

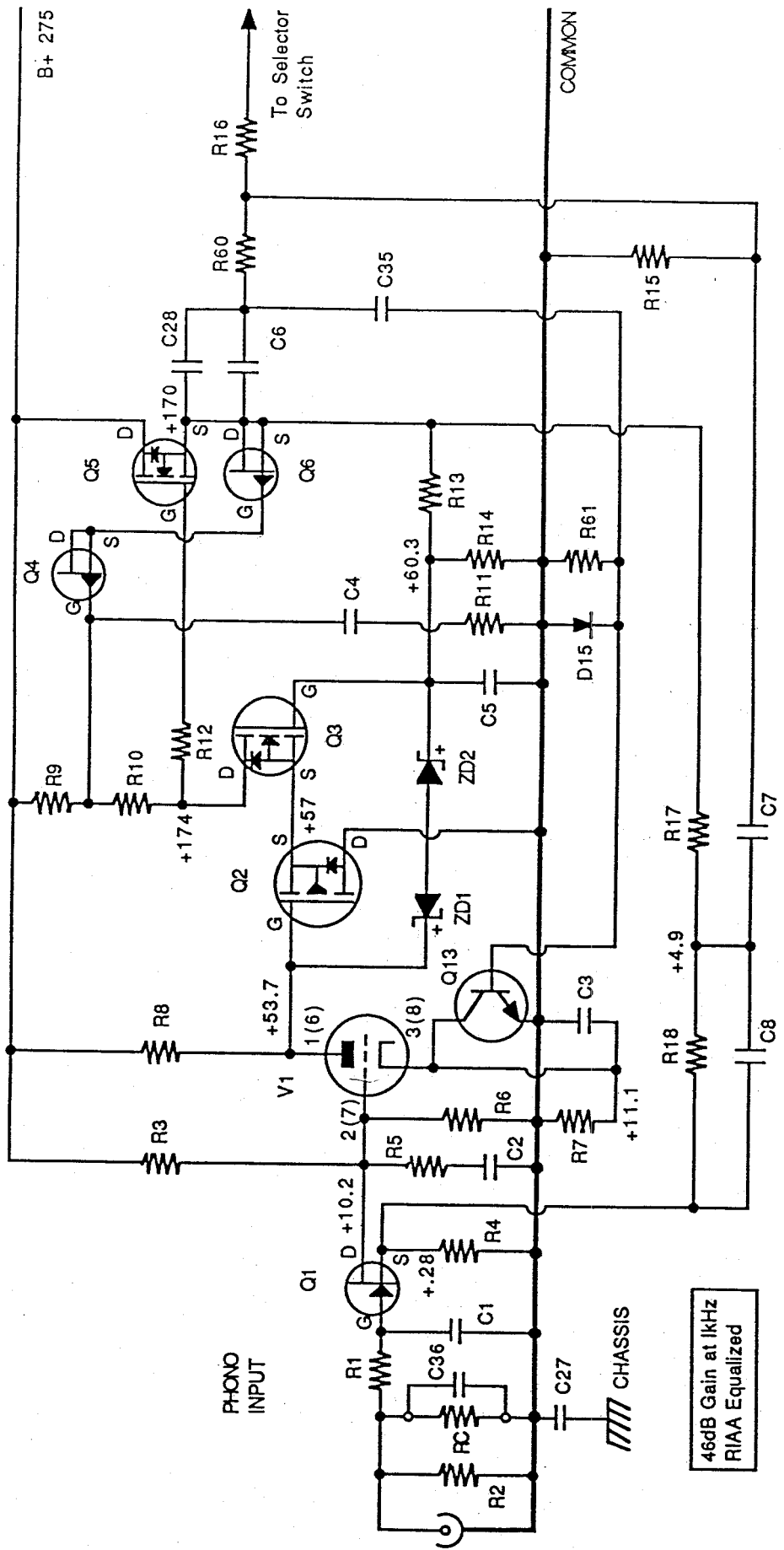
MODEL SP9 MARK II PREAMPLIFIER

SCHEMATIC AND PARTS LIST

6-20-89

audio research corporation

6801 SHINGLE CREEK PARKWAY
MINNEAPOLIS, MINNESOTA 55430



