

audio research

H I G H D E F I N I T I O N[®]

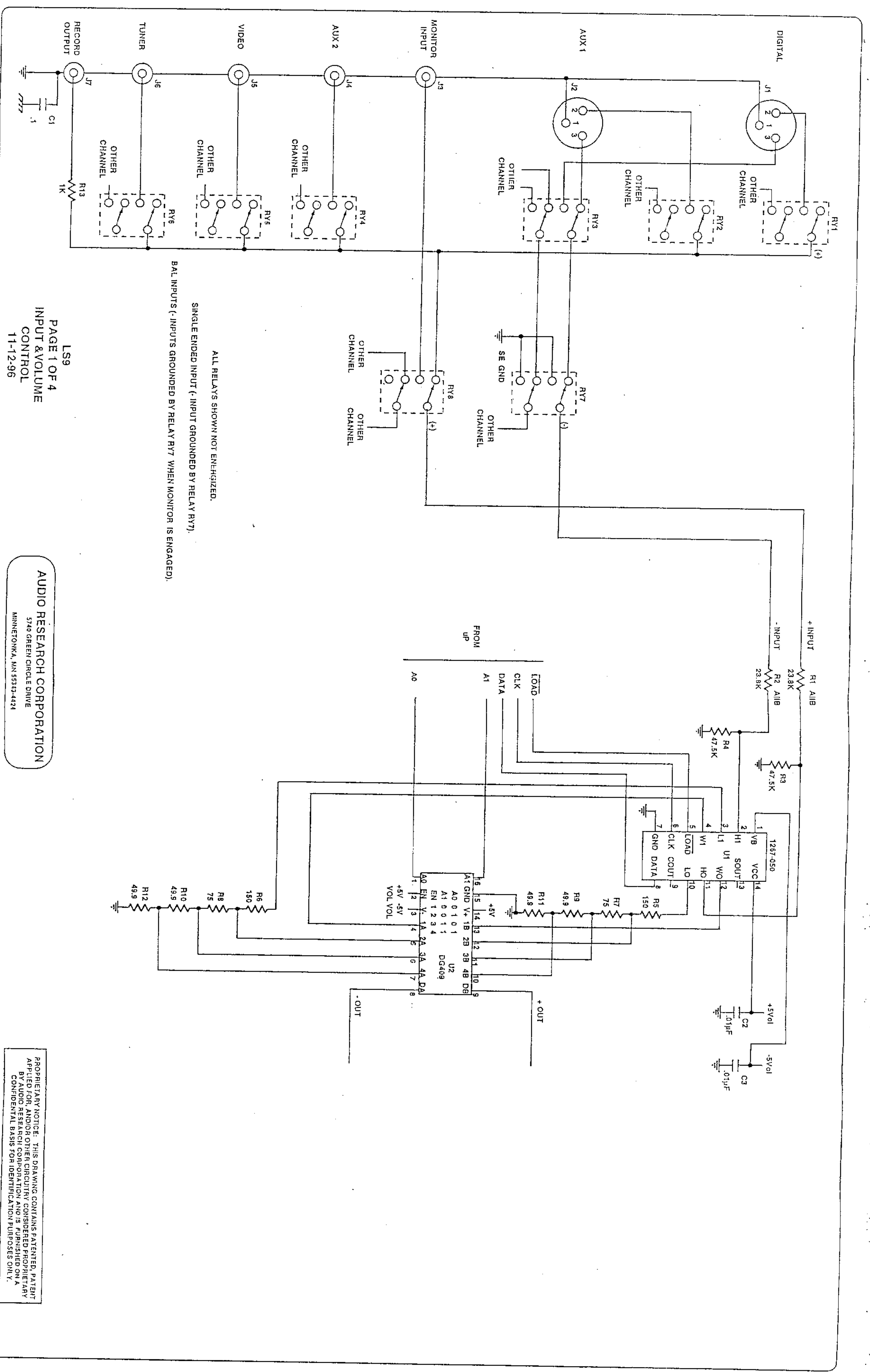
5740 GREEN CIRCLE DRIVE / MINNETONKA, MINNESOTA 55343-4424 / PHONE 612/939-0600 FAX 612/939-0604

