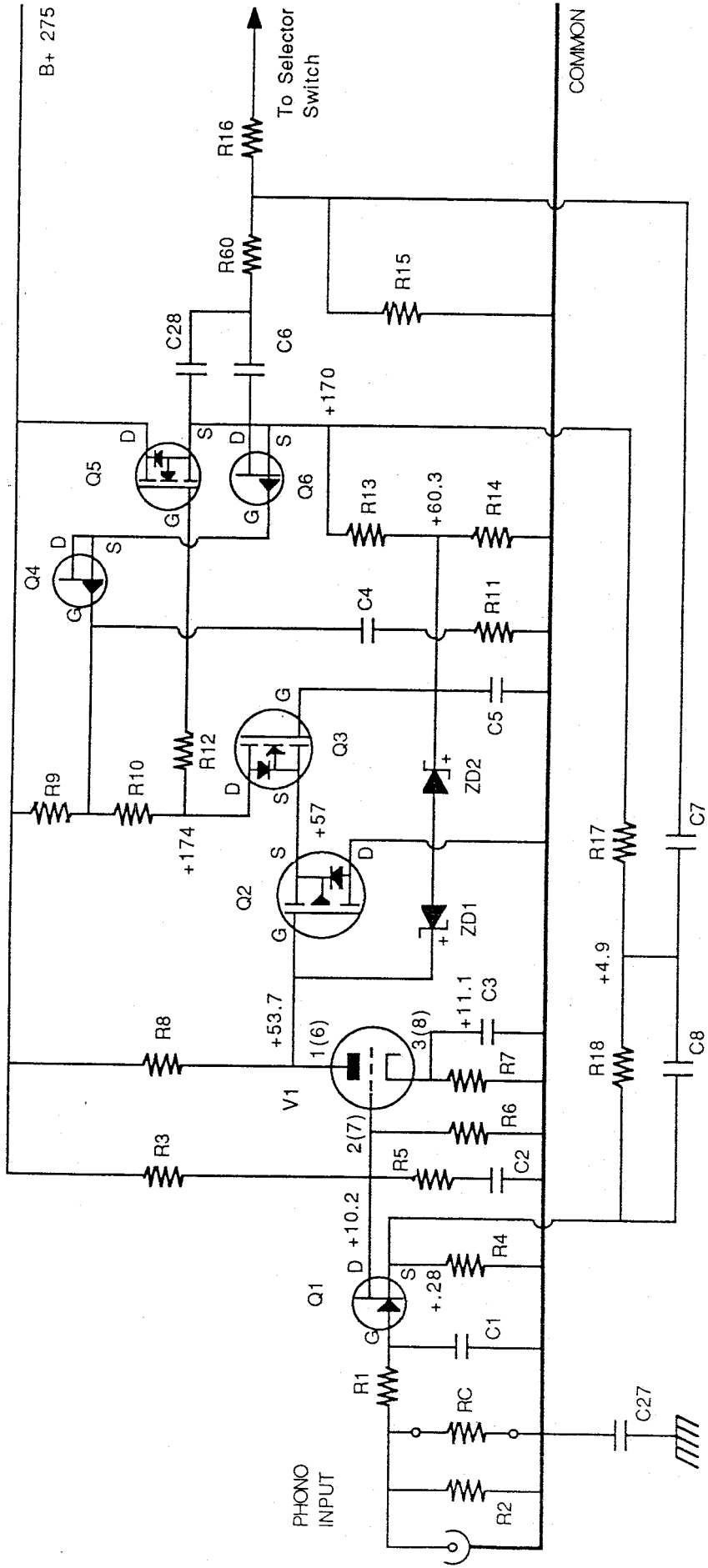


MODEL SP9 PREAMPLIFIER  
SCHEMATIC AND PARTS LIST

4-20-87

**audio research corporation**

6801 SHINGLE CREEK PARKWAY  
MINNEAPOLIS, MINNESOTA 55430



46 dB GAIN AT 1kHz  
 RIAA EQUALIZED