46dB Gain at 1kHz
RIAA Equalized

5-11-89

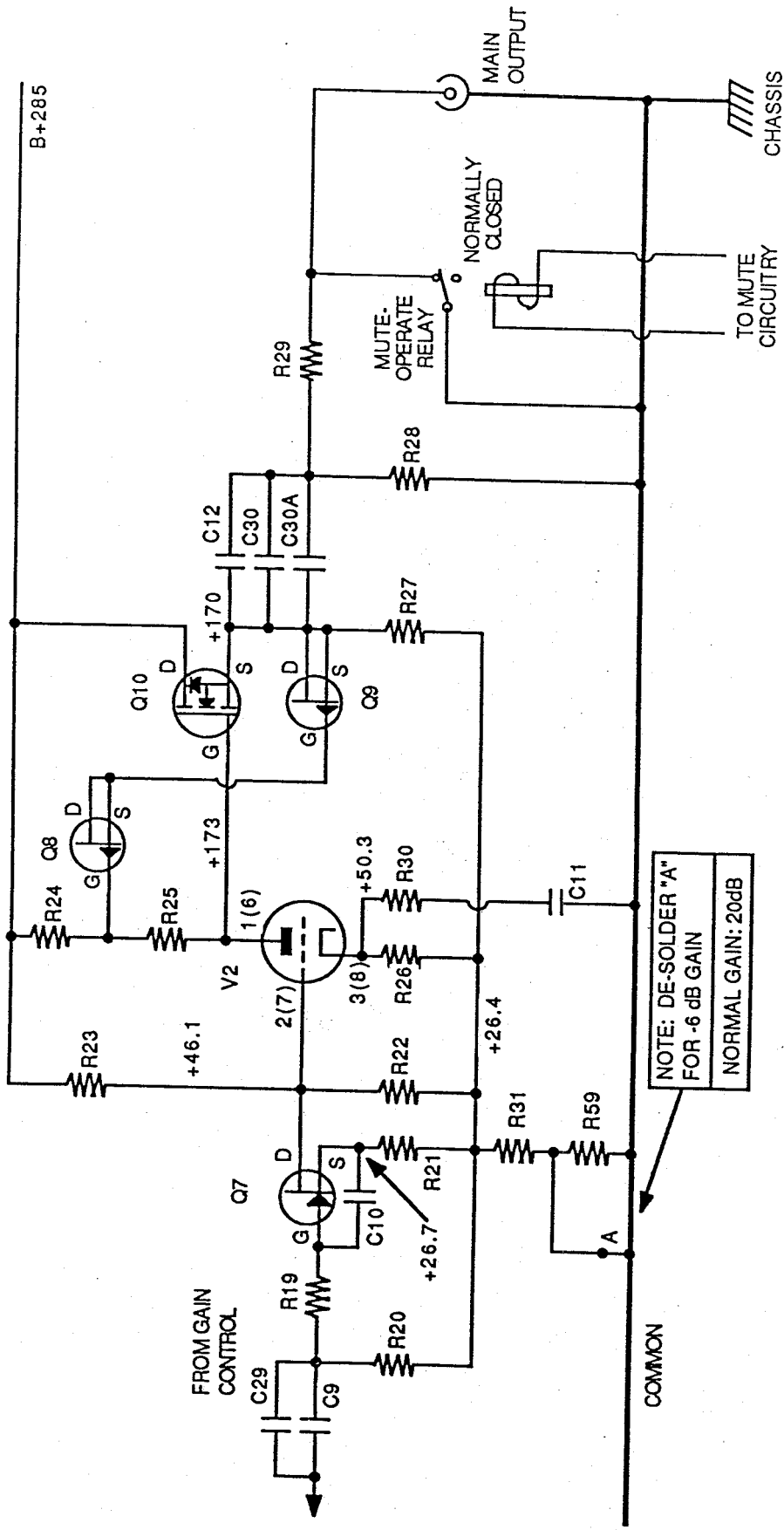


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SP9MKII PREAMPLIFIER - (PHONO CIRCUITRY) - PAGE 1 of 4 PAGES

