUT SIGNAL (INPUT GROUNDED)	-7.40mVDC	
9	DEPTH A & B @ '0'	15Vp-p -7.5VDC	
	DEPTH A & B @ '10', RATE @ '0'	15Vp-p -7.5VDC	
10	TEST POINT 9 (INVERTED)	15mV DC	
	WITH OUT SIGNAL	-14.4VDC	
12	10Vp-p SIG. IN @ RVB INPUT RVB A & B @ '10', A/B SIG = +15VDC	60mV p-p	
	A/B SIGNAL = -15VDC	4V p-p	
13	10Vp-p SIG. IN @ RVB INPUT RVB A & B @ '10', A/B SIG = +15VDC	4V p-p	
	A/B SIGNAL = -15VDC	190mV p-p	
14	NO CONDITION	+15VDC	
15	NO CONDITION	-15VDC	

CAUTION:
THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL.
TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

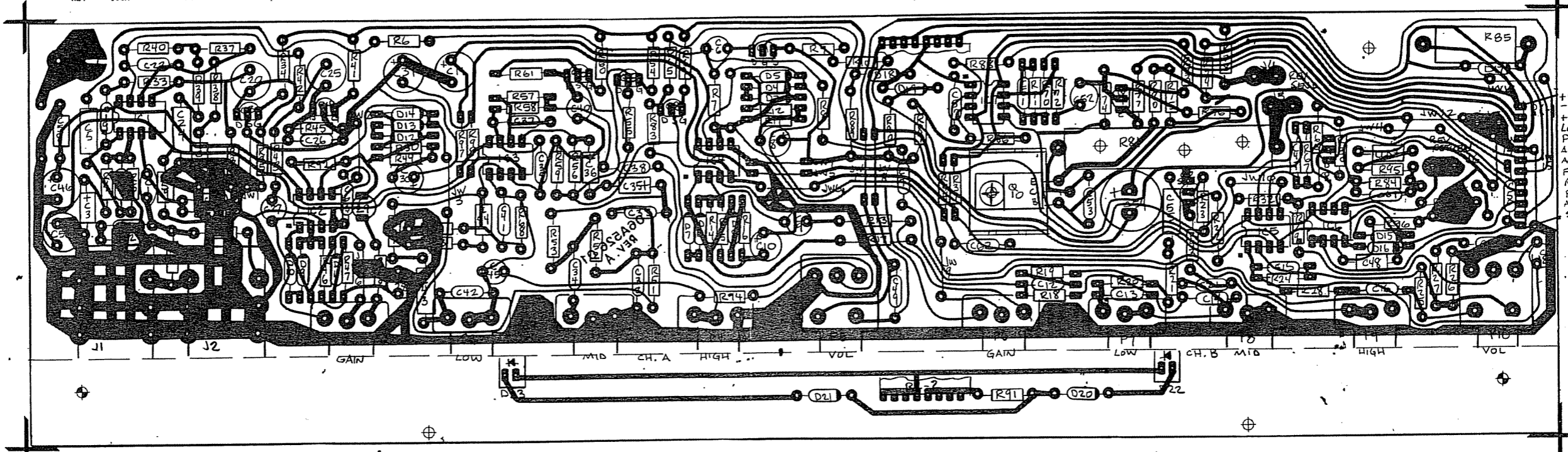
[A]	MGA 5/8/91		
ORIG.	DAN-9/15/89		
VERS.	DRAWN BY	CHECKED BY	APPROVED BY
PAGE #	2 OF 3	DRAWING #	16-036-51
DESCRIPTION: VH-140CXL CHORUS BOARD			

REVISION DESCRIPTIONS

CODE	DESCRIPTION
[A]	CHANGE VALUE OF D20 FROM 1N4002 TO 1N4744

SLM ELECTRONICS
11880 BORMAN DR.
ST. LOUIS, MO 63146

R1	22K	76-223-01	R55	100K	76-104-01	C4	.001uf	10N102-11	C58	.1uf	10N104-01	IC1	4558	37 458 01
R2	22K	76-223-01	R56	100K	76-104-01	C5	.22uf	10N102-01	C59	.1uf	10N104-01	IC2	11U-72	37 072 01
R3	270K	76-274-01	R57	47K	76-473-01	C6	2.2uf N.P.	12-225-81	C60	1uf/50v	10N105-51	IC3	11U-72	37 072 01
R4	1.5K	76-152-01	R58	47K	76-473-01	C7	.022uf	10N223-01	C61	.0015uf	10N152-11	IC4	11U-72	37 072 01
R5	7.5K	76-752-01	R59	270K	76-274-01	C8	22uf/35v	12-226-32	C62	.047uf	10N473-11	IC5	11U-72	37 072 01
R6	1.5K	76-152-01	R60	100K	76-104-01	C9	1uf/50v N.P.	12-105-81	C63	.047uf	10N473-11	IC6	4558	37 458 01
R7	33K	76-333-01	R61	100K	76-104-01	C10	22uf/35v	12-226-32	D1	1N75A	21N75A-01	IC7	4558	37 458 01
R8	1.5K	76-152-01	R62	270K	76-274-01	C11	100uf/35v	12-107-32	D2	1N75A	21N75A-01			
R9	270K	76-274-01	R63	33K	76-333-01	C12	220pf	10N221-11	D3	1N746	21N146-01			
R10	100K	76-104-01	R64	33K	76-333-01	C13	.1uf	10N102-11	D4	1N75A	21N75A-01	P1	100KRA	70 104-23
R11	10K	76-103-01	R65	15K	76-153-01	C14	.047uf	10N104-01	D5	1N91A	21N91A-01	P2	250HL	70 133-01
R12	10K	76-103-01	R66	4.7K	76-472-01	C15	100pf	10N101-21	D6	1N746	21N146-01	P3	50HL	70 133-01
R13	10K	76-103-01	R67	4.7K	76-472-01	C16	.022uf	10N223-01	D7	1N75A	21N75A-01	P4	50HL	70 133-01
R14	100K	76-104-01	R68	2.2M	76-225-01	C17	.022uf	10N223-01	D8	1N91A	21N91A-01	P5	100L W/PUR L SW	70 103-27
R15	10K	76-103-01	R69	100K	76-104-01	C18	2.2uf N.P.	12-225-81	D9	1N746	21N146-01	P6	50HL	70 133-01
R16	10K	76-103-01	R70	22K	76-223-01	C19	.047uf	10N103-11	D10	1N75A	21N75A-01	P7	250HL	70 254-22
R17	4.7K	76-472-01	R71	270K	76-274-01	C20	10uf/50v N.P.	12-106-81	D11	1N91A	21N91A-01	P8	100K	70 103-22
R18	100K	76-104-01	R72	4.7K	76-472-01	C21	.01uf	10N103-11	D12	1N746	21N146-01	P9	100KRA	70 104-23
R19	270K	76-274-01	R73	22K	76-223-01	C22	.047uf	10N473-11	D13	1N75A	21N75A-01	P10	100L W/PUR L SW	70 103-28
R20	10K	76-103-01	R74	4.7K	76-472-01	C23	3.3uf/50v	12-105-51	D14	1N91A	21N91A-01			
R21	15K	76-153-01	R75	1K	76-102-01	C24	.22uf	10N224-01	D15	1N91A	21N91A-01			
R22	4.7K	76-472-01	R76	4.7K	76-472-01	C25	10uf. 50v N.P.	12-106-81	D16	1N91A	21N91A-01			
R23	100K	76-104-01	R77	470	76-471-01	C26	.001uf	10N102-11	D17	1N746	21N146-01			
R24	22K	76-223-01	R78	47	76-470-01	C27	1uf/50v N.P.	12-105-81	D18	1N91A	21N91A-01	J1	1/4" 1/8 CLIFF	39-119-01
R25	270K	76-274-01	R79	22	76-220-01	C28	22uf/35v	12-226-32	D19	1N91A	21N91A-01	J2	1/4" 1/8 CLIFF	39-119-01
R26	3.3K	76-332-01	R80	10	76-100-01	C29	1uf/50v N.P.	12-105-81	D20	1N91A	21N91A-01	J3	.187 INB	17-894-01
R27	1.5K	76-152-01	R81	330 OHM 10W	78-331-10	C30	22uf/35v	12-226-32	D21	1N91A	21N91A-01	J4	.187 INB	17-894-01
R28	15K	76-153-01	R82	33K	76-333-01	C31	100uf/35v	12-107-32	D22	GREEN LED	21-502-01	J5	.187 INB	17-894-01
R29	1.5K	76-152-01	R83	1.5K	76-152-01	C32	.0047uf	10N551-11	D23	RED LED	21-501-01	J6	.187 INB	17 894-01
R30	100K	76-104-01	R84	15K	76-153-01	C33	850pf	10N551-11						
R31	47	76-470-01	R85	2K OHM 2 W	78-202-01	C34	.022uf	10N223-01						
R32	15K	76-153-01	R86	22K	76-223-01	C35	2.2uf/50v	12N225-51	Q1	J176	96-176-01	RC-1	12 PIN RUBBER	99 124 02
R33	1.5K	76-152-01	R87	1.5K	76-152-01	C36	2.2uf/50v	12N225-51	Q2	J176	96-176-01	RC-2	8 PIN RUBBER	99 120 01
R34	100K	76-104-01	R88	100K	76-104-01	C37	470pf	10N471-11	Q3	J112	96-112-01			
R35	100K	76-104-01	R89	33K	76-333-01	C38	.0022uf	10N222-01	Q4	J112	96-112-01			
R36	100K	76-104-01	R90	33K	76-333-01	C39	.047uf	10N473-11	Q5	J112	96-112-01			
R37	1.5K	76-152-01	R91	2.2K	76-222-01	C40	1uf/50v N.P.	12-105-81	Q6	J112	96-112-01			
R38	100	76-101-01	R92	100K	76-104-01	C41	.001uf	10N102-11	Q7	J176	96-176-01			
R39	47	76-470-01	R93	470K	76-474-01	C42	.0047uf	10N472-01	Q8	J112	96-112-01	HS-1	111 220 SINK	33-541-01
R40	1.5K	76-152-01	R94	47K	76-473-01	C43	.22uf	10N224-01	Q9	HPS-0-05	96-006-01			
R41	100K	76-104-01	R95	220	76-221-01	C44	.1uf	10N104-01	Q10	11P-32C	96-032-03			
R42	6.8K	76-682-01	R96	100K	76-104-01	C45	2.2uf/50v N.P.	12-225-81						
R43	4.7K	76-472-01	R97	47	76-470-01	C46	100uf/35v	12-107-32						
R44	47	76-470-01	R98	47	76-470-01	C47	50pf	10N500-21						
R45	100K	76-104-01				C48	.1uf	10N104-01						
R46	10K	76-103-01				C49	.022uf	10N223-01						
R47	10K	76-103-01				C50	.047uf	10N473-11						
R48	10K	76-103-01				C51	220pf	10N221-11						
R49	10K	76-103-01				C52	22uf/50v N.P.	12-226-81						
R50	10K	76-103-01				C53	.0015uf	10N152-11						
R51	10K	76-103-01				C54	220uf/50v	12-227-02						
R52	47K	76-473-01				C55	.22uf	10N224-01						
R53	47K	76-473-01				C56	100uf/35v	12-107-32						
R54	100K	76-104-01				C57	.047uf	10N473-11						

