

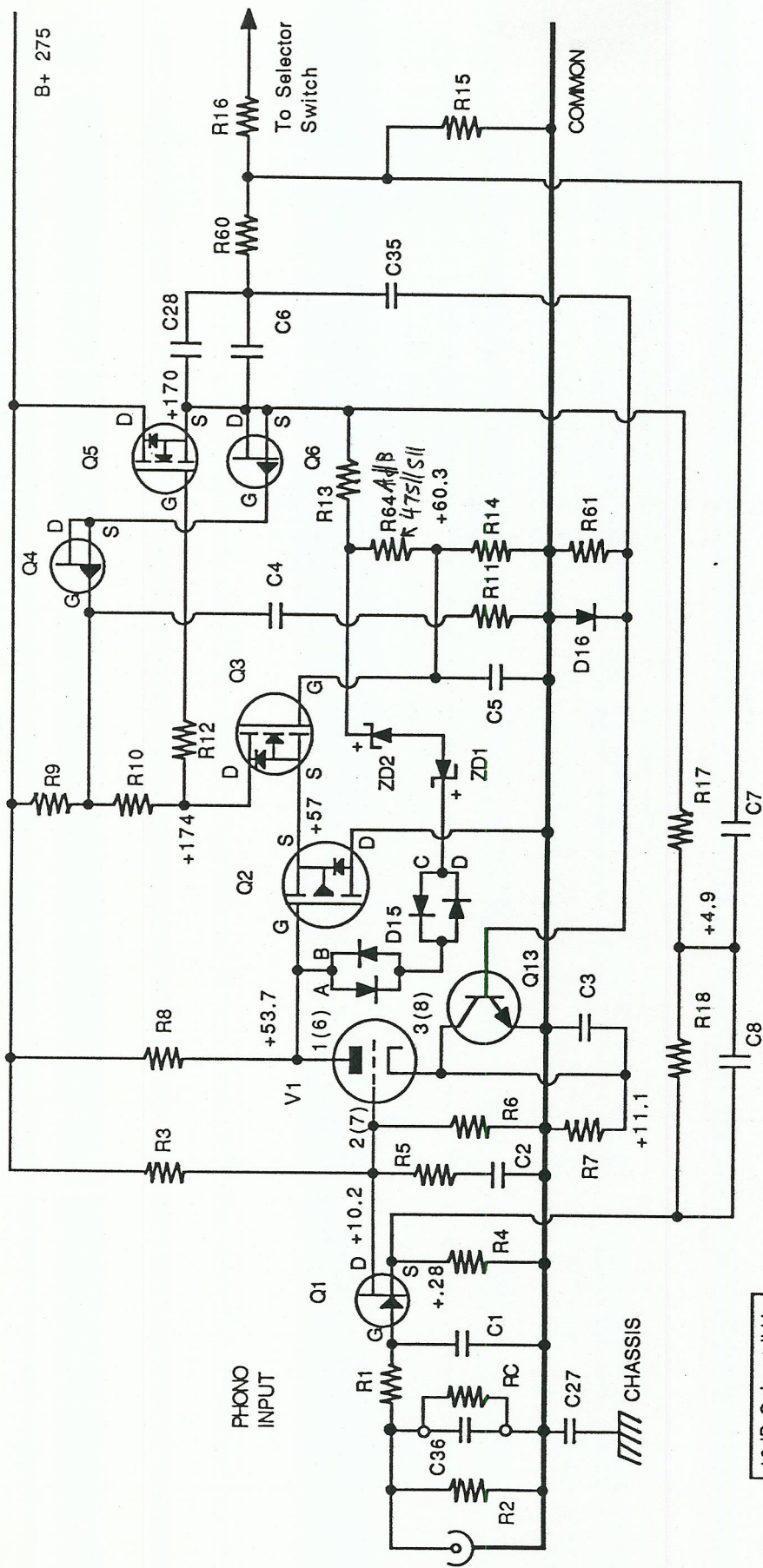
SP14 PREAMPLIFIER

SCHEMATIC

1-15-89

audio research corporation

6801 SHINGLE CREEK PARKWAY
MINNEAPOLIS, MINNESOTA 55430



46dB Gain at 1kHz
RIAA Equalized