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MINNEAPOLIS, MN 55430

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B+285

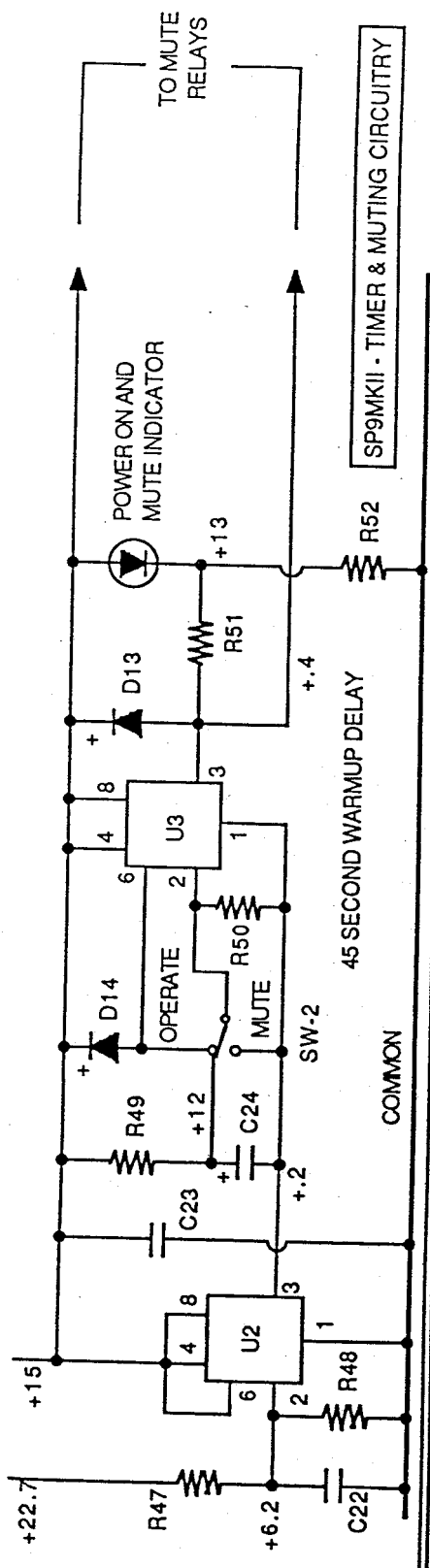
NOTE: DE-SOLDER "A"
FOR -6 dB GAIN
NORMAL GAIN: 20dB

SP9MKII PREAMPLIFIER - (LINE SECTION CIRCUITRY) - PAGE 2 of 4 PAGES

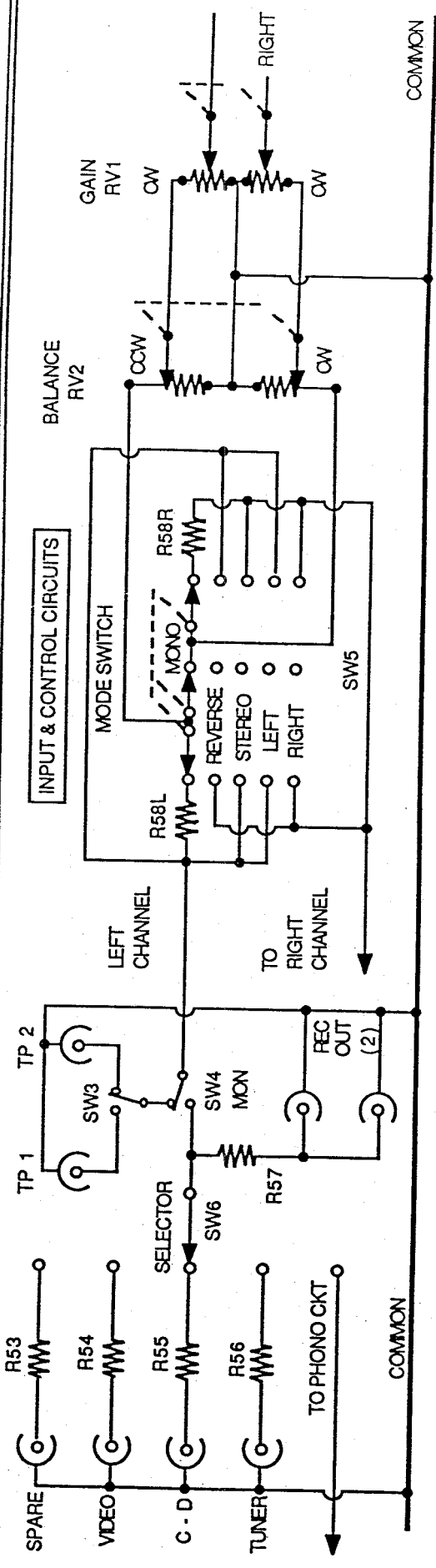
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SP9MKII - TIMER & MUTING CIRCUITRY