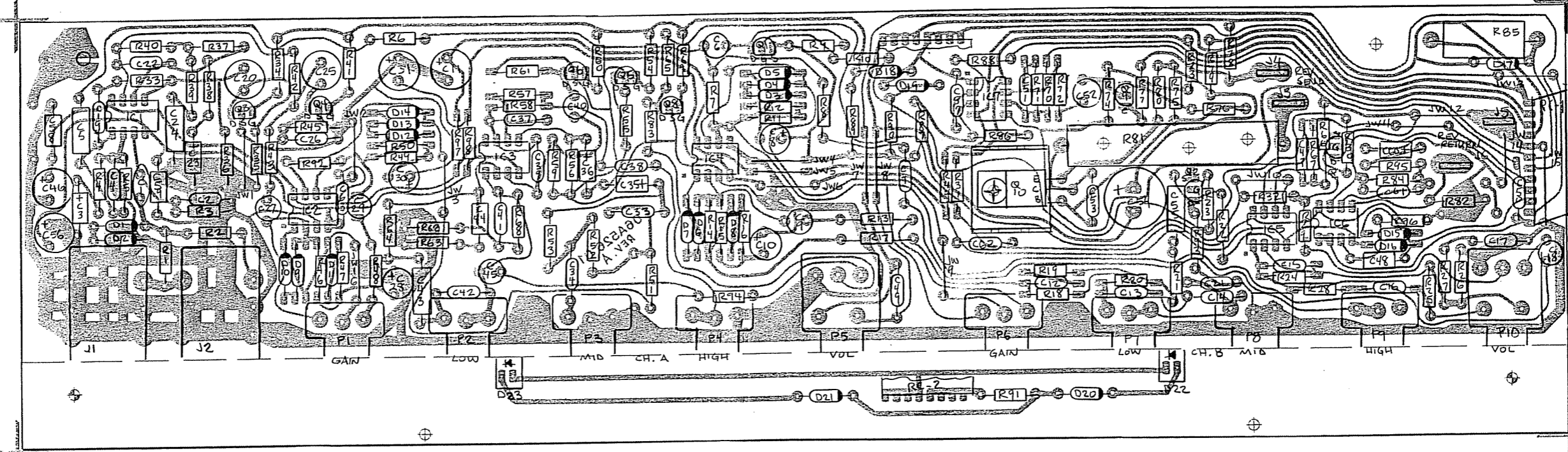


NOTES: 1) UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHMS 1/4 WATT, 5%. ALL CAPACITORS ARE IN MICROFARADS AND HAVE A 50 VOLT RATING (MINIMUM).

ASSY. PART NO. 07-526-01

TOLERANCES		REVISIONS		VH-140C PREAMP PC PICT	
(EXCEPT AS NOTED)	NO.	DATE	BY		
DECIMAL	1			SLM ELECTRONICS	
FRACTIONAL	2			1400 FERGUSON, ST. LOUIS, MO 63133	
ANGULAR	3			DRAWN BY DM	SCALE 2X
	4			CHK'D	DATE 7/15/89
	5			TRACED	APP'D
					DRAWING NO. 07-526-01

