

audio research

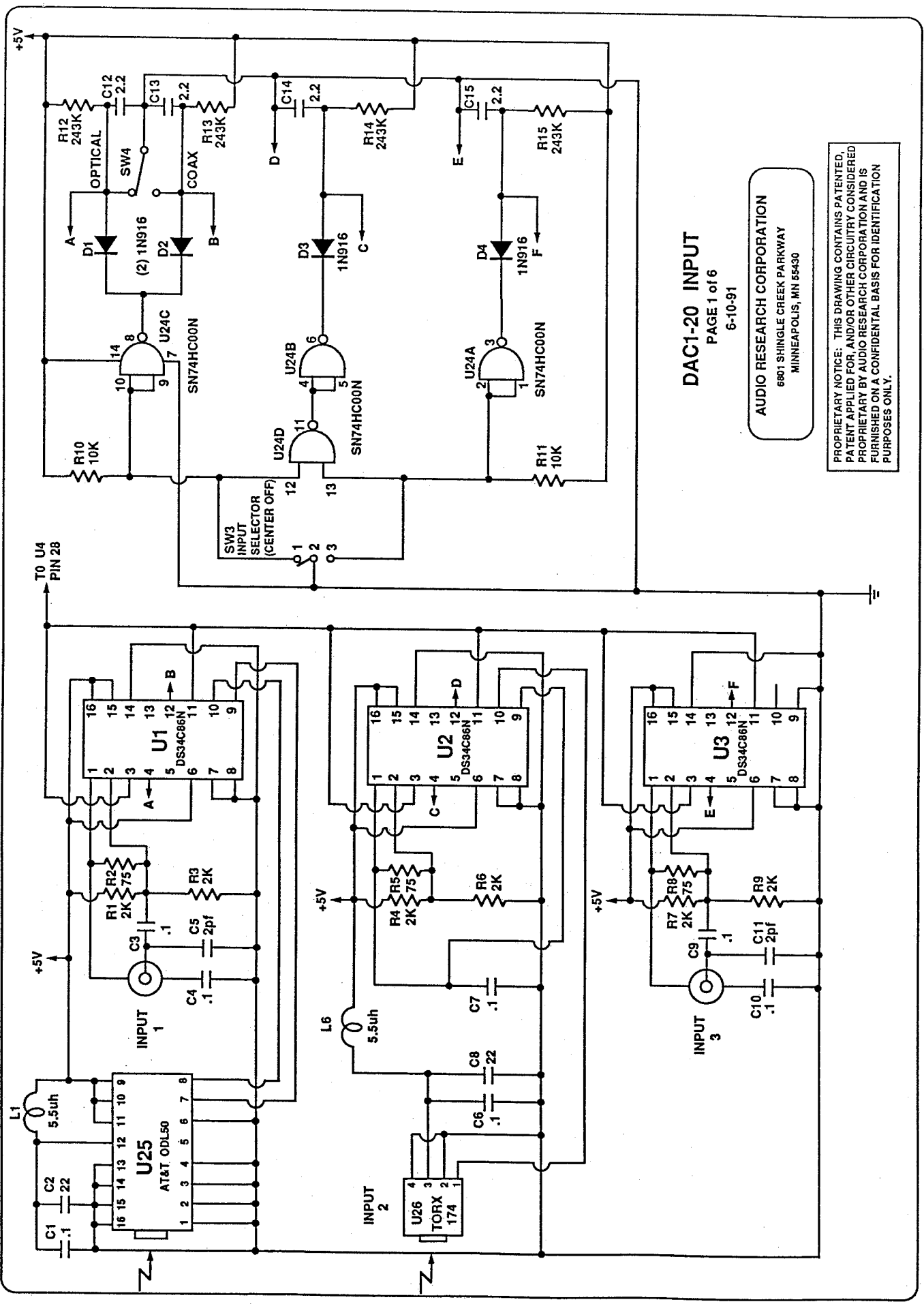
H I G H D E F I N I T I O N ®

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DAC1-20

SCHEMATIC AND PARTS LIST