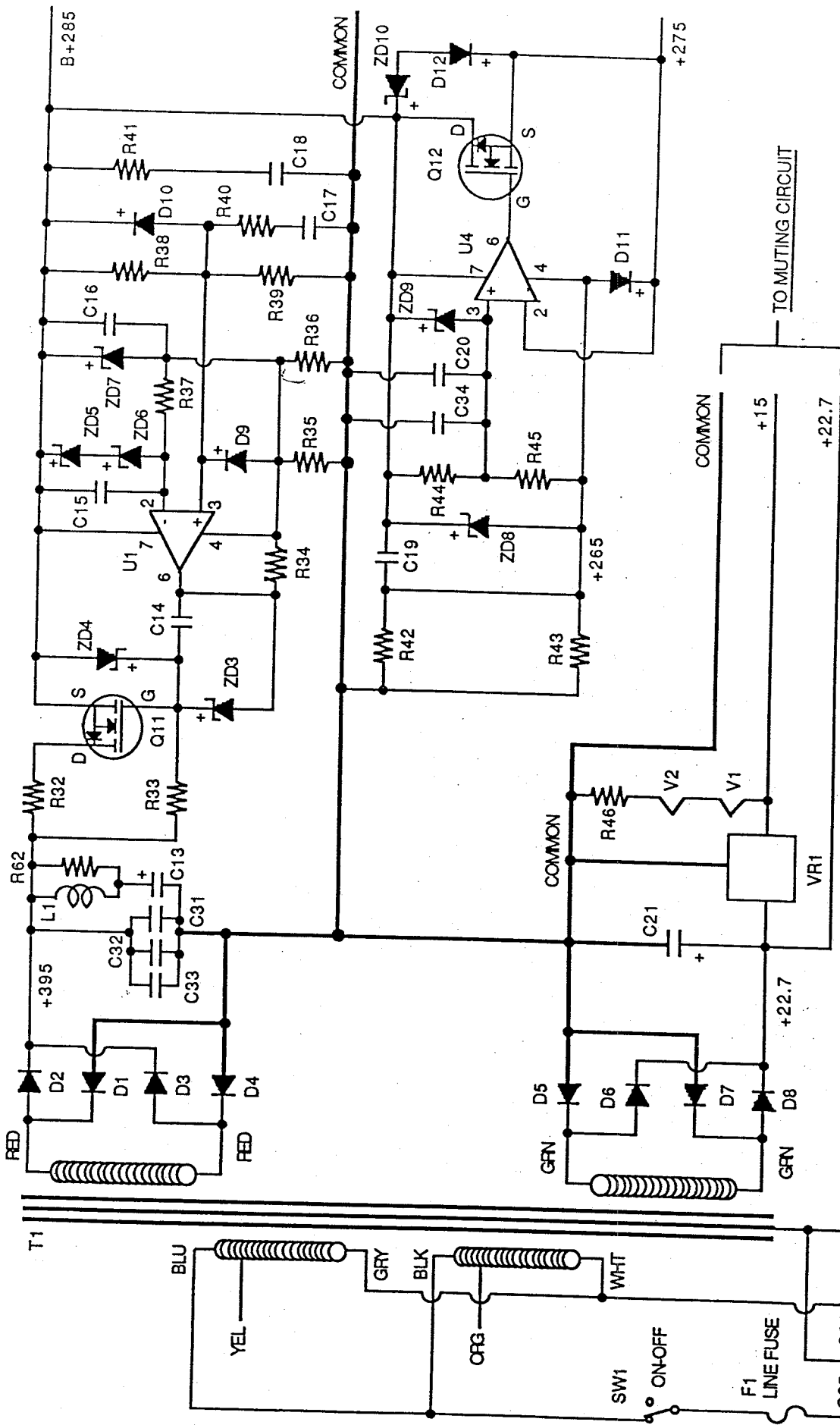
INPUT & CONTROL CIRCUITS

SP9MKII PREAMPLIFIER - (MUTING & SWITCHING CIRCUITRY) - PAGE 3 OF 4 PAGES

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SP9MKII PREAMPLIFIER - (POWER SUPPLY SECTION) - PAGE 4 of 4 PAGES

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BLK GRN WHT
 100-135 VAC 50/60Hz

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PARTS LIST

As of JUN 16 89

PRODUCT: SP9MK11

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
Q 10	2	30006716	FET, ORANGE, GREEN, BLUE
Q 11	1	30006811	FET, YELLOW
Q 12	1	30007102	FET, YELLOW RED
Q 13	2	30003100	TRANSIST., 2N5088, 2N5209, 2N5210
RESISTORS			
R C	1	42182203	RES. 182 OHM 1% MK-3 50PPM
R 1,10,56	6	42549103	RES. 54.9 OHM 1% MK-3 50PPM
R 2	2	42499403	RES. 49.9K 1% MK-3 50PPM
R 3,23	4	42750405	RES. 75K 1% MK-8 50PPM
R 4B	2	42127303	RES. 1.27 1% MK-3 50PPM
R 4,25	4	42150203	RES. 150 OHM 1% MK-3 50PPM
R 4A	2	42205203	RES. 205 OHM 1% MK-3 50PPM
R 5	2	42121303	RES. 1.21K 1% MK-3 50PPM
R 6,6A	4	42100403	RES. 10K +/- 1% MK-3 50PPM
R 6B	2	42100503	RES. 100K +/- 1% MK-3 50PPM
R 7	2	42121403	RES. 12.1K 1% MK-350PPM
R 7A,26	4	42215403	RES. 21.5K 1% MK-3 50PPM
R 8	2	42150514	RES. 150K 1% MK-5 1W 50PPM
R 9,13,27A	6	42274405	RES. 27.4K 1% MK-8 50PPM
R 9A	2	42825405	RES. 82.5K 1% MK-8 50PPM
R 11	2	42357203	RES. 357 OHM 1% MK-3 50PPM