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JAN. 25, 1989

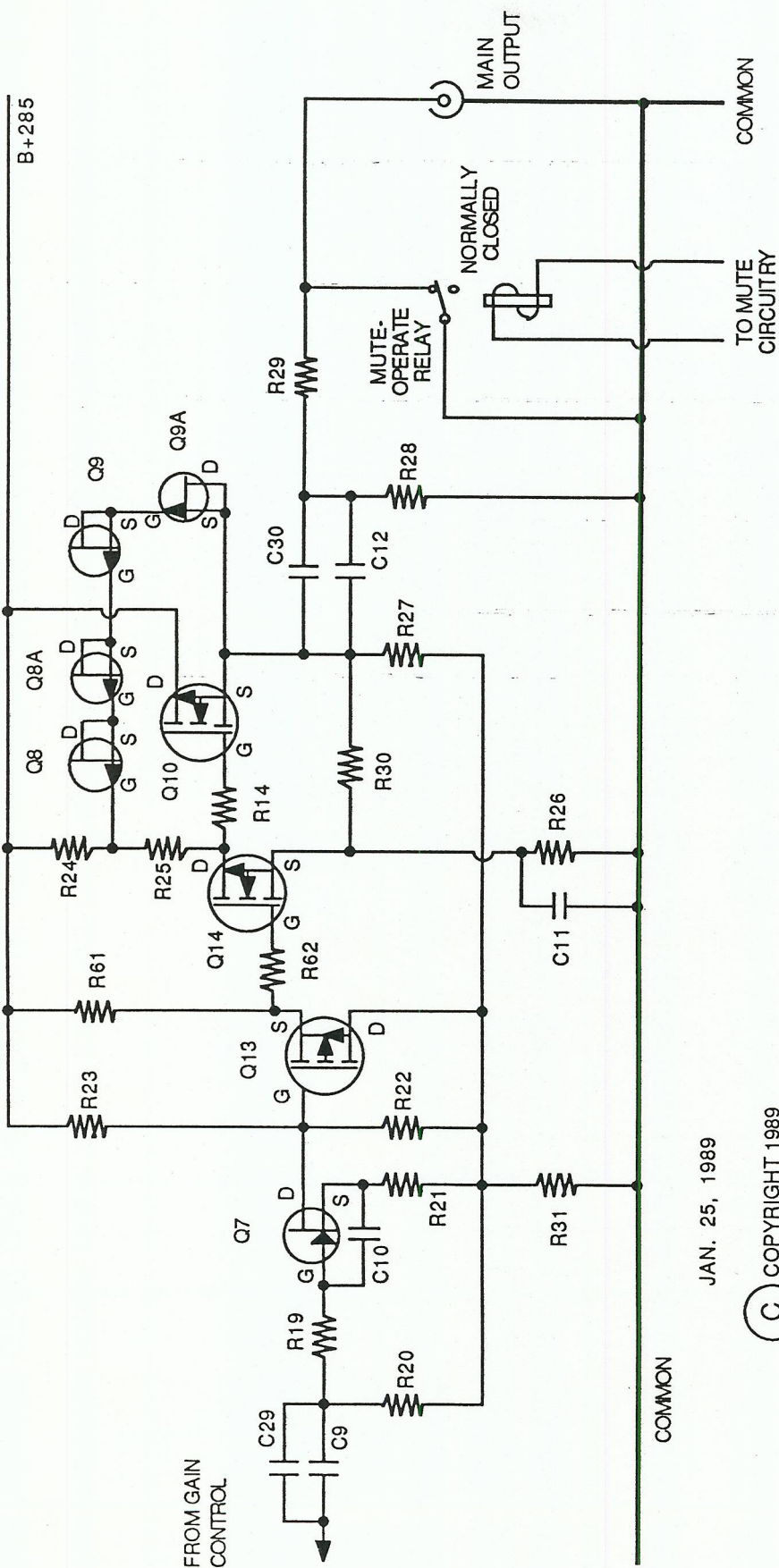
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SP14 PREAMPLIFIER - (PHONO CIRCUITRY) - PAGE 1 of 4 PAGES