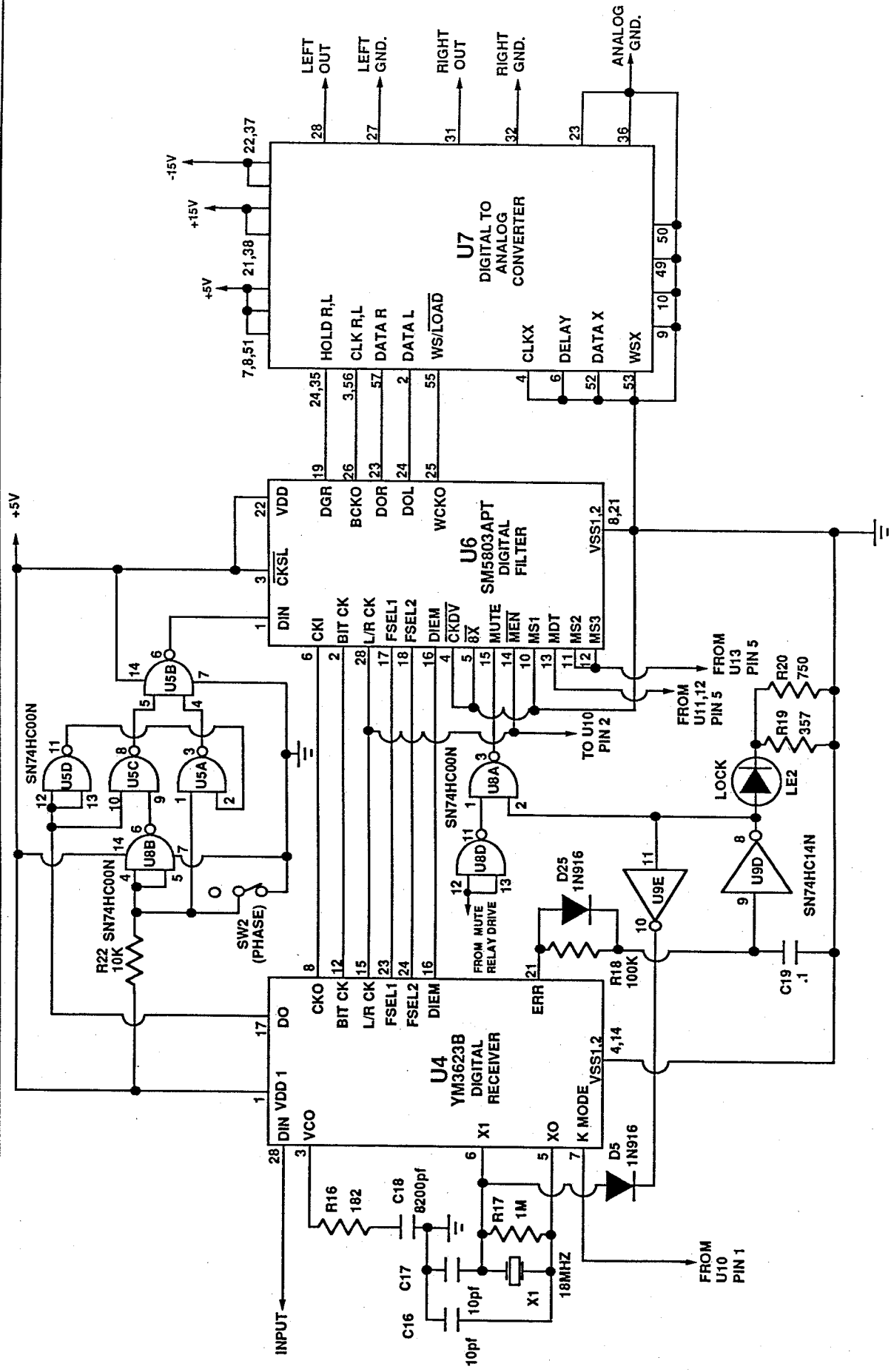
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DAC1-20 INPUT
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MINNEAPOLIS, MN 55430

