

audio research

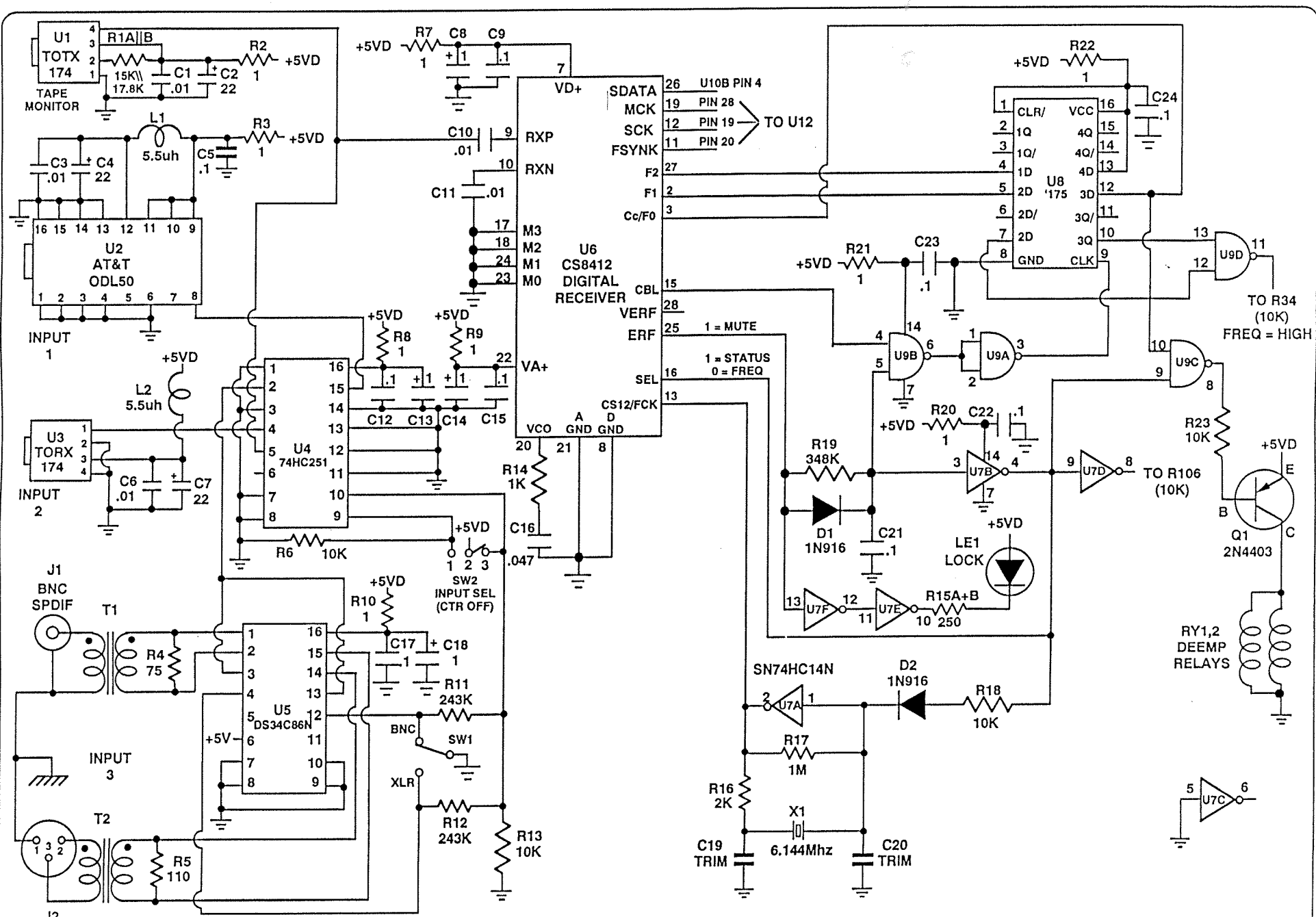
H I G H D E F I N I T I O N[®]