MacINTOSH Plus/WZJ  
 HD 20SC-1  
 MacDRAFT Files  
 April 16, 1987

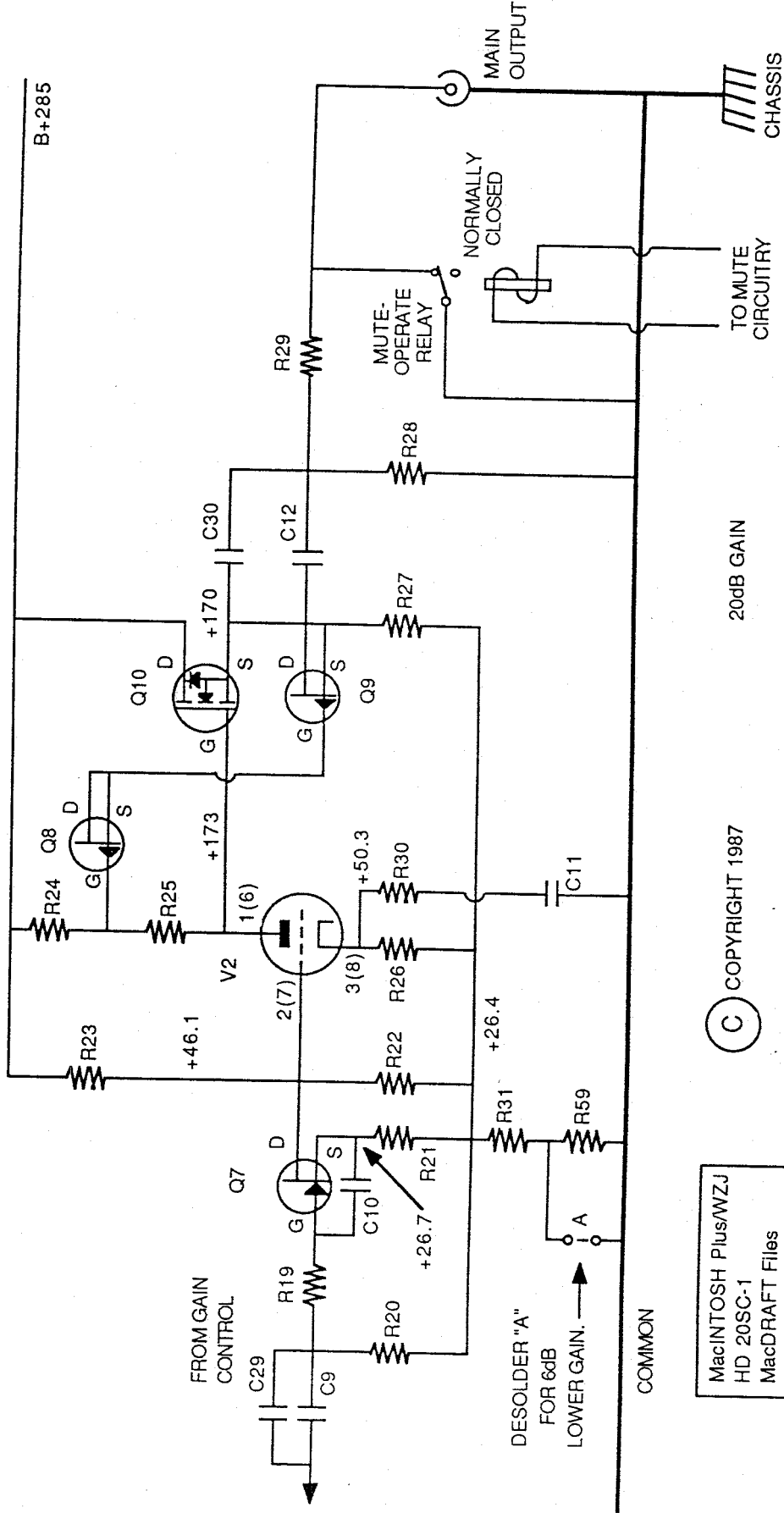
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SP9 PREAMPLIFIER ( PHONO CIRCUITRY) - PAGE 1 of 4 PAGES