LS9 SCHEMATIC

AND PARTS LIST

11-12-96 and

1-21-97



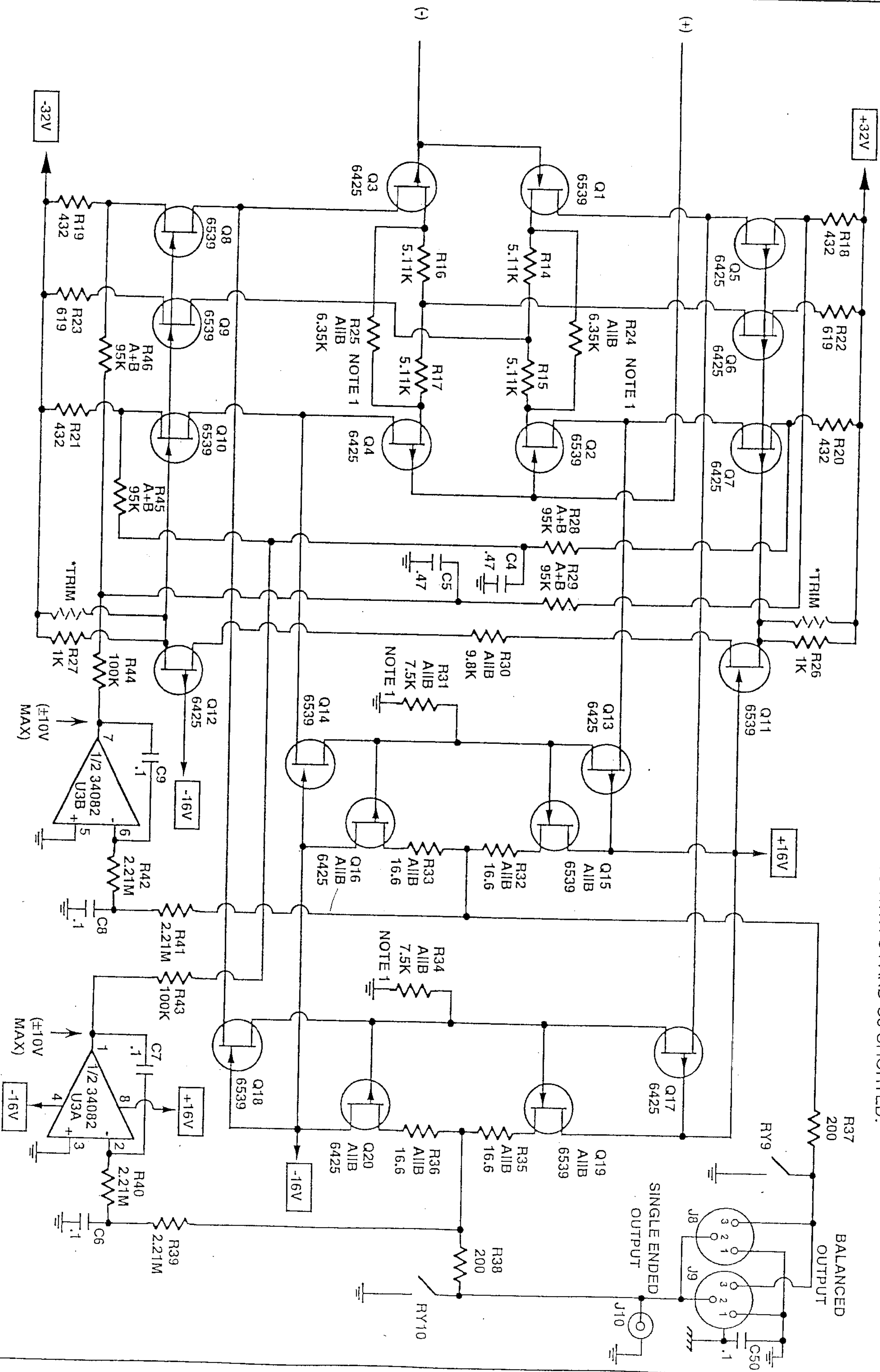
ALL RELAYS SHOWN NOT ENERGIZED.
 SINGLE ENDED INPUT (- INPUT GROUNDED BY RELAY RY7).
 BAL. INPUTS (- INPUTS GROUNDED BY RELAY RY7 WHEN MONITOR IS ENGAGED).