R1	22K	76-223-01	R55	100K	76-104-01	C4	.001uf	10N102-11	C58	.1uf	10N104-01	IC1	4558	37-458-01
R2	22K	76-223-01	R56	100K	76-104-01	C5	.22uf	10N224-01	C59	.1uf	10N104-01	IC2	4558	37-458-01
R3	270K	76-274-01	R57	47K	76-473-01	C6	2.2uf N.P.	12-225-01	C60	1uf/50v	12N105-51	IC3	110-72	37-072-01
R4	1.5K	76-152-01	R58	47K	76-473-01	C7	.022uf	10N223-01	C61	.0015uf	10N152-11	IC4	110-72	37-072-01
R5	7.5K	76-758-01	R59	270K	76-274-01	C8	22uf/35v	12-226-32	C62	.047uf	10N473-11	IC5	110-72	37-072-01
R6	1.5K	76-152-01	R60	100K	76-104-01	C9	1uf/50v N.P.	12-105-01	C63	.047uf	10N473-11	IC6	4558	37-458-01
R7	33K	76-333-01	R61	100K	76-104-01	C10	22uf/35v	12-226-32	D1	1N75A	21N75A-01	IC7	4558	37-458-01
R8	1.5K	76-152-01	R62	270K	76-274-01	C11	100uf/35v	12-107-32	D2	1N75A	21N75A-01			
R9	270K	76-274-01	R63	33K	76-333-01	C12	220pf	10N104-01	D3	1N75A	21N75A-01	P1	1000RN	70-104-23
R10	100K	76-104-01	R64	33K	76-333-01	C13	.1uf	10N473-11	D4	1N75A	21N75A-01	P2	2500L	70-306-01
R11	10K	76-103-01	R65	15K	76-153-01	C14	.047uf	10N473-11	D5	1N75A	21N75A-01	P3	500L	70-133-01
R12	10K	76-103-01	R66	4.7K	76-472-01	C15	100pf	10N101-21	D6	1N75A	21N75A-01	P4	500L	70-133-01
R13	10K	76-103-01	R67	4.7K	76-472-01	C16	.022uf	10N223-01	D7	1N75A	21N75A-01	P5	100L W/PULL SW	70-103-27
R14	100K	76-104-01	R68	2.2M	76-225-01	C17	.022uf	10N223-01	D8	1N75A	21N75A-01	P6	500L	70-133-01
R15	10K	76-103-01	R69	100K	76-104-01	C18	2.2uf N.P.	12-225-01	D9	1N75A	21N75A-01	P7	2500RN	70-254-22
R16	10K	76-103-01	R70	22K	76-223-01	C19	.047uf	10N473-11	D10	1N75A	21N75A-01	P8	100RN	70-103-22
R17	4.7K	76-472-01	R71	270K	76-274-01	C20	10uf/50v N.P.	12-105-01	D11	1N75A	21N75A-01	P9	100RN	70-103-22
R18	100K	76-104-01	R72	4.7K	76-472-01	C21	.01uf	10N103-11	D12	1N75A	21N75A-01	P10	100RN W/PULL SW	70-103-28
R19	270K	76-274-01	R73	22K	76-223-01	C22	.047uf	10N473-11	D13	1N75A	21N75A-01			
R20	33K	76-333-01	R74	4.7K	76-472-01	C23	3.3uf/50v	12N335-51	D14	1N75A	21N75A-01			
R21	15K	76-153-01	R75	1K	76-102-01	C24	.22uf	10N224-01	D15	1N75A	21N75A-01			
R22	4.7K	76-472-01	R76	4.7K	76-472-01	C25	10uf.50v N.P.	12-105-01	D16	1N75A	21N75A-01			
R23	100K	76-104-01	R77	470	76-471-01	C26	.001uf	10N102-11	D17	1N75A	21N75A-01			
R24	22K	76-223-01	R78	47	76-470-01	C27	1uf/50v N.P.	12-105-01	D18	1N75A	21N75A-01	J1	1/4" 1/5 CLIFF	39-119-01
R25	270K	76-274-01	R79	22	76-220-01	C28	22uf/35v	12-226-32	D19	1N75A	21N75A-01	J2	1/4" 1/5 CLIFF	39-119-01
R26	3.3K	76-332-01	R80	10	76-100-01	C29	1uf/50v N.P.	12-105-01	D20	1N75A	21N75A-01	J3	.107 INB	17-89A-01
R27	1.5K	76-152-01	R81	330 OHM 10W	78-331-10	C30	22uf/35v	12-226-32	D21	1N75A	21N75A-01	J4	.107 INB	17-89A-01
R28	15K	76-153-01	R82	1.5K	76-152-01	C31	100uf/35v	12-107-32	D22	GREEN LED	21-501-01	J5	.107 INB	17-89A-01
R29	1.5K	76-152-01	R83	15K	76-153-01	C32	NOT USED		D23	RED LED	21-501-01	J6	.107 INB	17-89A-01
R30	100K	76-104-01	R84	2K OHM 2 W	78-202-01	C33	560pf	10N561-11	U1	J176	96-176-01	NC-1	12 PIN RIDGEM	99-124-02
R31	47	76-470-01	R85	2K OHM 2 W	78-202-01	C34	.022uf	10N223-01	U2	J176	96-176-01	NC-2	8 PIN RIDGEM	99-120-01
R32	15K	76-153-01	R86	22K	76-223-01	C35	2.2uf/50v	12N225-51	U3	J112	96-112-01	HS-1	III 220 SINK	33-541-01
R33	1.5K	76-152-01	R87	1.5K	76-152-01	C36	2.2uf/50v	12N225-51	U4	J112	96-112-01	SI-MEM-1	4-40X3/8"	30-440-52
R34	100K	76-104-01	R88	100K	76-104-01	C37	.470pf	10N471-11	U5	J112	96-112-01	MII-1	4-40 MII	30-442-52
R35	100K	76-104-01	R89	33K	76-333-01	C38	.0022uf	10N222-01	U6	J112	96-112-01	PC-1	55 275C P.C.	06A526-01
R36	100K	76-104-01	R90	33K	76-333-01	C39	.047uf	10N473-11	U7	J112	96-112-01			
R37	1.5K	76-152-01	R91	2.2M	76-222-01	C40	1uf/50v N.P.	12-105-01	U8	J112	96-112-01			
R38	100	76-101-01	R92	100K	76-104-01	C41	.001uf	10N102-11	U9	J112	96-112-01			
R39	47	76-470-01	R93	470K	76-474-01	C42	.0047uf	10N472-01	U10	HPS-11-05	96-005-01			
R40	1.5K	76-152-01	R94	47K	76-473-01	C43	.22uf	10N224-01			96-032-03			
R41	100K	76-104-01	R95	220	76-221-01	C44	.1uf	10N104-01						
R42	6.8K	76-682-01	R96	100K	76-104-01	C45	2.2uf/50v N.P.	12-225-01						
R43	4.7K	76-472-01	R97	47	76-470-01	C46	100uf/35v	12-107-32						
R44	47	76-470-01	R98	47	76-470-01	C47	50pf	10N500-21						
R45	100K	76-104-01				C48	.1uf	10N104-01						
R46	10K	76-103-01	JUI-16	JUMPER	76-000-05	C49	.022uf	10N223-01						
R47	10K	76-103-01	C1	.047u	10-473-03	C50	.047uf	10N473-11						
R48	10K	76-103-01	C2	100pf	10N102-11	C51	220pf	10N221-11						
R49	10K	76-103-01	C3	2.2uf/50v	12N225-51	C52	22uf/50v N.P.	12-226-01						
R50	10K	76-103-01				C53	.0015uf	10N152-11						
R51	10K	76-103-01				C54	220uf/50v	12-227-02						
R52	47K	76-473-01				C55	.22uf	10N224-01						
R53	47K	76-473-01				C56	100uf/35v	12-107-32						
R54	100K	76-104-01				C57	.047uf	10N473-11						



NOTES: 1) UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHMS 1/4 WATT, 5%. ALL CAPACITORS ARE IN MICROFARADS AND HAVE A 50 VOLT RATING (MINIMUM).