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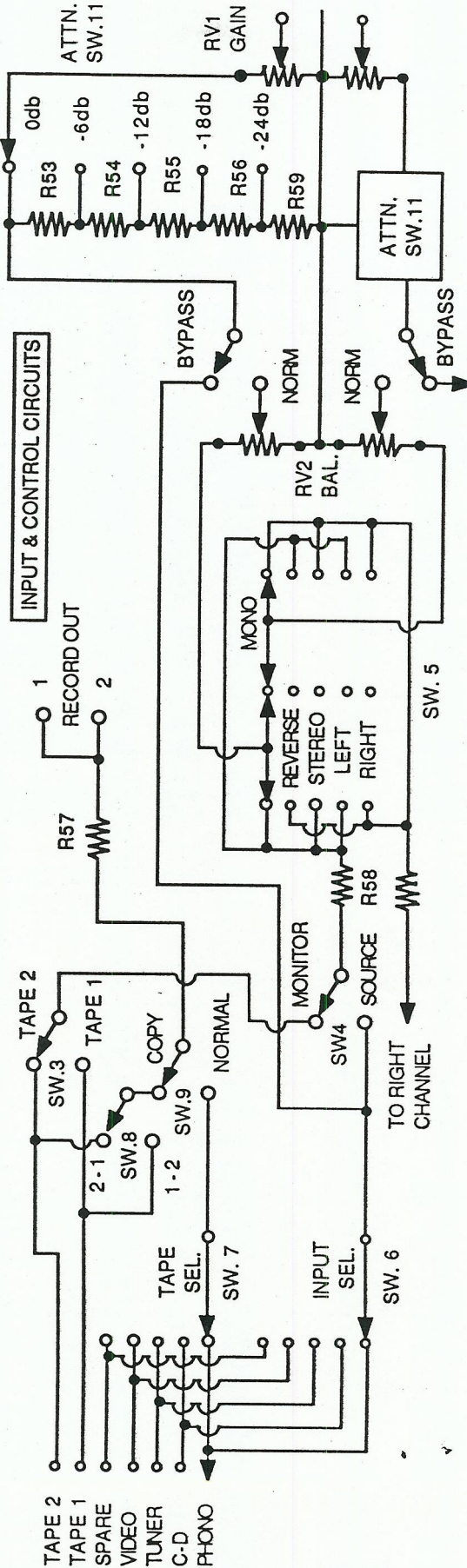
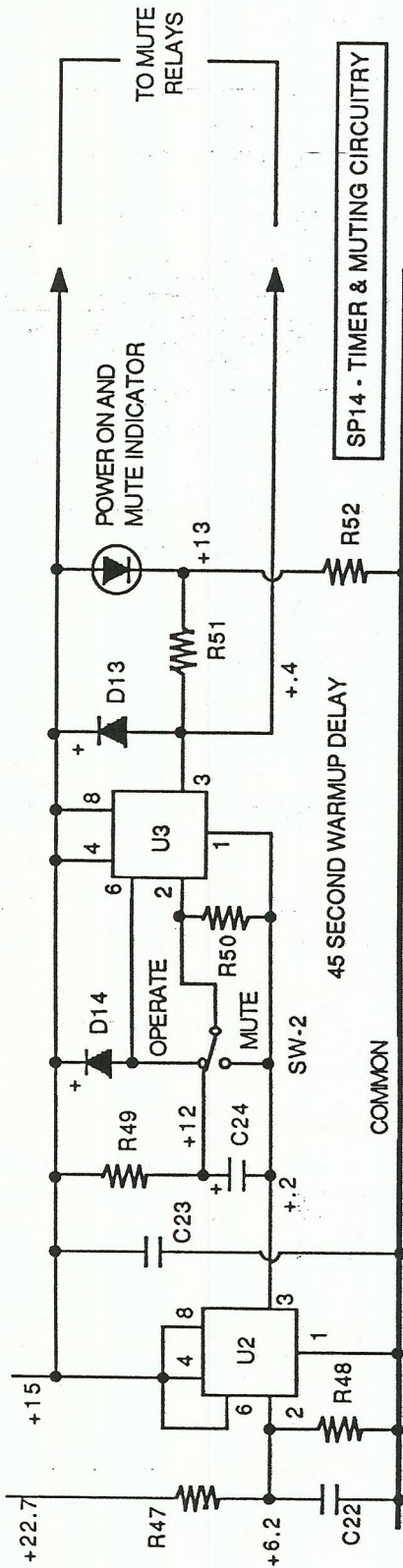
SP14 PREAMPLIFIER - (LINE SECTION CIRCUITRY) - PAGE 2 of 4 PAGES