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

DAC3

SCHEMATIC

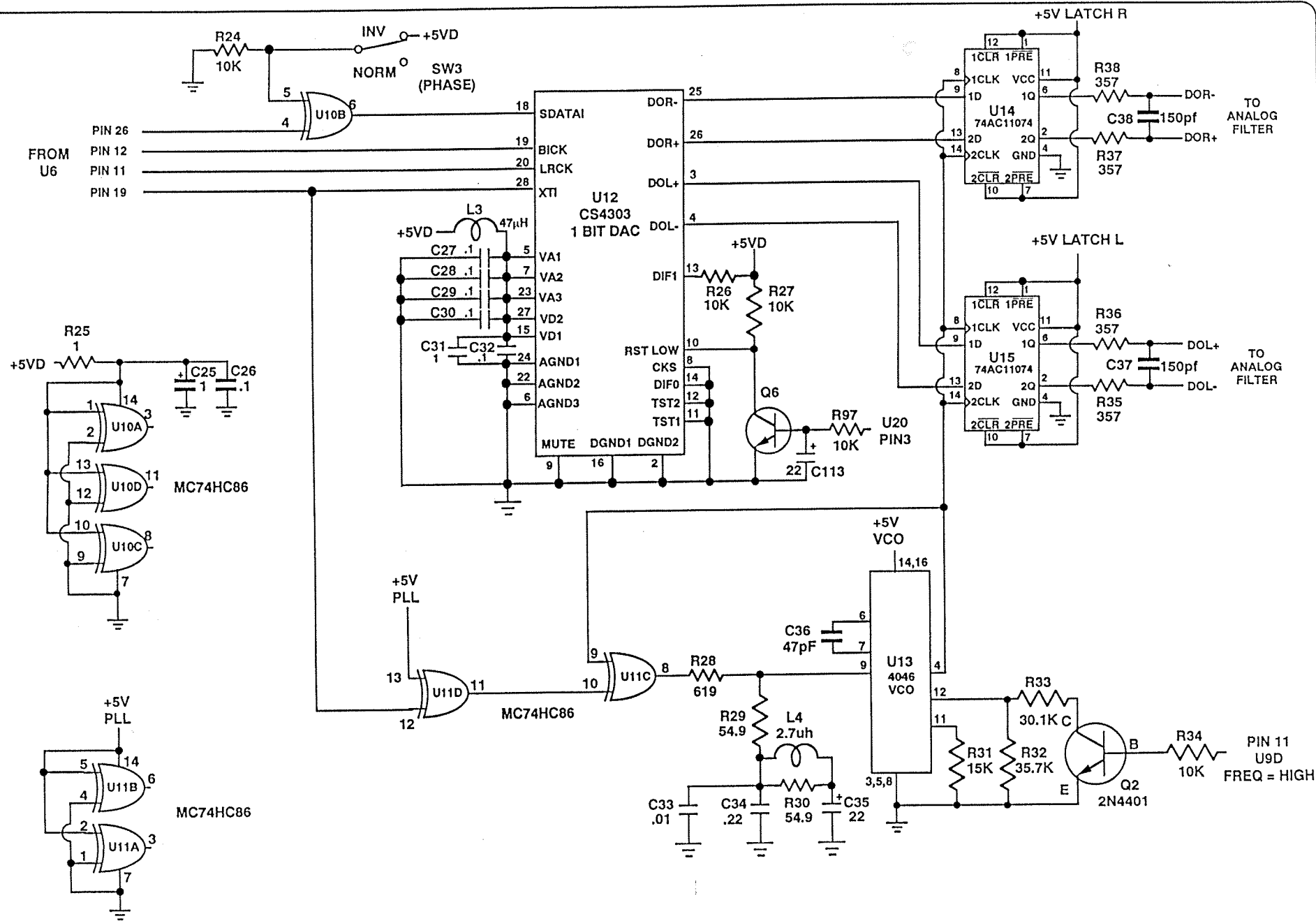
8-25-94



**DAC3
INPUT SEL & RCVR**
PAGE 1 of 5
8-25-94

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5740 GREEN CIRCLE DRIVE
MINNETONKA, MN 55343-4424