R 12	2	42274103	RES. 27.4 OHM 1% MK-3 50PPM
R 14	2	42150414	RES. 15K 1% MK-5 50PPM
R 15,20,28	6	42475503	RES. 475K 1% MK-3 50PPM
R 16,16A,16B	6	42100314	RES. 1K 1% MK-5 50PPM
R 17	2	42562513	RES. 562K 1% MK-4 50PPM
R 18	2	42274403	RES. 27.4K 1% MK-3 50PPM
R 18B	2	42357403	RES. 35.7K 1% MK-3 50PPM
R 18A	2	42619203	RES. 619 OHM 1% MK-3 50PPM
R 19,19A,40	5	42332203	RES. 332 OHM 1% MK-3 50PPM
R 21,32,32A	4	42200205	RES. 200 OHM +/- 1% MK8 50PPM
R 22,22A	4	42681303	RES. 6.81K 1% MK-3 50PPM
R 24,27,35,36,42,43	8	42100505	RES. 100K 1% MK-8 50PPM
R 29,29A	4	42475203	RES. 475 OHM 1% MK-3 50PPM
R 30	2	42392303	RES. 3.92K 1% MK-3 50PPM
R 31,31A	4	42221303	RES. 2.21K 1% MK-3 50PPM
R 31B	2	42237303	RES. 2.37K 1% MK-350PPM
R 31C	2	42287303	RES. 2.87K 1% MK-3 50PPM
R 33	1	42158513	RES. 158K 1% MK-4 50PPM
R 34,34A	2	42392403	RES. 39.2K 1% MK-3 50PPM
R 37	1	42499303	RES. 4.99K 1% MK-3 50PPM
R 38,61	3	42150403	RES. 15K 1% MK-3 50PPM
R 38A	1	42215503	RES. 215K 1% MK-3 50PPM
R 39	1	42280513	RES. 280K 1% MK-4 50PPM
R 41	1	43100002	RES. 1 OHM 2W 5% W.W.
R 44,45	2	42100703	RES. 10 MEG 1% MK-3 50PPM
R 46	1	43750001	RES. 7.5 OHM 2W W.W.
R 47,55,55A	5	42768403	RES. 76.8K 1% MK-3 50PPM
R 48	1	42324403	RES. 32.4K 1% MK-3 50PPM
R 49	1	42100603	RES. 1 MEG 1% MK-3 50PPM
R 50	1	41100702	RES. 10 MEG 1/4W 5%
R 51	1	42100303	RES. 1K 1% MK-3 50PPM