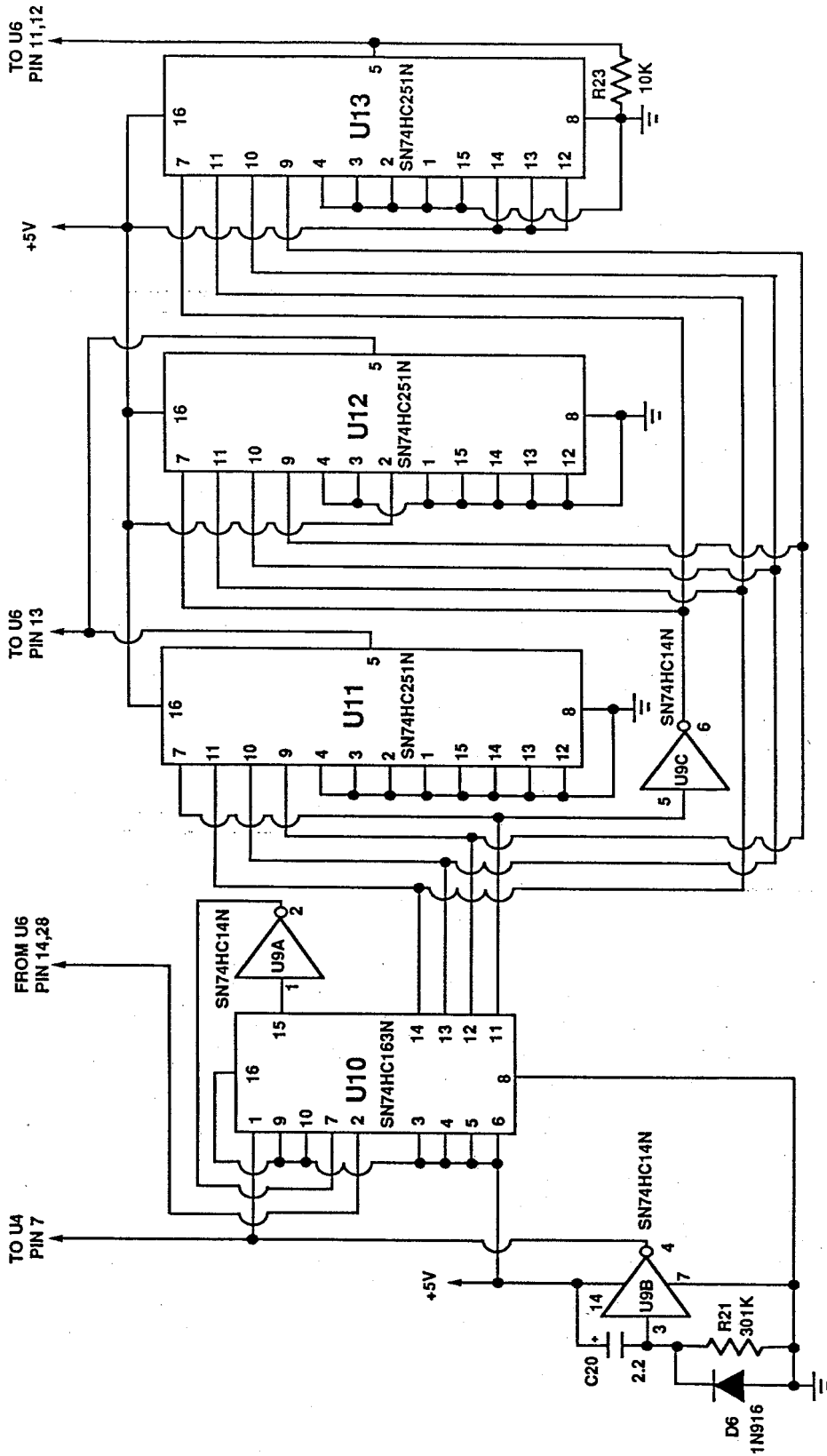
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