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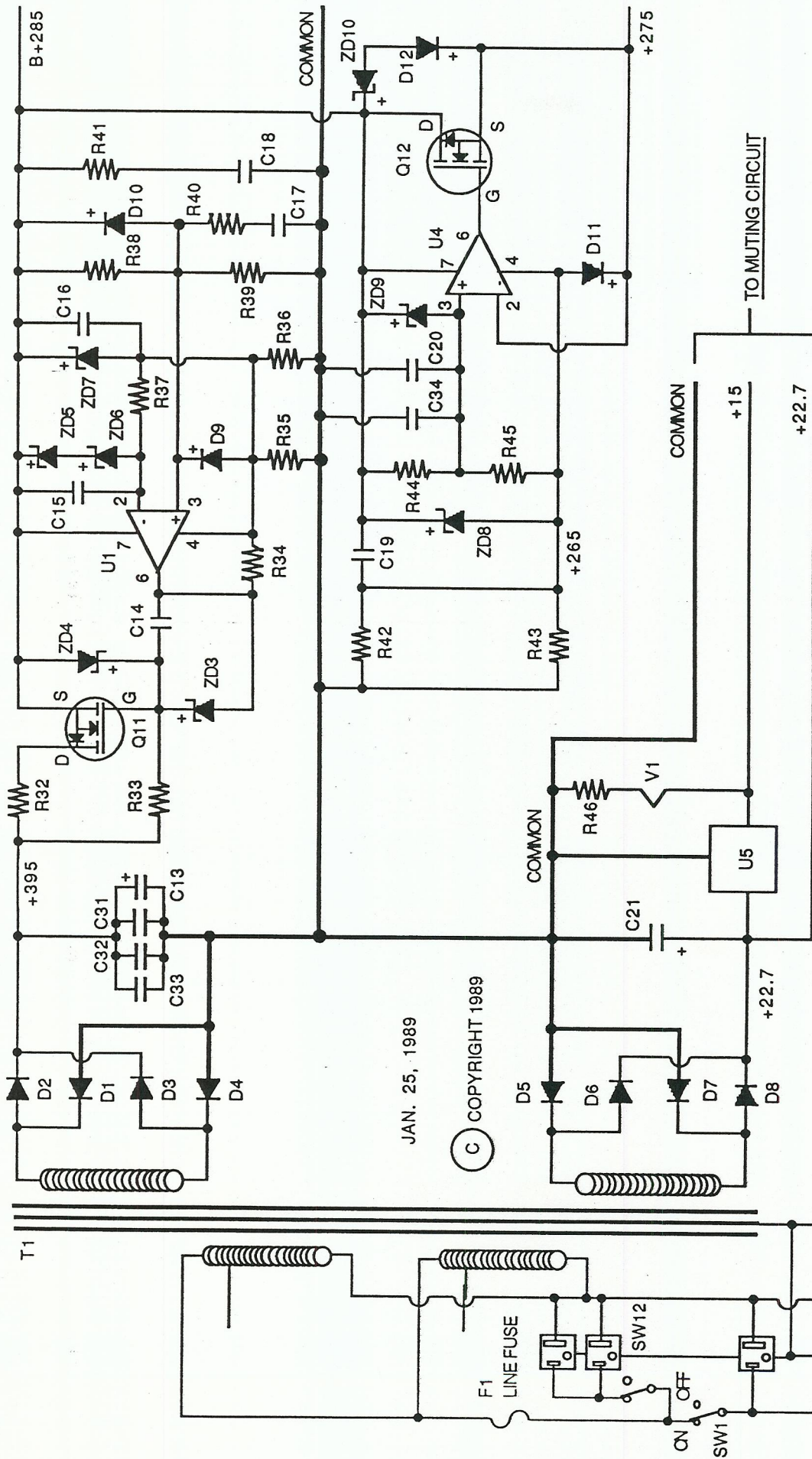
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SP14 PREAMPLIFIER - (MUTING & SWITCHING CIRCUITRY) - PAGE 3 of 4 PAGES

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SP14 PREAMPLIFIER - (POWER SUPPLY SECTION) - PAGE 4 of 4 PAGES

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BLK GRN WHT
100-135 VAC 50/60Hz

audio research

H I G H D E F I N I T I O N[®]

3900 ANNAPOLIS LANE NORTH / PLYMOUTH, MINNESOTA 55447-5447 / PHONE: 763-577-9700 FAX 763-577-0323

SP14 PARTS LIST

1-24-89

PARTS LIST

As of JAN 24 89

PRODUCT: SP14

SP14

NOTES:

Schematic Symbol	Quantity	ARC Part#	Description
CAPACITORS			
C 1,2	4	53560103	CAP. 56 PFD +/-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 PFD +/-PFD 63V DPN
C 6,12	4	53500606	CAP. 5MF +/- 10% 250 V
C 7	2	53156400	CAP. .0156 MFD +/- 2% 630V
C 8	2	53480300	CAP. .0048 MFD +/- 2% 630V
C 9	2	53470510	CAP. .47 MFD 425V IAR
C 11	2	53200003	CAP. 2 PFD STYRENE
C 13	1	50100802	CAP. 100 MFD 450V
C 14,15,16,19	4	53220507	CAP. .22 MF 10% 160V
C 17,28,29,30,32,33,34	10	53100406	CAP. .01 MFD +/- 10% 630 V
C 18,20	2	53200602	CAP. 2 MFD +/-10% 450V
C 21	1	50150904	CAP. 1500 MFD 35V
C 22,23	2	53220506	CAP. .22 MFD 100V
C 24	1	51330702	CAP. 33 MFD +/- 10% 16V
C 25,26	2	53100407	CAP. .01MFD 250V 20% MPE MALL
C 27	2	52100300	CAP. 1000 PF 20% 1000V
C 31	1	53100608	CAP. 1.0 MFD 1-20% 425V TYPE V
C 35	2	52680000	CAP. 6.8PF +/- 1/2PF 1000 V
C 36	2	53560201	CAP. 560 PFD +/-2 1/2% 630 V
DIODES			
D 1,2,3,4	4	30502200	IN4006
D 5,6,7,8	4	30500400	IN4005 GENERAL INSTRUMENT
D 9,10,11,12,13,14,15,15A,15B,15C,16	24	30500910	FAIRCHILD IN916B
FUSES			
F1 (100/120V)	1	34500260	FUSE, BUSSMANN MDQ 3/4
F1 (220/240V)	1	34500104	.4 AMP MDQ
PANEL INDICATOR			
LE 1 -	1	34300102	LED,COLLAR & RETAINING RING
TRANSISTORS			
Q 1,1A	4	30006524	FET, WHITE RED YELLOW
Q 2,13	4	30007006	FET, GRAY BLUE
Q 3,5,10	6	30006702	FET, ORANGE RED
Q 4,6,8,8A,9,9A	12	30005901	FET, RED BROWN
Q 7	2	30006502	FET, WHITE RED
Q 11	1	30006811	FET, YELLOW
Q 12	1	30007102	FET, YELLOW RED
Q 13	2	30003100	TRANSIST.,2N5088,2N5209,2N5210
Q 14	2	30006723	FET, ORANGE RED ORANGE
RESISTORS			
R 6B.	2	42100503	RES. 100K+/-1% MK-3 50PPM
R 1,10	4	42549103	RES. 54.9 OHM 1% MK-3 50PPM
R 2	2	42499403	RES. 49.9K 1% MK-3 50PPM
R 2A	2	42100203	RES. 100 OHM 1% MK-3 50PPM
R 2B	2	42432103	RES. 43.2 OHM 1% MK-3 50PPM
R 2C,19,19A,19B,19C	10	42150203	RES. 150 OHM 1% MK-3 50PPM
R 2D,60,60A	6	42205203	RES. 205 OHM 1% MK-3 50PPM
R 2E,6,6A	6	42100403	RES. 10K+/-1% MK-3 50PPM
R 2F,48,51	4	42100303	RES. 1K 1% MK-3 50PPM
R 2G	2	42432303	RES. 4.32K 1% MK-3 50PPM
R 5	2	42121303	RES. 1.21K 1% MK-3 50PPM
R 7,54A	4	42215403	RES. 21.5K 1% MK-3 50PPM
R 7A	2	42121403	RES. 12.1K 1% MK-350PPM
R 8	2	42150514	RES. 150K 1% MK-5 1W 50PPM
R 8,23	4	42750405	RES. 75K 1% MK-8 50PPM

PRODUCT: SP14

SP14

PARTS LIST

AS of JAN 24 83

NOTES:

Schematic Symbol	Quantity	ARC Part#	Description
R 9,13,24,27	8	42274405	RES. 27.4K 1% MK-8 50PPM
R 9B	2	42825405	RES. 82.5K 1% MK-8 50PPM
R 11,64	4	42357203	RES. 357 OHM 1% MK-3 50PPM
R 12,62	4	42274103	RES. 27.4 OHM 1% MK-3 50PPM
R 14,26,26A	6	42150414	RES. 15K 1% MK-5 50PPM
R 15,20,28	6	42475503	RES. 475K 1% MK-3 50PPM
R 16,16B,18	6	42619203	RES. .619 OHM 1% MK-3 50PPM
R 17	2	42562513	RES. 562K 1% MK-4 50PPM
R 18A	2	42274403	RES. 27.4K 1% MK-3 50PPM
R 18B	2	42357403	RES. 35.7K 1% MK-3 50PPM
R 21,29	4	42200205	RES. 200 OHM +/-1% MK8 50PPM
R 22,22A	4	42681303	RES. 6.81K 1% MK-3 50PPM
R 24A,24B,27A,35,36,42,43	10	42100505	RES. 100 1% MK-8 50PPM
R 25	2	42332103	RES. 33.2 OHM 1% MK-3 50PPM
R 25A,40,46B	4	42332203	RES. 332 OHM 1% MK-3 50PPM
R 26B,26C	4	42348403	RES. 34.8K 1% MK-3 50PPM
R 30,61	4	42681405	RES. 68.1K 1% MK-8 50PPM
R 31,31A,31B	6	42182303	RES. 1.82K 1% MK-3 50PPM
R 31C	2	42150303	RES. 1.50K 1% MK-3 50PPM
R 32	1	43100202	RES. 100 OHM 2W 5%
R 33	1	42158513	RES. 158K 1% MK-4 50PPM
R 34,34A,48A	3	42392403	RES. 39.2K 1% MK-3 50PPM
R 37	1	42499303	RES. 4.99K 1% MK-3 50PPM
R 38,63	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	43500100	RES. 50 OHM +/-5% 4 1/2W
R 46A	1	43750102	RES. 75 OHM 3W 5%
R 47	1	42768403	RES. 76.8K 1% MK-3 50PPM
R 48B	2	42162503	RES. 162K 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 52	1	42511303	RES. 5.11K 1% MK-3 50PPM
R 53	2	42255403	RES. 25.5K 1% MK-3 50PPM
R 53A,55A	4	42127403	RES. 12.7K 1% MK-3 50PPM
R 54	2	42118403	RES. 11.8K 1% MK-3 50PPM
R 55	2	42536303	RES. 5.36K 1% MK-3 50PPM
R 56,58,59	6	42464303	RES. 4.64K 1% MK-3 50PPM
R 56A	2	42316303	RES. 3.16K 1% MK-3 50PPM
R 57	2	42100314	RES. 1K 1% MK-5 50PPM
R 59A	2	42221303	RES. 2.2K 1% MK-3 50PPM
R 64A	2	42475203	RES. 475 OHM 1% MK-3 50PPM
CONTROLS			
RV 1	1	45100528	100K DUAL GAIN POT
RV 2	1	45100529	100 K DUAL BALANCE POT
RELAYS			
RY 1	2	64101000	RELAY, 12V REED 51P 1200 OHM
SWITCHES			
SW 1,12	2	24100710	TOGGLE SW.,PREM.SILVER,PRE AM
SW 2,3,4,8,9,10	6	24100410	TOGGLE SW.,PREM.GOLD,PRE AMP
SW 5	1	24002100	SWITCH, 5 POS. MODE
SW 6,7,11	3	24002000	SWITCH, 5 POS. ROTARY
TRANSFORMERS			
T 1	1	60007701	XFR. SP9(220/240V) TOROID
INTEGRATED CIRCUITS			
U 1	1	31002200	MC 34071 P MOTOROLA
U 2,3	2	31000801	SP10 TIMER MC1455PI

PARTS LIST

As of JAN 24 89

PRODUCT: SP14

SP14

NOTES:

Schematic Symbol	Quantity	ARC Part#	Description
U 4	1	31001900	TL071CP
U 5	1	31002000	D70/D115/D250 MC7815CT
VACUUM TUBES			
V 1	1	32001110	VAC.TUBE, 6DJ8 RUSSIAN
ZENER DIODES			
ZD 1	2	30504400	IN 5240B
ZD 2	2	30501800	IN5245B
ZD 3	1	30504200	IN5535A
ZD 4	1	30500300	IN 4740A
ZD 5,6	2	31000702	LM329DZ
ZD 7	1	30503500	IN5359 B
ZD 8,9,10	3	30503700	DIODE, Z20 10%