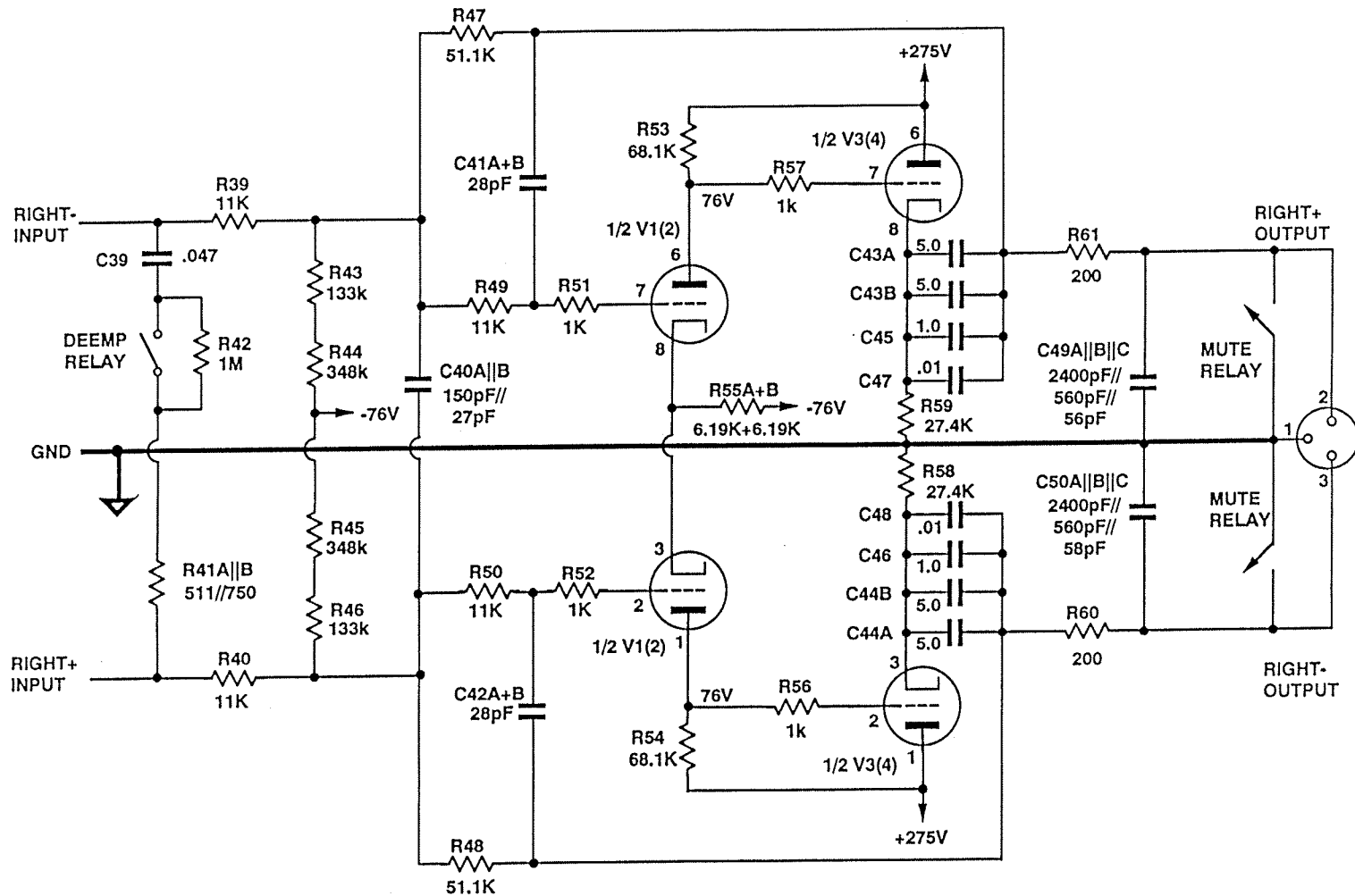
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**DAC3
DAC & VCO**