LS9
 PAGE 1 OF 4
 INPUT & VOLUME
 CONTROL
 11-12-96

AUDIO RESEARCH CORPORATION
 5746 GREEN CIRCLE DRIVE
 MINNETONKA, MN 55343-4421

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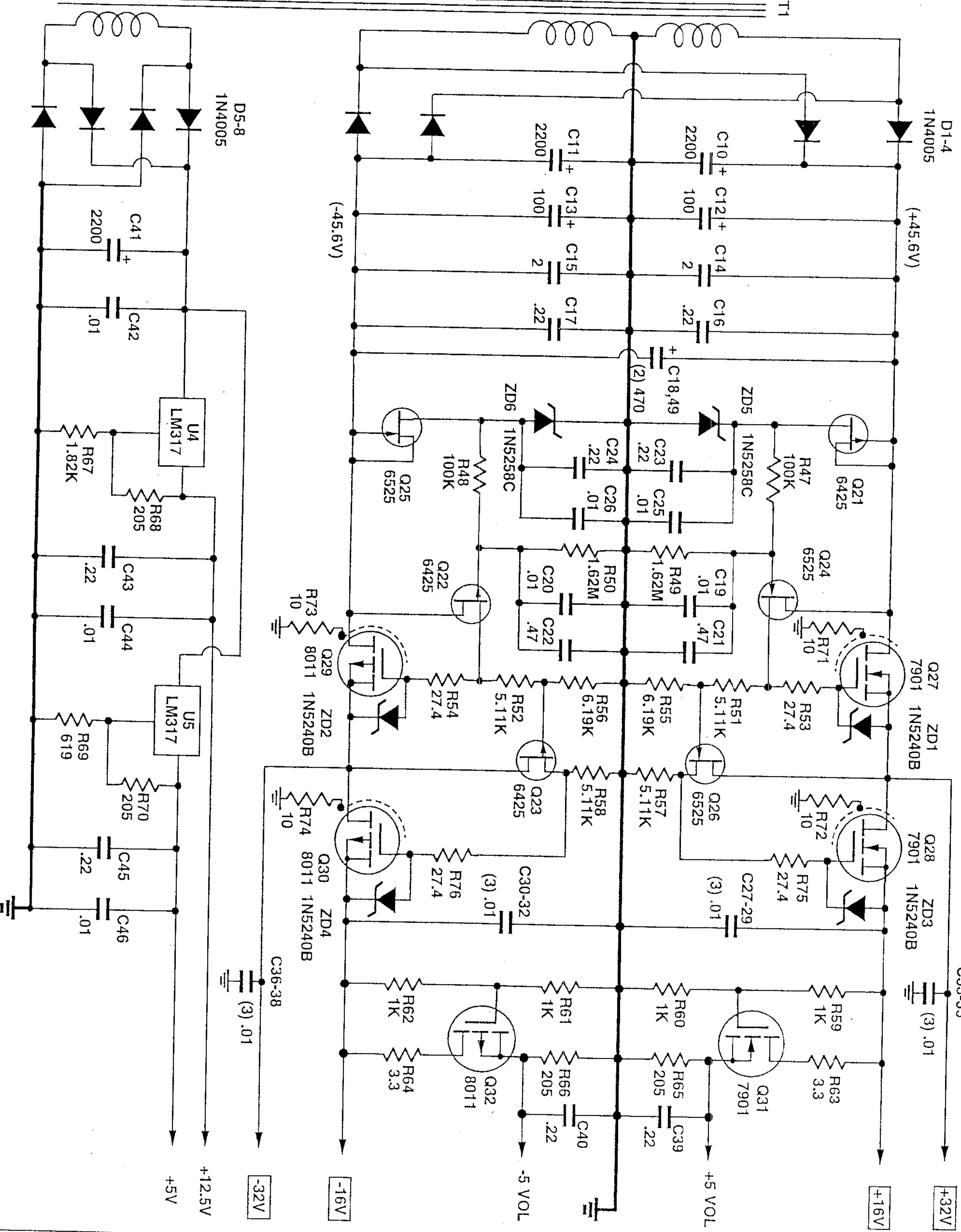
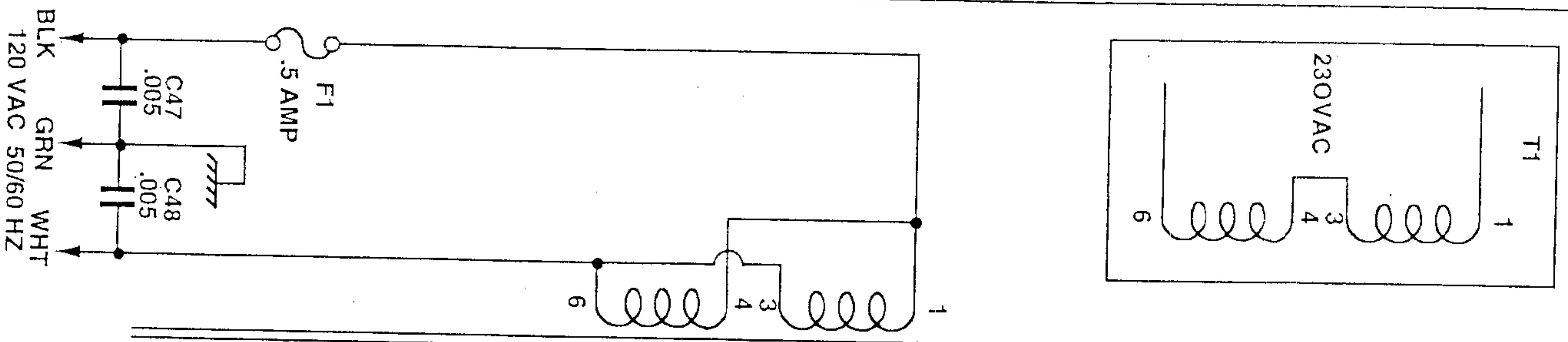
*TRIM FOR EQUAL OFFSET ON + AND - OUTPUTS WITH C4 AND C5 SHORTED.