PARTS LIST

As of JUN 16 89

PRODUCT: SP9MK11

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
CAPACITORS			
C 1,2,10,11	8	53560103	CAP. 56 PF +/-2% 630V DPN
C 3	2	53100101	CAP. 10 PF +/-1 PF 630V PPN
C 4	2	53150202	CAP. 150 PF 2 1/2% 630V PPN
C 5	2	53270101	CAP. 27 PF +/-1PF 630V PNP
C 6,12	4	53500606	CAP. 5 UF +/-10% 250V
C 7	2	53156400	CAP. .0156 UF +/-2% 630V
C 8	2	53480300	CAP. .0048 UF +/-2% 630V
C 9	2	53470510	CAP. .47 UF 425V IAR
C 13	1	50100802	CAP. 100 UF 450V
C 14,15,16,19	4	53220507	CAP. .22 UF 10% 160V
C 17,28,29,30,30A,32,33,34	12	53100406	CAP. .01 UF +/-10% 630V
C 18,20	2	53200602	CAP. 2 UF +/-10% 450V
C 21	1	50150904	CAP. 1500 UF 35V
C 22,23	2	53220506	CAP. .22 UF 100V
C 24	1	51330702	CAP. 33 UF +/-10% 16V
C 25,26	2	52500300	CAP. .005 UF 20% CERAMIC DISC
C 27	2	52100300	CAP. 1000 PF 20% 1000V
C 31	1	53100608	CAP. 1.0 UF 1-20% 425V TYPE V
C 35	2	52680000	CAP. 6.8 PF +/- 1/2PF 1000V
C 36	2	53560201	CAP. 560 PF +/-2.5% 630V
DIODES			
D 1,2,3,4	4	30502200	IN4006
D 5,6,7,8	4	30500400	IN4005 GENERAL INSTRUMENT
D 9,10,11,12,13,14,15	8	30500910	FAIRCHILD IN916B
FUSES			
F 1(240V)	1	34500120	FUSE, MDX/MDC 3/10A SL BL 220
F 1(120V)	1	34500250	FUSE, BUSSMANN MDQ 6/10 A
CONNECTORS			
J 1-10	20	23202100	GOLD PHONO JACK,SP9
INDUCTORS			
L 1	1	61000160	CHOKE, 2.7 UH +/- 10%
PANEL INDICATOR			
LE 1	1	34300102	LED,COLLAR & RETAINING RING
TRANSISTORS			
Q 1,1A	4	30006535	FET, WHITE ORANGE GREEN
Q 2	2	30007006	FET, GRAY BLUE
Q 3,5	4	30006705	FET, ORANGE GREEN
Q 4,6,8,9	8	30005901	FET, RED BROWN
Q 7	2	30006503	FET, WHITE ORANGE