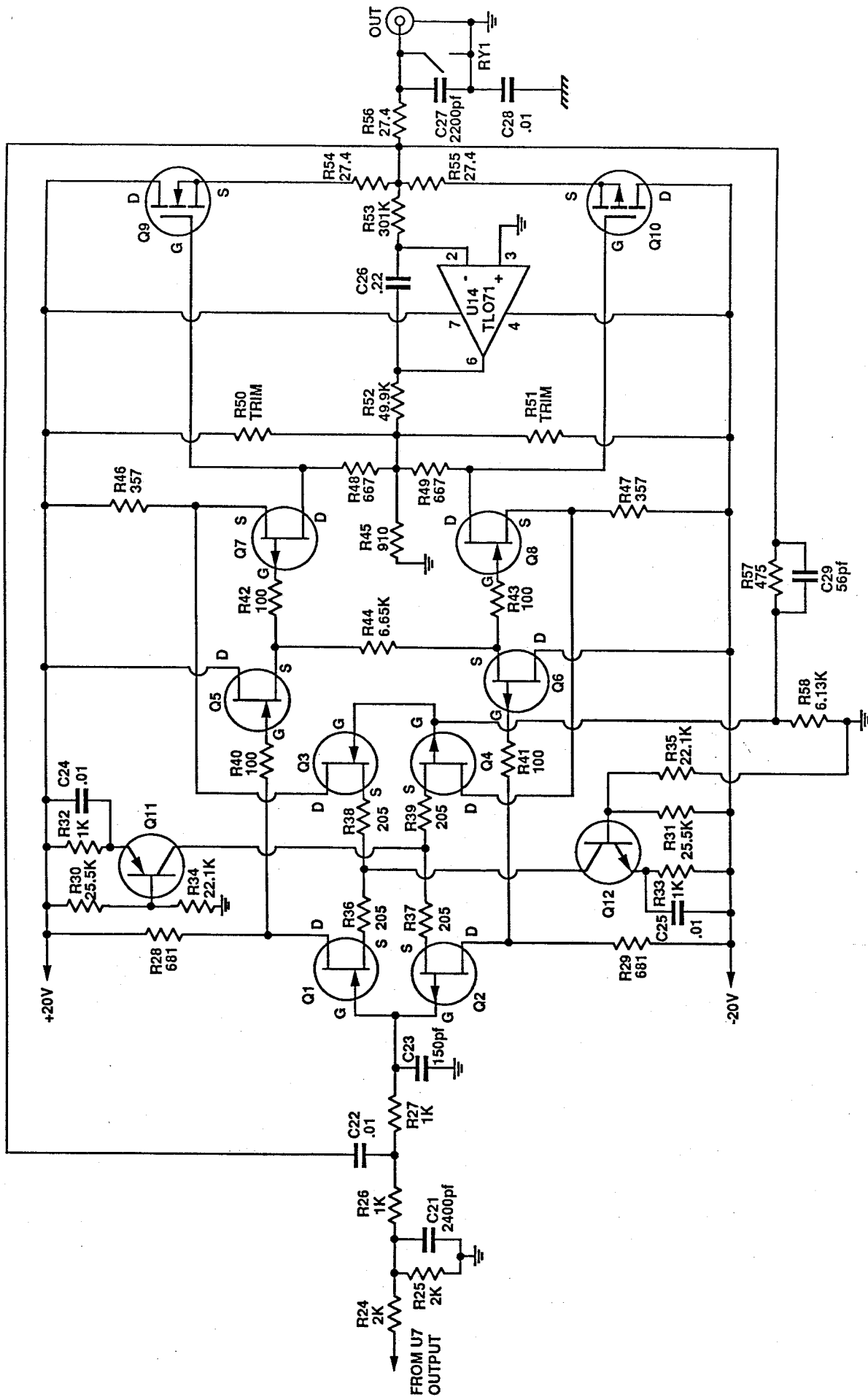
DAC1-20 DIGITAL
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