NOTE 1: FOR HIGH GAIN
VERSION.
R24,25 3.44K(6.35K||7.5K).
R31,34 10K(20K||20K).

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LS9 POWER SUPPLY

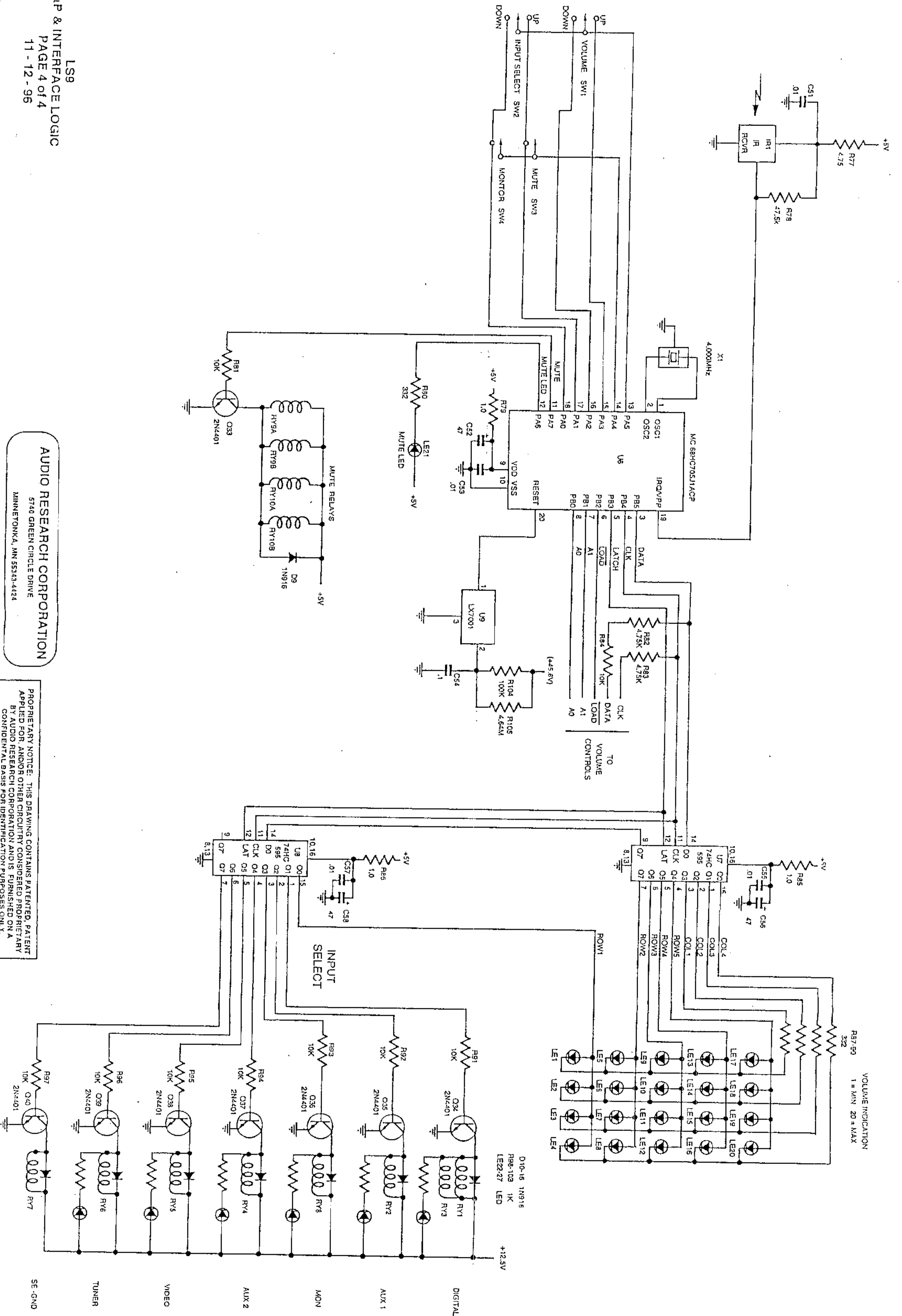
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1-21-97