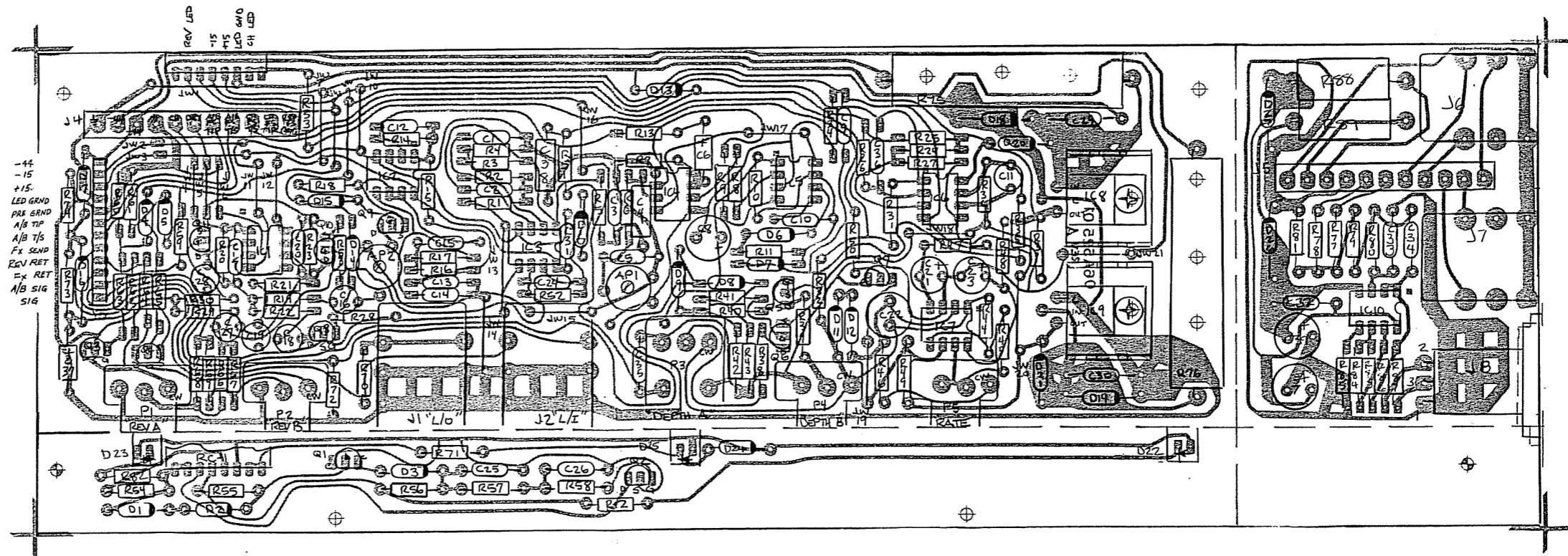
① REMOVED C32 & CHANGED R20 TO 33K

ASSY. PART NO. 07-526-01

TOLERANCES (EXCEPT AS NOTED)	REVISIONS			VH-140C PREAMP PC PICT
	NO.	DATE	BY	
DECIMAL	①	8/26/89	SM	SLM ELECTRONICS 1400 FERGUSON, ST. LOUIS, MO 63133
FRACTIONAL				DRAWN BY DM SCALE 2X MATERIAL
ANGULAR				CHEK DATE 9/15/89 DRAWING NO. 07-526-01
				TRACED APPD

07-525-01 PARTS LIST

R1	3.9K	76-392-01	R55	33K	76-333-01	C15	.1u	10N104-01	D1	MPS-1N53	96-055-01	RC-1	8 PIN RIBBON	99-128-01
R2	27K	76-273-01	R56	33K	76-333-01	C16	2.2u/50v N.P.	12-225-81	D2	J112	96-112-01	HS-1	10 220 OHM	33-541-01
R3	15K	76-153-01	R57	270K	76-274-01	C17	220P	10N221-11	D3	J112	96-112-01	HS-2	10 220 OHM	33-541-01
R4	3.9K	76-392-01	R58	100K	76-104-01	C18	2.2u/50v N.P.	12-225-81	D4	J176	96-176-01			
R5	10K	76-103-01	R59	33K	76-333-01	C19	2.2u/50v N.P.	12-225-81	D5	J112	96-112-01			
R6	100K	76-104-01	R60	1M	76-105-01	C20	220P	10N221-11	D6	J176	96-176-01			
R7	47K	76-473-01	R61	1M	76-105-01	C21	22u/35v	12-226-32	D7	MPS-1N53	96-055-01			
R8	47	76-470-01	R62	2.2K	76-222-01	C22	47u/16v N.P.	12-476-81	D8	J112	96-112-01			
R9	47	76-470-01	R63	100K	76-104-01	C23	22u/35v	12-226-32	D9	J176	96-176-01	SCREW 1	4-40X3/8"	30-440-52
R10	330K	76-334-01	R64	2.2K	76-222-01	C24	100P	10N101-21	D10	J176	96-176-01	SCREW 2	4-40X3/8"	30-440-52
R11	3.9K	76-392-01	R65	100K	76-104-01	C25	.047u	10N473-11						
R12	1.1M	76-182-01	R66	2.2K	76-222-01	C26	.1u	10N104-01						
R13	47K	76-473-01	R67	2.2K	76-222-01	C27	2.2u/50v N.P.	12-225-81						
R14	47K	76-473-01	R68	2.2K	76-222-01	C28	2.2u/50v N.P.	12-225-81						
R15	4.7K	76-472-01	R69	2.2K	76-222-01	C29	.22u	10N224-01						
R16	2.7K	76-272-01	R70	1.5K	76-152-01	C30	.22u	10N224-01	IC1	4558	37-458-01			
R17	2.7K	76-272-01	R71	100	76-101-01	C31	.047u	10N473-11	IC2	4558	37-458-01			
R18	2.2M	76-225-01	R72	10K	76-103-01	C32	.047u	10N473-11	IC3	4558	37-458-01			
R19	2.7K	76-272-01	R73	2.2M	76-225-01	C33	.001u	10N102-01	IC4	MM3007	37-307-01			
R20	12K	76-123-01	R74	10K	76-103-01	C34	.01u	10N103-11	IC5	MM3101	37-301-01			
R21	2.7K	76-272-01	R75	180 OHM 10W	78-181-10	C35	.022u	10N223-01	IC6	4558	37-458-01			
R22	2.7K	76-272-01	R76	180 OHM 10W	78-181-10	C36	.1u	10N104-01	IC7	4558	37-458-01			
R23	12K	76-123-01	R77	10K	76-103-01	C37	2.2u/50v	12N225-51	IC8	78M15	37-715-01			
R24	22K	76-223-01	R78	10K	76-103-01	C38	.22u	10N224-01	IC9	79M15	37-915-01			
R25	1.8K	76-182-01	R79	15K	76-152-01	C39	100u/35v	12-107-32	IC10	4558	37-458-01			
R26	100K	76-104-01	R80	7.5K	76-102-01									
R27	1.5K	76-152-01	R81	1K	76-101-01									
R28	2.2M	76-225-01	R82	100	76-101-01									
R29	100K	76-104-01	R83	47K	76-473-01	D1	IN914	21N914-01	P1	10K	70-132-01			
R30	100K	76-104-01	R84	47K	76-473-01	D2	IN914	21N914-01	P2	10K	70-132-01			
R31	2.7K	76-272-01	R85	47K	76-473-01	D3	IN914	21N914-01	P3	10K W/PULL SW	70-103-27			
R32	2.7K	76-272-01	R86	270	76-271-01	D4	IN914	21N914-01	P4	10K	70-132-01			
R33	1.5K	76-152-01	R87	270	76-271-01	D5	IN914	21N914-01	P5	100K	70-104-23			
R34	22	76-220-01	R88	2K/2H	78-202-01	D6	IN914	21N914-01						
R35	18K	76-183-01	R89	2K/2H	78-202-01	D7	IN914	21N914-01						
R36	10K	76-103-01				D8	IN914	21N914-01						
R37	18K	76-183-01				D9	IN914	21N914-01	J1	1/4" 1/8 CLIFF	39-119-01			
R38	10K	76-103-01				D10	IN914	21N914-01	J2	1/4" 1/8 CLIFF	39-119-01			
R39	10K	76-103-01				D11	IN75A	21N75A-01	J3	12 PIN .1" SKT	17-314-12			
R40	100K	76-104-01				D12	IN75A	21N75A-01	J4	11 PIN HEADER	17-310-11			
R41	100K	76-104-01				D13	IN746	21N746-01	J5	11 PIN HEADER	17-310-11			
R42	33K	76-333-01				D14	IN914	21N914-01	J6	1/4" 1/8 CLIFF	39-117-01			
R43	33K	76-333-01				D15	IN914	21N914-01	J7	1/4" 1/8 CLIFF	39-116-01			
R44	10K	76-103-01				D16	IN914	21N914-01	J8	MALE R.N. XLR	39-308-01			
R45	27K	76-273-01				D17	IN4749	21N4749-01						
R46	2.7K	76-272-01				D18	IN5357	21-5357-01						
R47	47	76-470-01				D19	IN5357	21-5357-01						
R48	47	76-470-01				D20	IN4744	21N4744-01	NP-1	10K IRIM	71-103-02			
R49	47K	76-473-01				D21	IN4002	21N4002-01	NP-2	10K IRIM	71-103-02			
R50	47K	76-473-01				D22	RED LED	21-503-01						
R51	4.7K	76-472-01				D23	YELLOW LED	21-503-01						
R52	1M	76-105-01				D24	IN914	21N914-01						
R53	1.5K	76-152-01				D25	YELLOW LED	21-503-01						
R54	1.8K	76-182-01				D26	IN5353	21-5353-01						
						D27	IN5353	21-5353-01						