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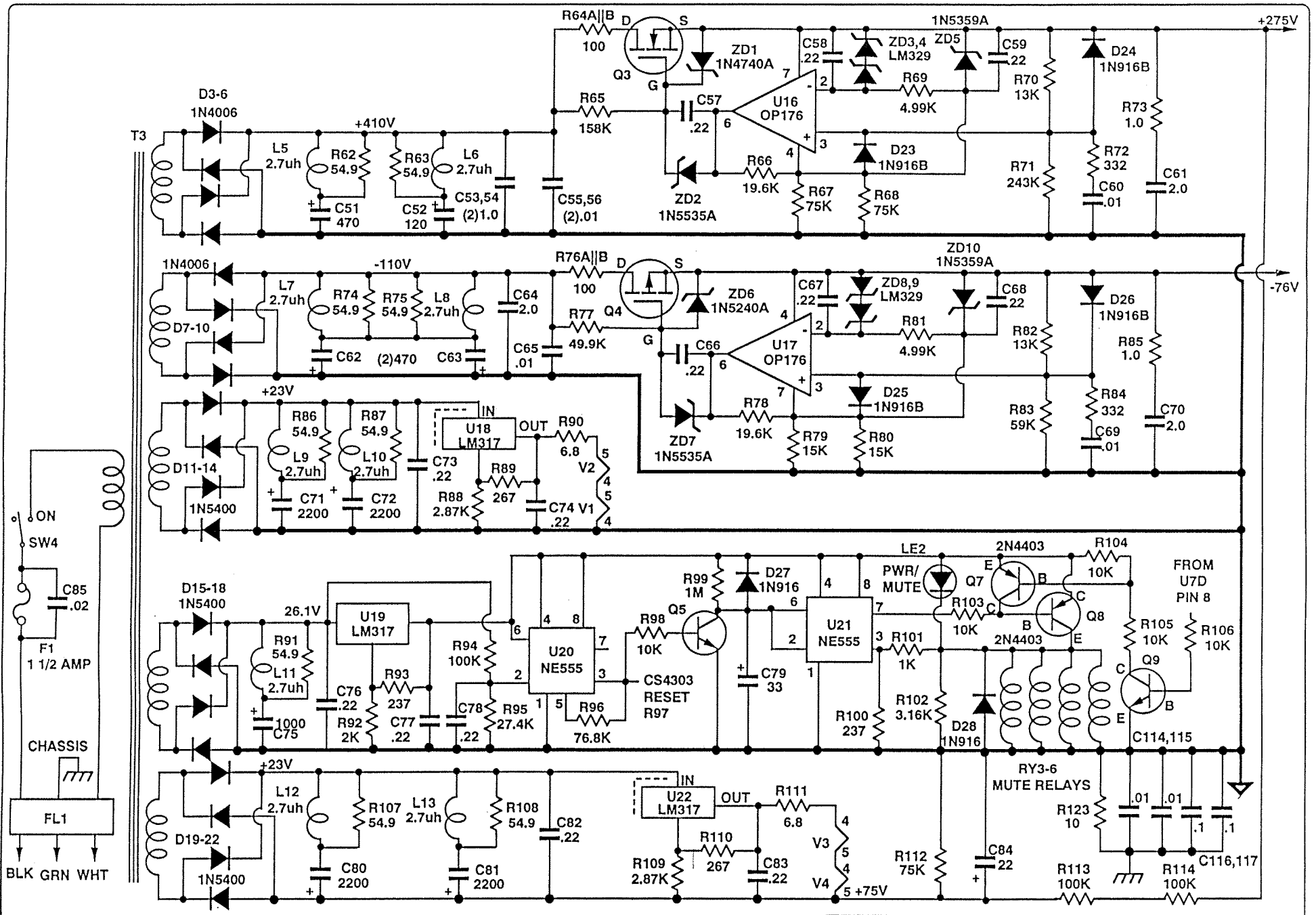
RIGHT(LEFT) CHANNEL SHOWN