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SE-GND

TUNER

VIDEO

AUX 2

MON

AUX 1

DIGITAL

+12.5V

LE22/27 LED

P98-109 1K

D10-16 1N916

ROW1

LE1

LE2

LE3

LE4

LE5

LE6

LE7

LE8

LE9

LE10

LE11

LE12

LE13

LE14

LE15

LE16

LE17

LE18

LE19

LE20

ROW2

ROW3

ROW4

COL1

COL2

COL3

COL4

CLK

DO

Q1

Q2

Q3

Q4

Q5

Q6

Q7

Q8

Q9

Q10

Q11

Q12

Q13

Q14

Q15

Q16

Q17

Q18

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Q110

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Q112

Q113

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Q116

Q117

Q118

Q119

Q120

PARTS LIST

As of FEB 18 97

PRODUCT: LS9

Schematic Symbol	Quantity	ARC Part #	Description
C CAPACITORS			
C1,50,54	4	52100500	CAP., 0.1 μ f 100V \pm 20%
C2,3,51,53,55,57	8	52100400	CAP., .01 μ f 200V \pm 10%
C4,5,21,22	6	53470511	CAP., .47 μ f \pm 20% 250V
C6-9	8	53100506	CAP., 0.1 μ f \pm 10% 160V
C10,11	2	50220904	CAP., 2200 μ F 63V
C12,13	2	50100806	CAP., 100 μ F 63V
C14,15	2	53200603	CAP., 2 μ F \pm 10% 250V
C16,17,23,24,40,43,45	8	53220507	CAP., .22 μ f \pm 10% 160V
C18,49	2	50470802	CAP., 470 μ F 100V "LYTIC"
C19,20,25-38,42,44,46	19	53100410	CAP., .01 μ f \pm 10% 400V
C41	1	50220903	CAP., 2200 μ F 35V ELECTROLYTIC
C52,56,58	3	50470701	CAP., 47 μ F 35V \pm 20%
D DIODES			
D1-8	8	30500400	IN4005
D9-16	8	30500910	1N916B
F FUSES			
F1	1	34500203	FUSE, 1/2 AMP MDQ BUSSMAN
IR IR RECEIVERS			
IR1	1	34100300	RECEIVER, IR MODULE GP1U581X
J CONNECTORS			
J1,2	4	23201960	CONNECTOR, XLR FEM. #NC3FD-V-B
J3-7,10	6	23201510	JACK, CHASSIS WHITE
J3-7,10	6	23201509	JACK, CHASSIS RED
J8,9	4	23201965	CONNECTOR, XLR MALE #NC3MD-V-B
LE PANEL INDICATOR			
LE1-27	27	34300300	L.E.D., GREEN SPOT LTL-1234A
Q TRANSISTORS			
Q1,2,8-11,15A-B,19A-B,24,26	22	30006527	FET, WHITE RED VIOLET
Q3-7,12,13,16A/B,17,20A/B,21-23	27	30006425	FET, GRAY, GRAY, DOT
Q14,18,25	5	30006525	FET, WHITE RED GREEN
Q27,28,31	3	30007901	FET, RED ORANGE
Q29,30,32	3	30008011	FET, GREEN GREEN
Q33-40	8	30002800	TRANSISTOR, 2N4401