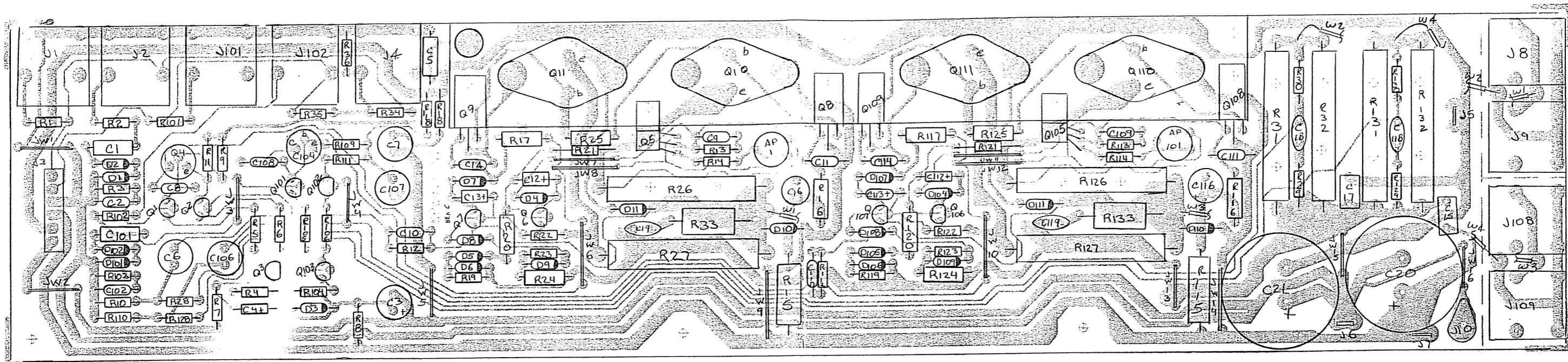
NOTES: 1) UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHMS 1/4 WATT. SW. ALL CAPACITORS ARE IN MICROFARADS AND HAVE A 50 VOLT RATING (MINIMUM).

ASSY. PART NO. 07-525-01

TOLERANCES		REVISIONS			VH-140C CHORUS BRD PICT	
DECIMAL	FRACTIONAL	NO.	DATE	BY	SCALE	MATERIAL
±	±	1	5/8/81	TGL	2X	SLM ELECTRONICS 1400 FERGUSON, ST. LOUIS, MO 63133
±	±	2			2X	
±	±	3				
±	±	4				
±	±	5				

Δ CHANGED D20 FROM 21A402-C1 TO 21A444-01

DRAWING NO. 07-525-01



PART	DESCRIPTION	PART NO.
R14	560	76-561-01
R15	2K, 2W	78-202-01
R1, 101	1K	76-102-01
R2, 102	4.7K	76-472-01
R3, 103	27K	76-273-01
R4, 104	2.7K	76-272-01
R5, 105	22	76-220-01
R6, 106	22	76-220-01
R7	8.2 K	76-822-01
R8	22	76-220-01
R7, 109	470	76-471-01
R10, 110	330	76-331-01
R11, 111	10	76-100-01
R12, 112	27K	76-273-01
R13, 113	1.5K	76-152-01
R16, 116	680 1/2 W	77-680-01
R17, 117	100 1/2 W	77-101-01
R18, R118	22	76-220-01
R19, R119	33K	76-333-01
R20, 120	2700 1/2 W	77-272-01
R21, R121	270	76-271-01
R22, 122	270	76-271-01
R23, 123	33K	76-333-01
R24, 124	2700 1/2 W	77-272-01
R25, 125	100 1/2 W	77-101-01
R26, 126	.33/10 W	78-330-10
R27, 127	.33/10 W	78-330-10
R28, 128	220	76-221-01
R29, 129	10	76-100-01
R30, 130	22	76-220-01
R31, 131	.68/10W	78-068-10
R32, 132	.68/10W	78-068-10
R33, 133	10/ 2 W	78-100-01
R34, 134	10K	76-103-01
R35, 135	10K	76-103-01
R36, 136	3.3K	76-332-01
JW1-16		76-000-02
C1, 101	.1	10A104-01
C2, 102	.0022	10A222-01
C3	220/50V	12-227-02
C4	1/50V	12A105-51
C5, 105	.1	10A104-01
C6, 106	22 NP/50V	12-226-81
C7, 107	220/50V	12-227-02
C8, 108	100P	10A101-21
C9, 109	.0022	10A222-01
C10, C110	100P	10A102-21
C11, 111	330P/100V	10A331-11
C12, 112	1/50V	12A105-51
C13, 113	1/50V	12A105-51
C14, 114	330P/100V	10A331-11
C15	.1/100V	10A104-01

PART	DESCRIPTION	PART NO.
C16, 116	47/35V	12-476-32
C17	.1/100V	10A104-01
C18, 118	.022 POLY	10-223-02
C19, 119	.047/100V POLY	10-473-03
C20	6800/50	12-688-02
C21	6800/50	12-688-02

PART	DESCRIPTION	PART NO.
D1, 101	IN 746 A	21A146-01
D2, 102	IN 746 A	21A146-01
D3, 103	IN 4740A	21A440-01
D4, 104	IN 914	21A914-01
D5, 105	IN 746 A	21A146-01
D6, 106	IN 3070	21A370-01
D7, 107	IN 914	21A914-01
D8, 108	IN 746 A	21A146-01
D9, 109	IN 3070	21A370-01
D10, 110	IN 5393	21A593-01
D11, 111	IN 5393	21A593-01

PART	DESCRIPTION	PART NO.
Q1, 101	MPS A56	96-056-01
Q2, 102	MPS A56	96-056-01
Q3, 103	MPS A56	96-056-01
Q4, 104	2N 3440	96-340-01
Q5, 105	2N 3402	96-342-01
Q6, 106	MPS A06	96-006-01
Q7, 107	MPS A56	96-056-01
Q8, 108	TIP 31 C	96-031-03
Q9, 109	TIP 32 C	96-032-03
Q10, 110	MJ 15001	96-101-01
Q11, 111	MJ 15002	96-102-01