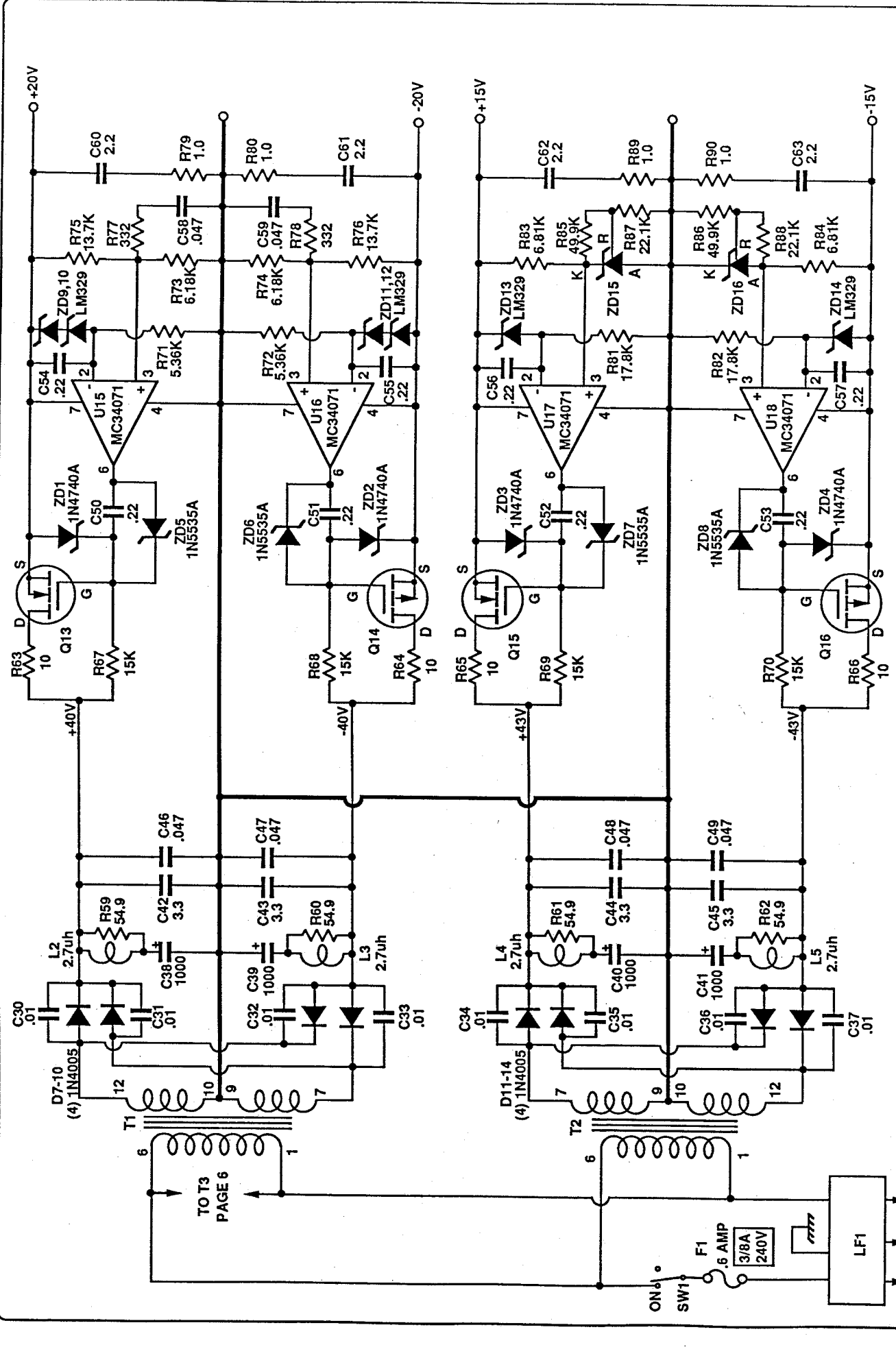
DAC1-20 FILTER STARTUP