PARTS LIST

As of FEB 18 97

PRODUCT: LS9

Schematic Symbol	Quantity	ARC Part #	Description
R RESISTORS			
R31A/B,34A/B	8	42150414	RES., 15K Ω MK-5 1% 50PPM
R1A/B,2A/B	8	42475413	RES., 47.5K Ω MK-4 1% 50PPM
R32A/B,33A/B,35A/B,36A/B	16	42332103	RES., 33.2 Ω MK-3 1% 50PPM
R24A/B,25A/B	8	42127403	RES., 12.7K Ω MK-3 1% 50PPM
R3,4,28A/B,29A/B,45A/B,46A/B,78	21	42475402	RES., 47.5K Ω MK-2 1% 50 PPM
R5,6	4	42150202	RES., 150 Ω MK-2 1% 50PPM
R7,8	4	42750102	RES., 75 Ω MK2 1% 50 PPM
R9-12	8	42499102	RES., 49.9 Ω MK-2 1% 50PPM
R13,27,59,60,62,98-103	13	42100303	RES., 1K Ω MK-3 1% 50PPM
R14-17,51,52,57,58	12	42511303	RES., 5.11K Ω MK-3 1% 50PPM
R18-21	8	42432202	RES., 432 Ω MK-2 1% 50 PPM
R22,23,69	5	42619203	RES., 619 Ω MK-3 1% 50PPM
R26,61	3	42110303	RES., 1.10K Ω MK3 1% 25PPM
R30A,B	6	42215403	RES., 21.5K Ω MK-3 1% 50PPM
R37,38	4	42200205	RES., 200 Ω MK8 1% 50PPM
R39-42	8	42221602	RES., 2.21 MEG MK-2 1% 50PPM
R43,44,47,48	6	42100502	RES., 100K Ω MK-2 1% 50PPM
R49,50	2	42162602	RES., 1.62 MEG MK-2 1% 50PPM
R53,54,75,76	4	42274103	RES., 27.4 Ω MK-3 1% 50PPM
R55,56	2	42619303	RES., 6.19K Ω MK-3 1% 50 PPM
R63,64	2	43330001	RES., 3.3 Ω 3W \pm 5% W.W.
R65,66,68,70	4	42205203	RES., 205 Ω MK-3 1% 50PPM
R67	1	42182303	RES., 1.82K Ω MK-3 1% 50PPM
R71-74	4	42100103	RES., 10 Ω MK-3 1% 50PPM
R77	1	42475002	RES., 4.75 Ω MK-2 1% 50 PPM
R79,85,86	4	42100002	RES., 1 Ω MK-2 1% 50 PPM
R80,87-90	5	42332203	RES., 332 Ω MK-3 1% 50PPM
R81,84,91-97	9	42100402	RES., 10K Ω MK-2 1% 50 PPM
R82,83	2	42475302	RES., 4.75K Ω MK-2 1% 50 PPM
R104	1	42100503	RES., 100K Ω MK-3 1% 50PPM
R105	1	42464603	RES., 4.64 MEG. MK-3 1% 50PPM
RY RELAYS			
RY1-8	8	64101600	RELAY, 12VDC
RY9,10	4	64101010	RELAY, 5 VDC 500 Ω COIL
SW SWITCHES			
SW1,2	2	24003400	SWITCH, ROTARY UP-DOWN LS15
SW3,4	2	24102700	SWITCH, TOGGLE LS15
T TRANSFORMERS			
T1	1	60014614	XFR., LS9 DUAL VOLTAGE

PARTS LIST

As of FEB 18 97

PRODUCT: LS9

Schematic Symbol	Quantity	ARC Part #	Description
U			INTEGRATED CIRCUITS
U1	2	31008221	IC, 50K VOLUME 1267-050 TESTED
U2	2	31003820	DUAL ANALOG SWITCH DG409DJ
U3	2	31001911	FET, J INPUT OP-AMP, MC34082
U4,5	2	31004000	REGULATOR, VOLTAGE ADJ POS.
U6	1	31008300	MC68HC705J1A, MOTOROLA
U7,8	2	31006800	REGISTER, LATCH
U9	1	31008400	LX7001CLP, LINFINITY
X			CRYSTALS
X1	1	27000200	RESONATOR, 4Mhz #EFO-GC4004A4
ZD			ZENER DIODES
ZD1-4	4	30504400	IN5240B