DAC3 ANALOG

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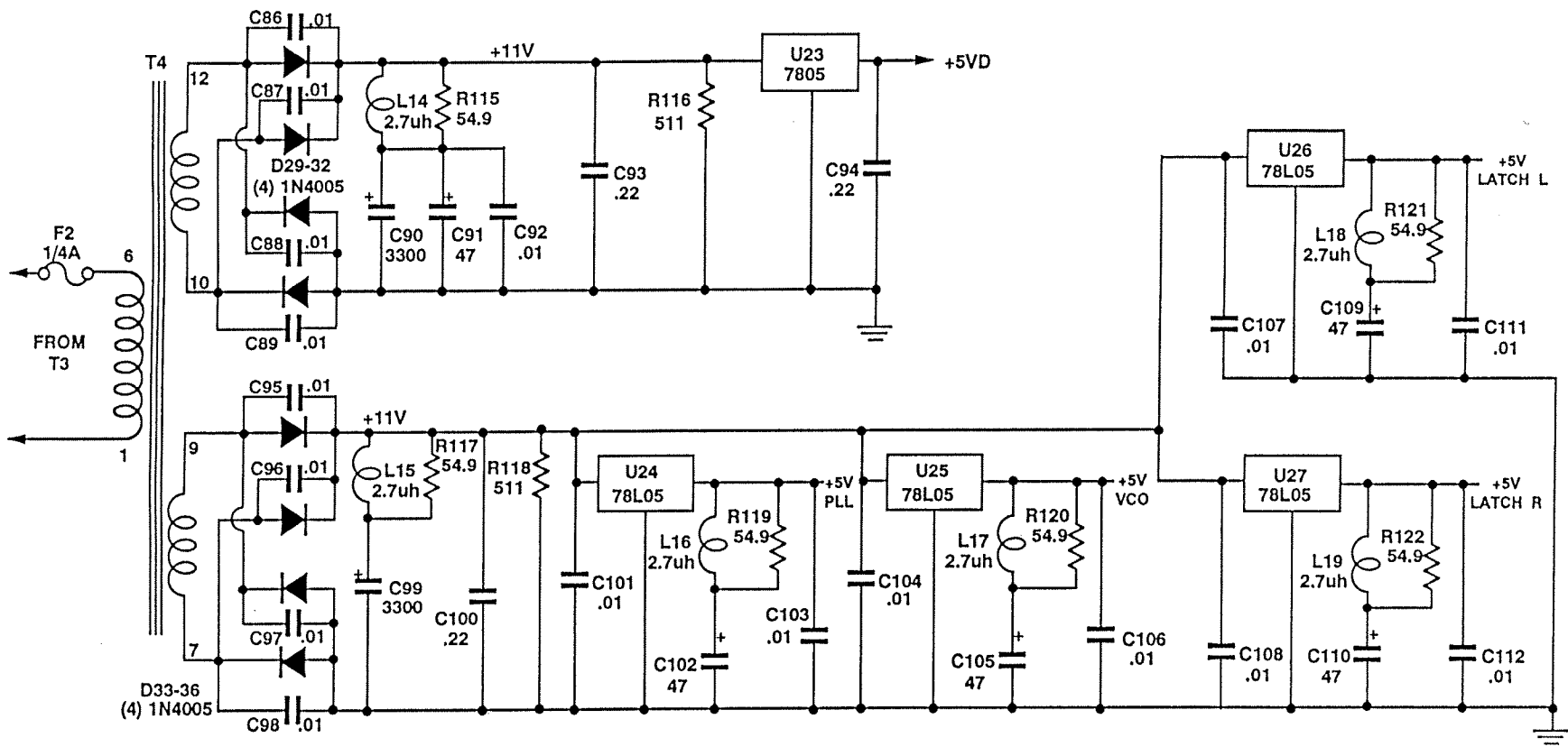
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DAC3
ANALOG POWER SUPPLY
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3900 ANNAPOLIS LANE NORTH / PLYMOUTH, MINNESOTA 55447-5447 / PHONE: 763-577-9700 FAX 763-577-0323

DAC3
PARTS LIST

3-17-95

PARTS LIST

As of MAR 17 95

PRODUCT: DAC3

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
C CAPACITORS			
C1,3,6,10,86-89,95-98,114,115,11	15	52100400	CAP. .01 UF 200V
C2,4,7,35,113	5	50220702	CAP. 22UF 50V
C5,9,12,15,17,21,22,23,24,26,27,28	17	52100500	CAP. 0.1 UF 100V
C 29,30,32,116,117			
C8,13,14,18,25,31	6	50100601	CAP. 1UF 63V
C16	1	52470401	CAP. .047UF CERAMIC
C33,92	2	53100410	CAP. .01 UF 400V MKP10
C34,57,58,59,66,67,68,73,74,76,77,78	17	53220507	CAP. .22 UF 10% 160V
C 82,83,93,94,100			
C 36,41B,42B	4	53560103	CAP. 56 PF+/-2% 630V DPN
C37,38	2	53150202	CAP. 150 PF 2 1/2% 630V PPN
C39	2	53470403	CAP. .047 UF +/-10% 160V.
C40,116	4	53100304	CAP. 1000PF 2.5% 630V. PPN
C 41A,42A	4	53270101	CAP. 27 PF +/-1PF 630V PNP
C43A,43B,44A,44B	8	53500607	CAP. 5 UF 200V
C45,46	4	53100610	CAP. 1UF 400V
C47,48	4	53100412	CAP. .01UF 600V
C49,50	4	53480300	CAP. .0048 UF+/-2% 630V
C51	1	50470807	CAP. 470UF 450V
C52	1	50120801	CAP. 120UF 450V.
C53,54	2	53100608	CAP. 1.0 UF 1-20% 425V TYPE V
C55,56,60,65,69	5	53100406	CAP. .01 UF+/-10% 630V
C61,65,70	3	53200602	CAP. 2 UF +/-10% 450V
C62,63	2	50470804	CAP. 470 UF 160V. RADIAL
C71,72,80,81	4	50220903	CAP. 2200 UF 35V.
C75	1	50100911	CAP. 1000 UF 35V
C79	1	51330702	CAP. 33 UF+/-10% 16V
C84	1	50220701	CAP. 22 UF 100V
C85	1	52200400	CAP. .02 UF 20% 300VAC/2000VD
C90,99	2	50330902	CAP. "LYTIC" 3300µF 25V
C91,102,105,109,110	5	50470701	CAP. 47UF 35V
C101,103,104,106,107,108,111,112	8	53100506	CAP. .1 UF 160V
C118,119	4	53780301	CAP. 7800 PF+/-2% 630V
D DIODES			
D3-10	8	30502200	IN4006
D11-14,19-22	8	30501500	MOTOROLA IN5400
D15-18,29-36	12	30500400	IN4005 GENERAL INSTRUMENT
F FUSES			
F1	1	34501700	FUSE, MDX 1.5 A
F2	1	34500102	FUSE, 1/4 250V
FL-1	1	59000001	LINE FILTER