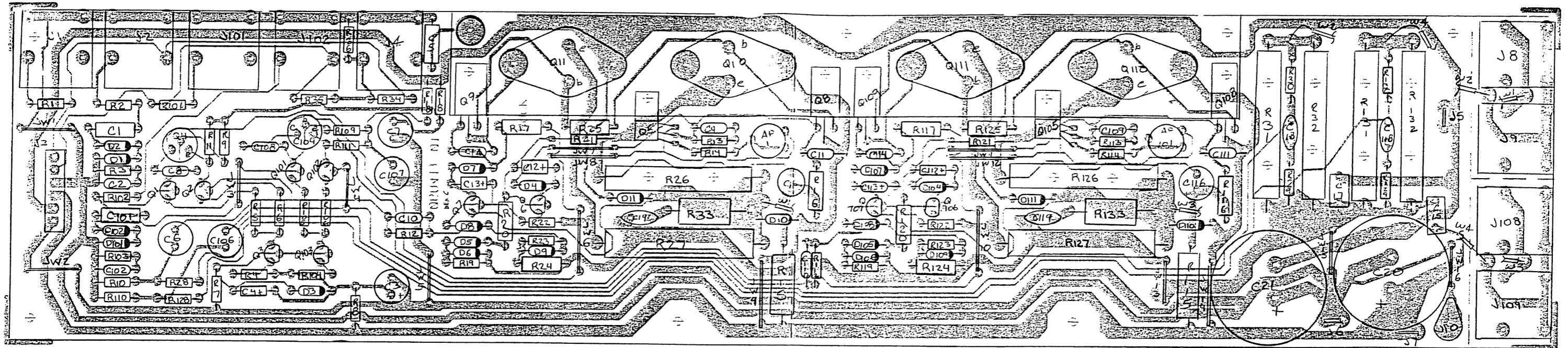
PART	DESCRIPTION	PART NO.
J1, 2, 8, 9, 4, 101, 102, 108, 109	1/4" JACK	39-116-01
J3	6 PIN HDR.	17-309-06
J5-7	.250 TAB.	17-836-01
J10	GROUND LUG	17-500-01

PART	DESCRIPTION	PART NO.
TP-1, 101	TRIM POT.	71-501-02
H.S.	BRACKET	33-117-01

PART	DESCRIPTION	PART NO.
W1	10.5" RED WIRE	97-168-02
W2	5.5" BLACK WIRE	97-168-56
W3	6.5" RED WIRE	97-168-62
W4	5.5" BLACK WIRE	97-168-56

TOLERANCES (EXCEPT AS NOTED)		REVISIONS		P/N-07-413-01	
NO.	DATE	BY	DATE	NO.	DESCRIPTION
1	8-16-89	DM		1	SS-140CA PWR AMP.
2				2	VH-140C POWER AMP.
3				3	SLM ELECTRONICS
4				4	11880 BORMAN ST. LOUIS, MO 63146
5				5	DRAWN BY TJC
6				6	SCALE
7				7	MATERIAL
8				8	DATE 7-13-87
9				9	DRAWING NO. 07-413-01

ARB CHANGED TO 22 DIMS.



PART	DESCRIPTION	PART NO.
R14	560	76-561-01
R15	2K, 2W	78-202-01
R1, 101	1K	76-102-01
R2, 102	4.7K	76-472-01
R3, 103	2.7K	76-273-01
R4, 104	2.7K	76-272-01
R5, 105	22	76-220-01
R6, 106	22	76-220-01
R7	8.2K	76-822-01
R8	22	76-220-01
R9, 109	470	76-471-01
R10, 110	330	76-331-01
R11, 111	10	76-100-01
R12, 112	27K	76-273-01
R13, 113	1.5K	76-152-01
R16, 116	680 1/2 W	77-680-01
R17, 117	100 1/2 W	77-101-01
R18, R118	22	76-220-01
R19, R119	33K	76-333-01
R20, 120	2700 1/2 W	77-272-01
R21, R121	270	76-271-01
R22, 122	270	76-271-01
R23, 123	33K	76-333-01
R24, 124	2700 1/2 W	77-272-01
R25, 125	100 1/2 W	77-101-01
R26, 126	.33/10 W	78-330-10
R27, 127	.33/10 W	78-330-10
R28, 128	220	76-221-01
R29, 129	10	76-100-01
R30, 130	22	76-220-01
R31, 131	.68/10 W	78-068-10
R32, 132	.68/10 W	78-068-10
R33, 133	10 1/2 W	78-100-01
R34, 134	10K	76-103-01
R35, 135	10K	76-103-01
R36, 136	3.3K	76-332-01
JW1-16		76-000-02
C1, 101	.1	10A104-01
C2, 102	.0022	10A222-01
C3	220/50V	12-227-02
C4	1/50V	12A105-51
C5, 105	.1	10A104-01
C6, 106	22 NP/50V	12-226-81
C7, 107	220/50V	12-227-02
C8, 108	100P	10A101-21
C9, 109	.0022	10A222-01
C10, C110	100P	10A102-21
C11, 111	330P/100V	10A331-11
C12, 112	1/50V	12A105-51
C13, 113	1/50V	12A105-51
C14, 114	330P/100V	10A331-11
C15	1/100V	10A104-01