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B+285



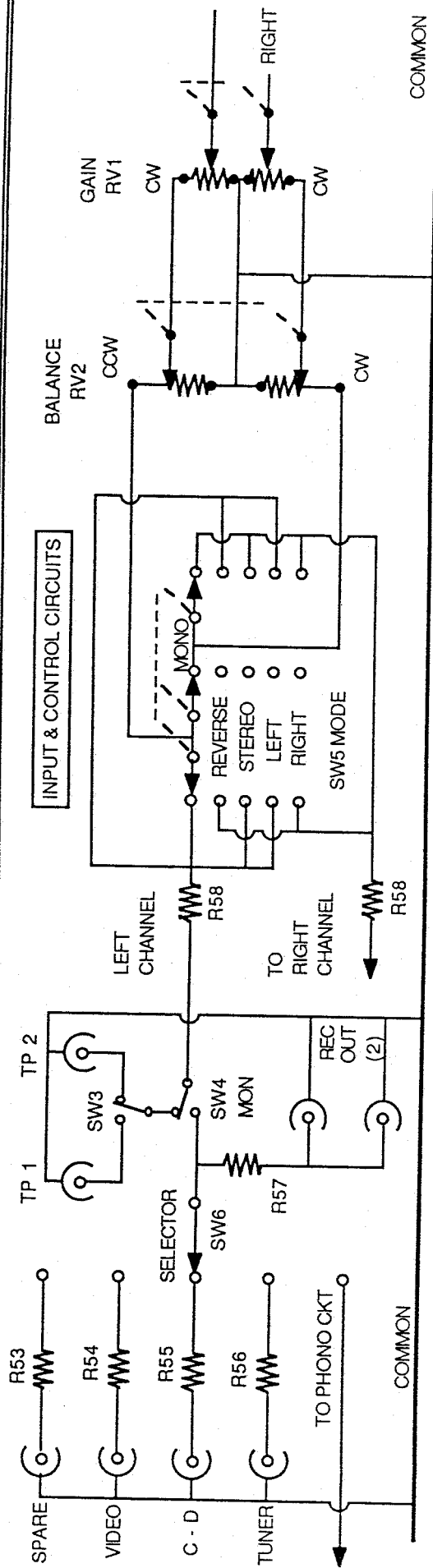
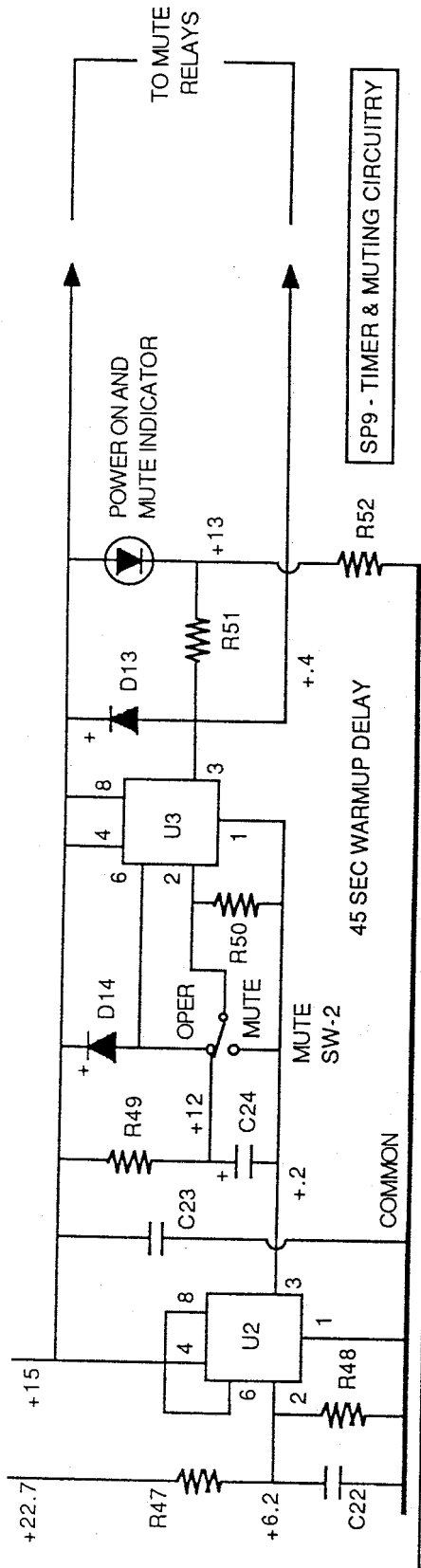
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SP9 PREAMPLIFIER - (LINE SECTION CIRCUITRY) - PAGE 2 of 4 PAGES