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DAC1-20 ANALOG FILTER
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DAC1-20 POWER SUPPLY
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BLK GRN WHT
 120 VAC 50/60 HZ

PARTS LIST

As of AUG 6 92

PRODUCT: DAC1-20

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
C CAPACITORS			
C 1,6,19,78-90	16	53100505	CAP. .1 UF 10% 63V
C 2,8	2	50220701	CAP. 22 UF 100V
C 3,4,7,9,10	5	52100500	CAP. 0.1 UF 100V
C 5,11	2	53200003	CAP. 2 PF STY.
C 12,13,14,15,20	5	51220601	CAP. 2.2 UF +/-10% 25V
C 16,17	2	53100101	CAP. 10 PF +/-1 PF 630V PPN
C 18	1	53820300	CAP. 8200 PF STY.
C 21	2	53240305	CAP. .0024 PF 2% 630V
C 22,24,25	6	53100410	CAP. .01 UF 400V MKP10
C 23	2	53150202	CAP. 150 PF 2 1/2% 630V PPN
C 26,50-57,74-77,91	15	53220507	CAP. .22 UF 10% 160V
C 27	2	53220306	CAP. 2200 PF 10% 100VDC
C 28,30-37,64-71	18	52100400	CAP. .01 UF 200V
C 29	2	53560103	CAP. 56 PF +/-2% 630V DPN
C 38-41,72,73	6	50100908	CAP. 1000 UF 63V
C 42-45	4	53330602	CAP. 3.3 UF 160V +/-10%
C 46-49,58,59	6	53470402	CAP. 0.047 UF 160V 10%
C 60-63	4	53220601	CAP. 2.2 UF 160V 10% MKP10
C 92	1	53220506	CAP. .22 MFD 100V
C 93	1	51330702	CAP. 33 UF +/-10% 16V
D DIODES			
D 1-6,23,24,25	9	30500910	1N916B
D 7-22	16	30500400	IN4005 GENERAL INSTRUMENT
F FUSES			
F1	1	34500270	FUSE, 6/10 AMP
F2	1	34500102	FUSE, 1/4 250V
J CONNECTORS			
J 1,2	2	23202200	CONNECTOR,BNC
J 4	1	23201509	CHASSIS JACK,RED
J 5	1	23201510	CHASSIS JACK,WHITE
J 6	2	23202400	BNC ADAPTOR
L INDUCTORS			
L 1,6	2	61000170	CHOKE, 5.5 UH
L 2,3,4,5	4	61000160	CHOKE, 2.7 UH +/- 10%
LE PANEL INDICATOR			
LE 1,2	2	34300102	L.E.D. COLLAR & RETAINING RING