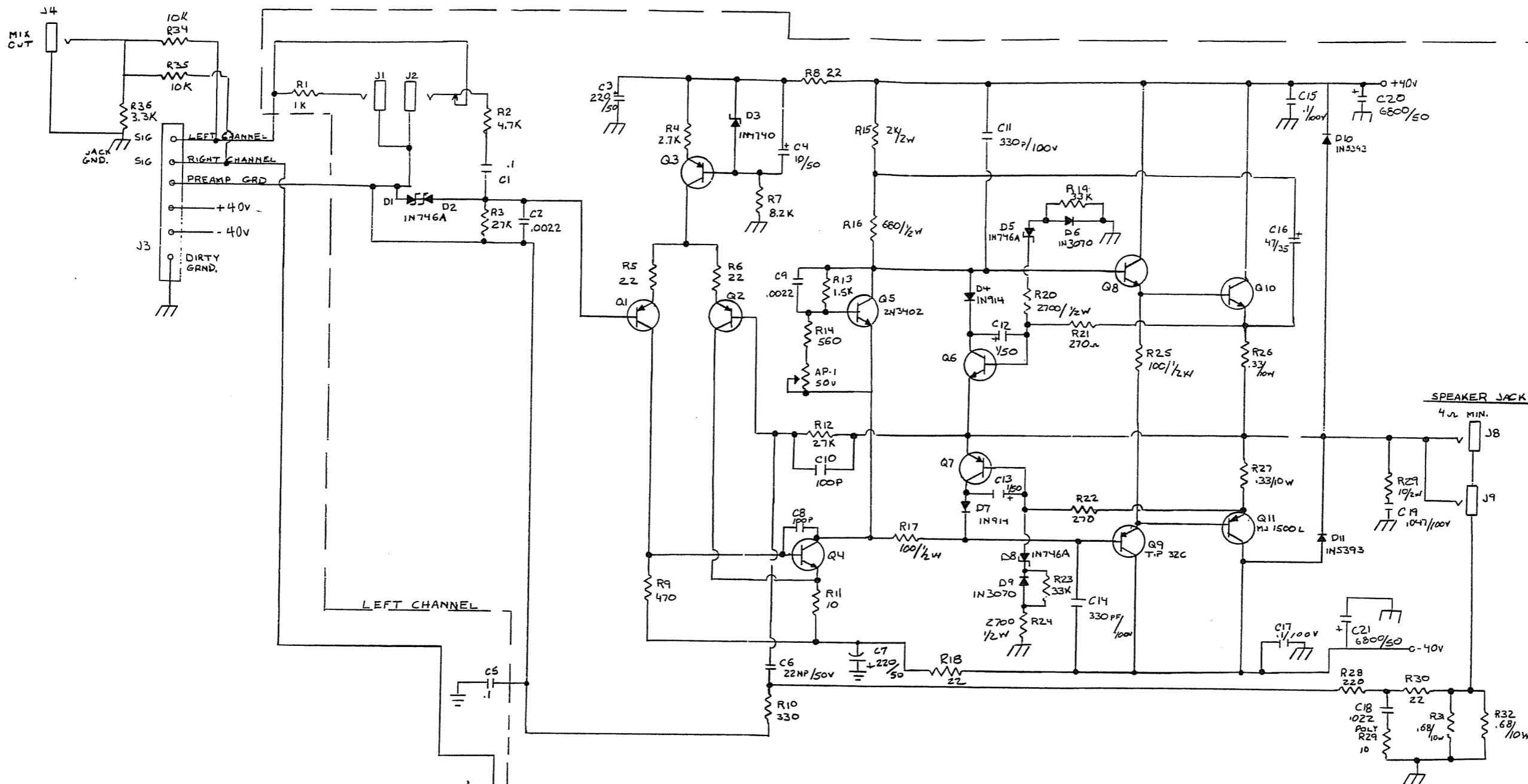
PART	DESCRIPTION	PART NO.
C16, 116	47/35V	12-476-32
C17	.1/100V	10A104-01
C18, 118	.022 PCLY	10-223-02
C19, 119	.047/100V POLY	10-473-03
C20	6800/50	12-688-02
C21	6800/50	12-688-02
D1, 101	IN 746 A	21A146-01
D2, 102	IN 746 A	21A146-01
D3	IN 4740A	21A440-01
D4, 104	IN 914	21A914-01
D5, 105	IN 746A	21A146-01
D6, 106	IN 3070	21A370-01
D7, 107	IN 914	21A914-01
D8, 108	IN 746 A	21A146-01
D9, 109	IN 3070	21A370-01
D10, 110	IN 5393	21A593-01
D11, 111	IN 5393	21A593-01
Q1, 101	MPS A 56	96-056-01
Q2, 102	MPS A 56	96-056-01
Q3, 103	MPS A 56	96-056-01
Q4, 104	2N 3440	96-340-01
Q5, 105	2N 3402	96-342-01
Q6, 106	MPS A 06	96-006-01
Q7, 107	MPS A 56	96-056-01
Q8, 108	TIP 31 C	96-031-03
Q9, 109	TIP 32 C	96-032-03
Q10, 110	MJ 15001	96-101-01
Q11, 111	MJ 15002	96-102-01
J1, 2, 8, 9, 4, 10, 102, 108, 109	1/4" JACK	39-116-01
J3	6 PIN HDR.	17-309-06
J5-7	.250 TAB.	17-836-01
J10	GROUND LUG	17-500-01
TP-1, 101	TRIM POT.	71-501-02
H.S.	BRACKET	33-117-01
W1	10.5" RED WIRE	97-168-02
W2	5.5" BLACK WIRE	97-168-56
W3	6.5" RED WIRE	97-168-62
W4	5.5" BLACK WIRE	97-168-56

PIN-07-413-01

TOLERANCES	REVISIONS	NO.	DATE	BY
DECIMAL	1	8-16-89	DM	
FRACTIONAL	2			
ANGULAR	3			

SS-140CA PWR AMP.
 VH-140C POWER AMP.
 SLM ELECTRONICS
 11850 BORMAN ST. LOUIS, MO 63146
 DRAWN BY: TFC
 CHECKED: TFC
 DATE: 7-13-87
 DRAWING NO: 07-413-01

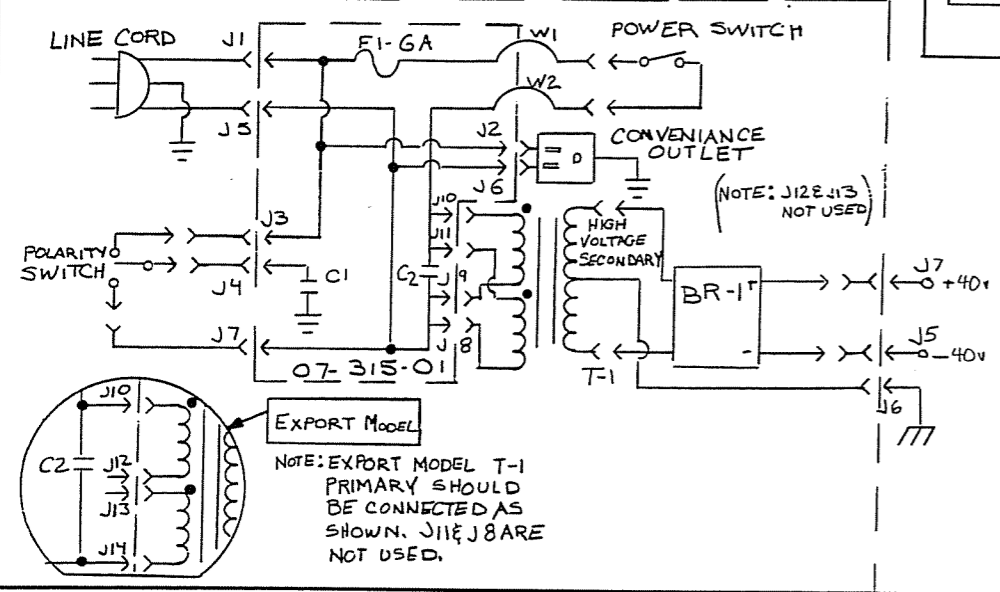
RB CHANGED TO 22 OHMS.



RIGHT CHANNEL
 IDENTICAL TO 'LEFT'
 EXCEPT - DELETE - C3, R8, D3, R7, C4, C15, Q17
 AND (ADD 100 TO REF DESIGNATORS)
 C-27 C-102, D-1, D 101, ETC.

P.C. Board Assy # 07-413-01

PART	DESCRIPTION	PART NO.
C22, 23	6800/50	12-688-02
C24, 25	.0027 V.L.	10-272-01
D1	1N746A	21A146-01
D2	1N746A	21A146-01
D3	1N4740A	21A440-01
D4	1N914	21A914-01
D5	1N746A	21A146-01
D6	1N3070	21A370-01
D7	1N914	21A914-01
D8	1N746A	21A146-01
D9	1N3070	21A370-01
D10	1N5393	21A593-01
D11	1N5393	21A593-01
Q1	MPSA56	96-056-01
Q2	MPSA56	96-056-01
Q3	MPSA56	96-056-01
Q4	2N3402	96-340-01
Q5	2N3402	96-342-01
Q6	MPSA06	96-006-01
Q7	MPSA56	96-056-01
Q8	TIP31C	96-031-03
Q9	TIP32C	96-032-03
Q10	MJ15001	96-101-01
Q11	MJ15002	96-102-01
J1, 2, 8, 9, 4	1/4" JACK	39-116-01
J3	5 PIN HEADER	17-309-05
J5-7	.250 TAB	17-835-01
S1	SWITCH	88-202-01
BR-1	BRIDGE REC	21-204-01
TP-1	TRIM POT	71-501-02



NOTE: EXPORT MODEL T-1 PRIMARY SHOULD BE CONNECTED AS SHOWN. J11 & J8 ARE NOT USED.