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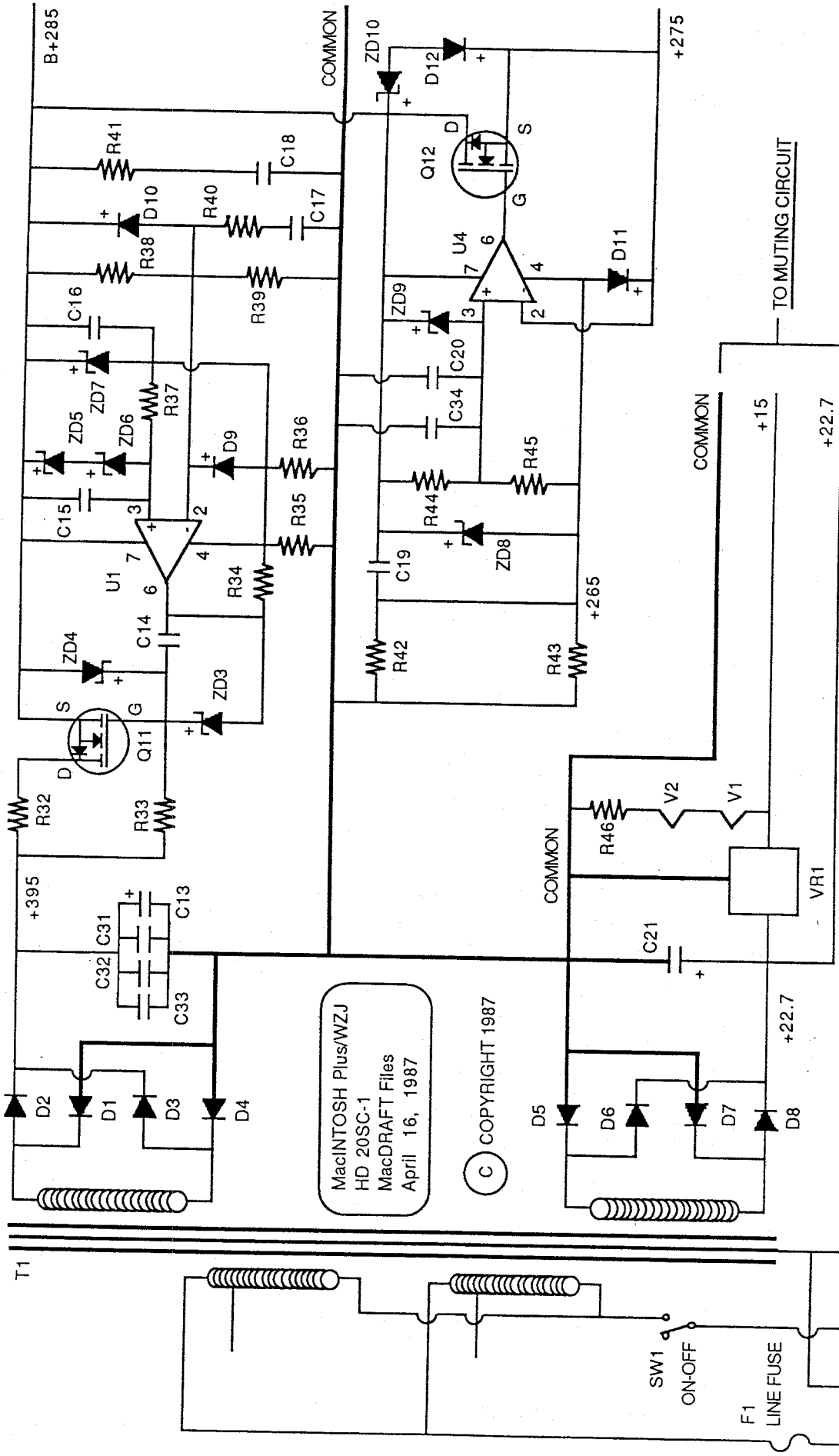
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SP9 PREAMPLIFIER - (MUTING & SWITCHING CIRCUITRY) - PAGE 3 of 4 PAGES

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MacINTOSH Plus/WZJ  
 HD 20SC-1  
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SP 9 PREAMPLIFIER - (POWER SUPPLY SECTION) - PAGE 4 of 4 PAGES

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BLK GRN WHT  
 100-135 VAC 50/60Hz