PARTS LIST

As of AUG 6 92

PRODUCT: DAC1-20

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
LF			LINE FILTER
LF 1	1	59000001	LINE FILTER
Q			TRANSISTORS
Q 1,3	4	30006528	FET, WHITE RED GRAY
Q 2,4	4	30006428	FET, GRAY,GRAY
Q 5,7	4	30006624	FET, VIOLET RED YELLOW
Q 6,8	4	30006409	FET, BLUE WHITE
Q 9	2	30007900	FET, VNO116N5 SUPERTEX
Q 10	2	30008000	VPO116N5 SUPERTEX
Q 11,18	3	30002900	TRANSISTOR,2N4403
Q 12	2	30002800	TRANSISTOR,2N4401
Q 14,16	2	30007029	FET, GRAY WHITE
Q 15,17	2	30006812	FET, YELLOW GRAY
R			RESISTORS
R 1,3,4,6,7,9,24,25,48A,49A	14	42200303	RES. 2K MK-3 1% 50PPM
R 2,5,8	3	42750103	RES. 75 OHM 1% MK-3 50PPM
R 10,11,22,23,101	5	42100403	RES. 10K+/-1% MK-3 50PPM
R 12,13,14,15	4	42243503	RES. 243K 1% MK3 50PPM
R 16	1	42182203	RES. 182 OHM 1% MK-3 50PPM
R 17	1	42100603	RES. 1 MEG 1% MK-3 50PPM
R 18,94	2	42100503	RES. 100K+/-1% MK-3 50PPM
R 19,46,47,97	6	42357203	RES. 357 OHM 1% MK-3 50PPM
R 20,98	2	42750203	RES. 750 OHM 1% MK-3 50PPM
R 21,53	3	42301503	RES. 301K 1% MK-3 50PPM
R 26,27,32,33,48,49	12	42100303	RES. 1K 1% MK-3 50PPM
R 28,29	4	42681203	RES. 681 OHM 1% MK-3 50PPM
R 30,31	4	42255403	RES. 25.5K 1% MK-3 50PPM
R 34,35,87,88	6	42221403	RES. 22.1K 1% MK-3 50PPM
R 36,37,38,39	8	42205203	RES. 205 OHM 1% MK-3 50PPM
R 40,41,42,43,91	9	42100203	RES. 100 OHM 1% MK-3 50PPM
R 42,85,86	4	42499403	RES. 49.9K 1% MK-3 50PPM
R 44	2	42665303	RES. 6.65K 1% MK-3 50PPM
R 45,45A	4	42182303	RES. 1.82K 1% MK-3 50PPM
R 54,54A,55,55A,56,56A,59,60,61,62	16	42549103	RES. 54.9 OHM 1% MK-3 50PPM
R 57	2	42475203	RES. 475 OHM 1% MK-3 50PPM
R 58,73,74	4	42118403	RES. 11.8K 1% MK-3 50PPM
R 58A	2	42127403	RES. 12.7K 1% MK-3 50PPM
R 63,64,65,66	5	42100103	RES. 10 OHM 1% MK-3 50PPM
R 67,68,69,70	4	42150403	RES. 15K 1% MK-3 50PPM
R 71,72	2	42536303	RES. 5.36K 1% MK-3 50PPM
R 73A,74A	2	42130403	RES. 13K 1% MK-3 50PPM
R 75,75A,76,76A	4	42274403	RES. 27.4K 1% MK-3 50PPM
R 77,78	2	42332203	RES. 332 OHM 1% MK-3 50PPM
R 79,80,89,90	4	43100002	RES. 1 OHM 2W 5% W.W.
R 81,82	2	42178403	RES. 17.8K 1% MK-3 50PPM
R 83,84	2	42681303	RES. 6.81K 1% MK-3 50PPM
R 92,93	2	42237303	RES. 2.37K 1% MK-3 50PPM
R 94A	1	42137503	RES. 137K 1%MK-3 50PPM
R 95,95A,96	3	42162503	RES. 162K 1% MK-3 50PPM
R 99	1	42237203	RES. 237 OHM 1% MK-3 50PPM

PARTS LIST

As of AUG 6 92

PRODUCT: DAC1-20

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
R 102	1	42768403	RES. 76.8K 1%MK-3 50PPM
RY RELAYS			
RY 1	2	64101010	RELAY, 5V DAC1
SW SWITCHES			
SW 1,2	2	24101600	TOGGLE,INVERT
SW 3	1	24101700	TOGGLE,INPUT
SW 4	1	24101500	TOGGLE,RECEIVER
T TRANSFORMERS			
T 1	1	60009200	XFR. ANALOG
T 2	1	60009300	XFR. DIGITAL
T 3	1	60009400	XFR. 5 VOLT
U INTEGRATED CIRCUITS			
U 1,2,3	3	31003220	LINE RECEIVER, C MOS
U 4	1	31003700	IC, DIGITAL RECEIVER
U 5,8,24	3	31003400	IC, QUAD GATE
U 6	1	31003100	IC, DIGITAL FILTER
U 7	1	31003010	DUAL 20 BIT DAC
U 9	1	31003300	IC, HEX INVERTER
U 10	1	31003500	IC, 4-BIT COUNTER
U 11,12,13	3	31003600	IC, DATA MULTIPLEXER
U 14	2	31001901	TLO71CP TESTED(RED LINE)
U 15,16,17,18,19	5	31002200	MC34071P
U 20,21	2	31002910	IC, 5V REGULATOR
U 22,23	2	31000801	TIMER
U 25	1	34100001	RECEIVER,GLASS FIBER
U 26	1	34100002	RECEIVER,PLASTIC FIBER
X CRYSTALS			
X 1	1	27000001	CRYSTAL,18.0MHz
ZD ZENER DIODES			
ZD 1,2,3,4,17	5	30500300	IN4740A
ZD 5,6,7,8	4	30504210	IN5535A (KNOX ONLY)
ZD 9-14	6	31000705	LM329DZ GREEN
ZD 15,16,18,19	4	31002600	ZENER DIODE, TL431CLP ADJ