- ③ CHANGE R33 TO R29
- ⚠ R8 CHANGED TO 22 OHMS
- ① UP-DATED "J" DESIGNATORS

TOLERANCES		REVISIONS		VA-140C POWER AMP		SHT 20F 3	
EXCEPT AS NOTED	NO.	DATE	BY	NO.	DATE	BY	SCALE
DECIMAL	1	5/25/88	TEL	AMPEG SS-140 C PWR AMP - LEFT CHANNEL			
FRACTIONAL	2	8-16-89	DM	SLM ELECTRONICS			
ANGULAR	3	5/12/90	TEL	11880 BORMAN ST LOUIS MO 63116			
	4			SCALE: 2X			
	5			DRAWING NO. 16-032-01			

PARTIAL PART LIST

IC1	3001	37-301-01
IC2	4013	37-413-01
IC3	74LS55	37-555-01
IC4	4558	37-458-01
IC10	74M15	37-915-01
IC11	78M15	37-715-01
P1	10K1	70-103-28
P2	10K1	70-103-22
P3	100K1	70-104-23
AP-1	10K TRIM	71-103-02
AP-2	50K TRIM	71-503-02
J1	9 PIN HEADER	17-310-09
J2	5 PIN HEADER	17-310-05
J3	11 PIN HEADER	17-310-11

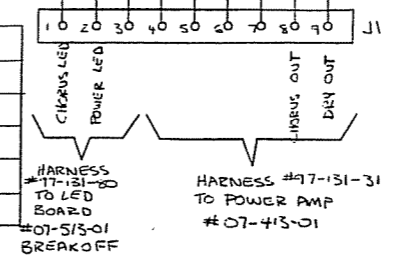
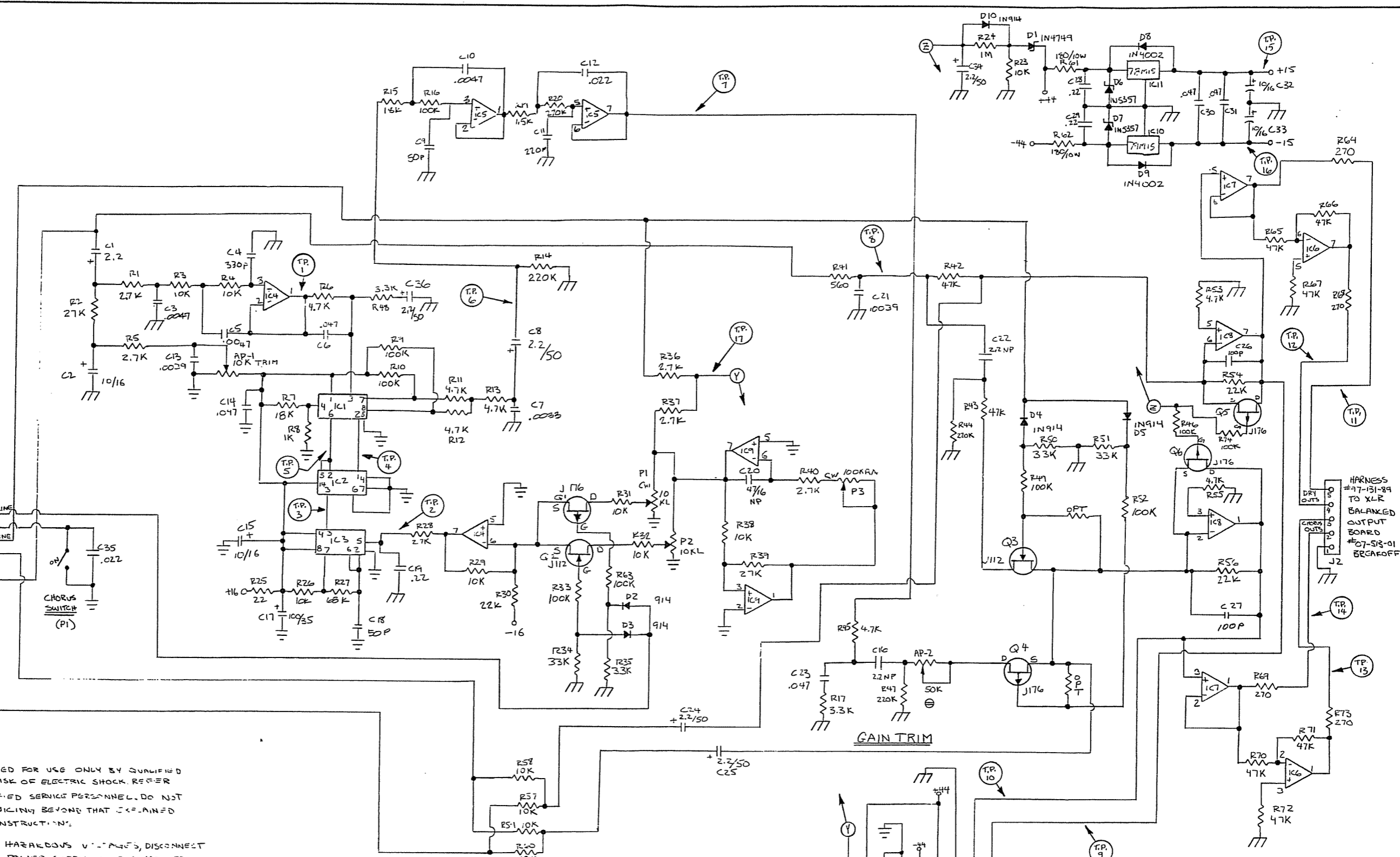
HARNESS #97-131-76 FROM PREAMP BOARD #07-513-01

HARNESS #97-131-89 TO XLR BALANCED OUTPUT BOARD #07-513-01 BREAKOFF

NOTES:

- THIS SCHEMATIC PROVIDED FOR USE ONLY BY QUALIFIED PERSONNEL, TO AVOID RISK OF ELECTRIC SHOCK REFER SERVING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPAINED IN THE OPERATING INSTRUCTIONS.
- THIS UNIT CONTAINS HAZARDOUS VOLTAGES, DISCONNECT POWER AND WAIT 5 MIN. POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
- UNLESS OTHERWISE SPECIFIED ALL RESISTORS ARE IN OHMS, 1/4 WATT, 5%. ALL CAPACITORS ARE IN MICROFARADS AND HAVE A 50V RATING.
- MEASUREMENTS AT TEST POINTS ARE MADE WITH A .1% OSCILLOSCOPE UNDER THE FOLLOWING CONDITIONS:
A/B SWITCH LINE @ -15V, CHORUS SWITCH LINE @ -15V, 2Vp-p IN PUT @ 1KHz, EXCEPT AS NOTED.

TP	WAVE	VOLTS	SP. AL COND.	3	4	5	6	7	8
1	~	7.2p-p	DEPTH A @ 0	15V P-P	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	7V P-P
2	~	2.2p-p	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	4.5V P-P
3	~	6.8V	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	4.5V P-P
4	~	6.8V	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	4.5V P-P
5	~	6.8V	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	4.5V P-P
6	~	6.8V	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	4.5V P-P
7	~	6.8V	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	4.5V P-P
8	~	6.8V	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	DEPTH A @ 10	4.5V P-P	4.5V P-P



SHT 3 of 3

TOLERANCES	REVISIONS	SS-140C
DECIMAL	NO. DATE	POWER AND CHORUS
FRACTIONAL		SLM ELECTRONICS
ANGULAR		1100 BORMAN ST. LOUIS, MO. 63146
	DATE	7-15-87
	TRACED	APR

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