PARTS LIST

As of MAR 17 95

PRODUCT: DAC3

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
J CONNECTORS			
J1	1	23202210	BNC CONNECTOR
J2	1	23201990	XLR FEMALE INPUT
J3	2	23201980	CONNECTOR,XLR BOARD MT
J4	1	23201509	CHASSIS JACK,RED
J4	1	23201510	CHASSIS JACK,WHITE
L INDUCTORS			
L1,2	2	61000170	CHOKE, 5.5 UH
L3	1	61000200	CHOKE, 47UH +/-5%
L4-19	16	61000160	CHOKE, 2.7 UH +/- 10%
LE PANEL INDICATOR			
LE1,2	2	34300102	L.E.D. COLLAR & RETAINING RING
Q TRANSISTORS			
Q1,7,8	3	30002900	TRANSISTOR,2N4403
Q2,5,6,9	4	30002800	TRANSISTOR,2N4401
Q3	1	30006761	FET, ORANGE YELLOW BROWN
Q4	1	30008401	FET, RED BLUE
R RESISTORS			
R 1A,49,50	5	42150403	RES. 15K 1% MK-3 50PPM
R1A	1	42150203	RES. 150 OHM 1% MK-3 50PPM
R1B	1	42178403	RES. 17.8K 1% MK-3 50PPM
R2,3,7,8,9,10,20,21,22,25	10	42100002	RES. 1 OHM MK-2 1% 50 PPM
R4	1	42750103	RES. 75 OHM 1% MK-3 50PPM
R5	1	42110203	RES. 110 OHM +/-1% MK-3 50PPM
R6,13,18,23,24,26,27,34,97,98,103,104	14	42100403	RES. 10K +/-1% MK-3 50PPM
R 105,106,			
R11,12,71	3	42243503	RES. 243K 1% MK3 50PPM
R14,51,52,56,57,101,125,126,	7	42100303	RES. 1K 1% MK-3 50PPM
R15A	1	42100203	RES. 100 OHM 1% MK-3 50PPM
R16,92	2	42200303	RES. 2K MK-3 1% 50PPM
R17,42,99	4	42100603	RES. 1 MEG 1% MK-3 50PPM
R19,44,45	5	42348503	RES. 348K 1% MK-3 50PPM
R28	1	42619203	RES. 619 OHM 1% MK-3 50PPM
R29,30,62,63,74,75,86,87,91,107,108	17	42549103	RES. 54.9 OHM 1% MK-3 50PPM
R 115,117,119-122			
R31	1	42750303	RES. 7.5K 1% MK-3 50PPM
R32	1	42255403	RES. 25.5K 1% MK-3 50PPM
R35-38	4	42357203	RES. 357 OHM 1% MK-3 50PPM
R 39,40	4	42110403	RES. 11K 1% MK-3 50PPM
R41A,116,118	4	42511203	RES. 511 OHM 1% MK-3 50PPM
R41B	2	42750203	RES. 750 OHM 1% MK-3 50PPM
R43,46	4	42110503	RES. 110K 1% MK3 50PPM
R 47,48	4	42698403	RES. 69.8K 1% MK-3 50PPM
R53,54	4	42681405	RES. 68.1K 1% MK-8 50PPM
R55A	2	42619303	RES. 6.19K MK-3 1% 50 PPM
R55B	2	42681303	RES. 6.81K 1% MK-3 50PPM