SP9 PARTS LIST

Schematic Symbol	Qty	Description	Value	ARC Part #
Capacitors				
C1,2,11	6	PPN	56pF	53560103
C3	2	PPN	10pF	53100101
C4,10	4	PPN	150pF	53150202
C5	2	PPN	27pF	53270101
C6,12	4	PPN	5uF/250V	53500606
C7	4	STY	7800pF	53780301
C8	4	STY	2400pF	53240305
C9	2	PPN	.47uF/425V	53470510
C13	1	Electrolytic	100 uF/450V	50100802
C14,15,16,19	4	PPN	.22uF/160V	53220507
C17,28,29,30,32,33,34	10	PPN	.01uF/630V	53100406
C18,20	2	PPN	2uF/450V	53200602
C21	1	Electrolytic	1500uF/35V	50150904
C22,23	2	PPN	.22uF/100V	53220506
C24	1	Tantalum	33uF/16V	51330702
C25,26	2	Met Polyester	.01uF/250VAC	53100407
C27	2	Ceramic	.001uF/500V	52100300
C31	1	PPN	1.0uF/425V	53100608
Zener Diodes				
ZD1,2	4		1N5240B	30504400
ZD3	1		1N5535A	30504200
ZD4	1		1N4740A	30500300
ZD5,6	2		LM329DZ	31000700
ZD7	1		1N5359A	30503500
ZD8,9,10	3		Z20	30503700
Diodes				
D1,2,3,4	4		1N4006	30502200
D5,6,7,8	4		1N4005	30500400
D9,10,11,12,13,14	6		1N916B	30500910
Relays				
RY1,2	2		12V Reed	64101000
Transistors				
Q1	2	FET	ARC	30006600
Q2	2	FET	ARC	30007000
Q3,5,10	6	FET	ARC	30006700
Q4,6,8,9	8	FET	ARC	30005901
Q7	2	FET	ARC	30006500
Q11	1	FET	ARC	30006800
Q12	1	FET	ARC	30007100

SP9 PARTS LIST

Symbol	Qty	Description	ARC Part #	Symbol	Qty	Description	ARC Part #
Integrated Circuits				Resistors, Continued			
U1	1	MC34071P	31002200	R5	2	1.21K1%MK3	42121303
U2,3	2	MC1455P	31000801	R6	2	16.9K1%MK3	42169403
U4	1	TLO71CP	31001900	R7	2	7.68K1%MK3	42768303
Voltage Regulator				R8	2	150K1%MK5	42150514
VR1	1	MC7815CT	31002000	R9	2	20.5K1%MK8	42205405
Panel Indicator				R11	2	357Ω1%MK3	42357203
LED1	1	Green LED	34300100	R12	2	27.4Ω1%MK3	42274103
Power Transformer				R13	2	27.4K1%MK8	42274405
T1	1	Toroid	60006601	R14	2	15.0K1%MK5	42150414
Switches				R15,20,28	6	475K1%MK3	42475503
SW1	1	DPDT Toggle-Silver	24100710	R16,40	3	332Ω1%MK3	42332203
SW2,3,4	3	DPDT Toggle-Gold	24100410	R17	2	562K1%MK4	42562513
SW5	1	3P5P Rotary-Mode	24000700	R18	2	15.8K1%MK4	42158413
SW6	1	2P5P Rotary-Selector	24001000	R19	2	511Ω1%MK3	42511203
Controls				R21	2	200Ω1%MK8	42200205
RV1	1	Gain-100K X 2	45100528	R22	2	13.7K1%MK4	42137413
RV2	1	Balance-100K X 2	45100529	R24,35,36,42,43	6	100K1%MK8	42100505
Connectors				R25	2	150Ω1%MK3	42150203
None	20	Input/Output-Gold	23202100	R26	2	21.5K1%MK3	42215403
None	1	Ground	23100700	R27	2	21.5K1%MK8	42215405
Fuses				R29	2	475Ω1%MK3	42475203
F1	1	.6Amp Slow(USA)	34500220	R30	2	3.92K1%MK3	42392303
F1	1	.3Amp Slow(Export)	34500120	R31	2	2.43K1%MK5	42243314
Resistors				R33	2	301K1%MK3	42301503
R1,10	4	54.9Ω1%MK3	42549103	R34	2	39.2K1%MK3	42392403
R2	2	49.9K1%MK3	42499403	R37	1	4.99K1%MK3	42499303
R3,23	4	75.0K1%MK8	42750405	R38	1	14.0K1%MK3	42140403
R4	2	86.6Ω1%MK4	42866113	R39	1	280K1%MK4	42280513
				R41	1	1Ω5%2WWW	43100002
				R44,45	2	10.0Meg1%MK3	42100703
				R46	1	7.5Ω5%2WWW	43750101
				R47	1	76.8K1%MK3	42768403
				R48	1	28.7K1% RN55	48287402
				R49	1	1.0Meg1%MK3	42100603
				R50	1	10Meg5%1/4W CC	41100702
				R51	1	1.0K1%MK3	42100303
				R52	1	5.11K1%MK3	42511303
				R53,54,55,56,57	10	499Ω1%MK3	42499203
				R58	2	4.64K1%MK3	42464303
				R59	2	1.82K1%MK3	42182303
				R60	2	100Ω1%MK3	42100203
				Rc	2	10Ω1%MK3	42100103
				Rc	2	33.2Ω1%MK3	42332103
				Rc	2	100Ω1%MK3	42100203