PARTS LIST

As of MAR 17 95

PRODUCT: DAC3

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
R58,59,79,80	6	42150405	RES. 15K 1% MK-8 50PPM
R60,61,64A,64B,76A,76B	8	42200205	RES. 200 OHM+/-1% MK8 50PPM
R65	1	42158513	RES. 158K 1% MK-4 50PPM
R66,78	2	42196403	RES. 19.6K 1% MK-3 50PPM
R67,68,112	3	42750405	RES. 75K 1% MK-8 50PPM
R69,81	2	42499303	RES. 4.99K 1% MK-3 50PPM
R70,82	2	42130403	RES. 13K 1% MK-3 50PPM
R72,84	4	42332203	RES. 332 OHM 1% MK-3 50PPM
R73,85	2	43100002	RES. 1 OHM 2W 5% W.W.
R77	1	42499403	RES. 49.9K 1% MK-3 50PPM
R83	1	42590403	RES. 59K 1% MK-3 50PPM
R88,109	2	42287303	RES. 2.87K 1% MK-3 50PPM
R89,110	2	42267203	RES. 267 OHM 1% MK-3 50PPM
R90,111	2	43680000	RES. 6.8 OHM 2W 5% SPH
R93,100	2	42237203	RES. 237 OHM 1% MK-3 50PPM
R94	1	42100503	RES. 100K+/-1% MK-3 50PPM
R95	1	42274403	RES. 27.4K 1% MK-3 50PPM
R96	1	42768403	RES. 76.8K 1%MK-3 50PPM
R102	1	42316303	RES. 3.16K 1% MK-3 50PPM
R113,114	2	42100505	RES. 100K 1% MK-8 50PPM
R123	1	42100103	RES. 10 OHM 1% MK-3 50PPM
R124	2	42121403	RES. 12.1K 1% MK-350PPM
RY RELAYS			
RY1,2	2	64101010	RELAY, 5V DAC1
RY3-6	4	64101000	RELAY, 12V REED S1P 1200 OHM
SW SWITCHES			
SW1	1	24101510	TOGGLE, RECEIVER NON-THREADED
SW 2	1	24101700	TOGGLE,INPUT
SW3,4	2	24101600	TOGGLE,INVERT
T TRANSFORMERS			
T1,2	2	60010300	XFR. PULSE PE65612
T3	1	60010600	XFR. LS5 TOROID 120V.
T4	1	60009400	XFR. 5 VOLT 120V.
U INTEGRATED CIRCUITS			
U1	1	34100010	TOTX176
U2	1	34100001	RECEIVER, GLASS FIBER
U3	1	34100002	RECEIVER, PLASTIC FIBER
U4	1	31003600	IC, DATA MULTIPLEXER
U5	1	31003220	LINE RECEIVER, C MOS
U6	1	31004400	CRYSTAL CS8412 RCVR.
U 6,12	2	14004939	INSULATOR, 1.40" X .50"
U7	1	31003400	IC, QUAD GATE
U8	1	31005620	QUAD D FLIP-FLOP
U9	1	31003300	IC, HEX INVERTER
U10,11	2	31004500	QUAD XOR GATE, SN74HC86N
U 11,13,14,15	4	14004938	INSULATOR, .80" X .25"
U12	1	31006400	CRYSTAL 1 BIT DAC CS4303-KP
U13	1	31006500	PHILLIPS VC0 74HC4046AN

PARTS LIST

As of MAR 17 95

PRODUCT: DAC3

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Schematic Symbol	Quantity	ARC Part #	Description
U14,15	2	31005010	TI DUAL D FLIP-FLOP 74AC11074N
U16,17	2	31002210	OP176GP
U18,19,22	3	31004000	ADJ. O.P. VLTG. REG.
U20,21	2	31000800	NE555N TIMER
U23	1	31002910	IC, 5V REGULATOR
U24,25,26,27	4	31006600	TI UA78L05CLP
		V	VACUUM TUBES
V1-4	4	32001150	VAC.TUBE 6922 RUSSIAN
		X	CRYSTALS
X1	1	27000020	6.144MHz CRYSTAL
		ZD	ZENER DIODES
ZD1,6	2	30500300	IN4740A
ZD2,7	2	30504210	IN5535A (KNOX ONLY)
ZD3,4,8,9	4	31000705	LM329DZ GREEN
ZD5,10	2	30503500	IN5359 B