

SW3 POS	U4 PIN 9	U4 PIN 10	U4 OUTPUT (PIN 5)
1	H	L	15
2	L	L	4
3	L	H	2

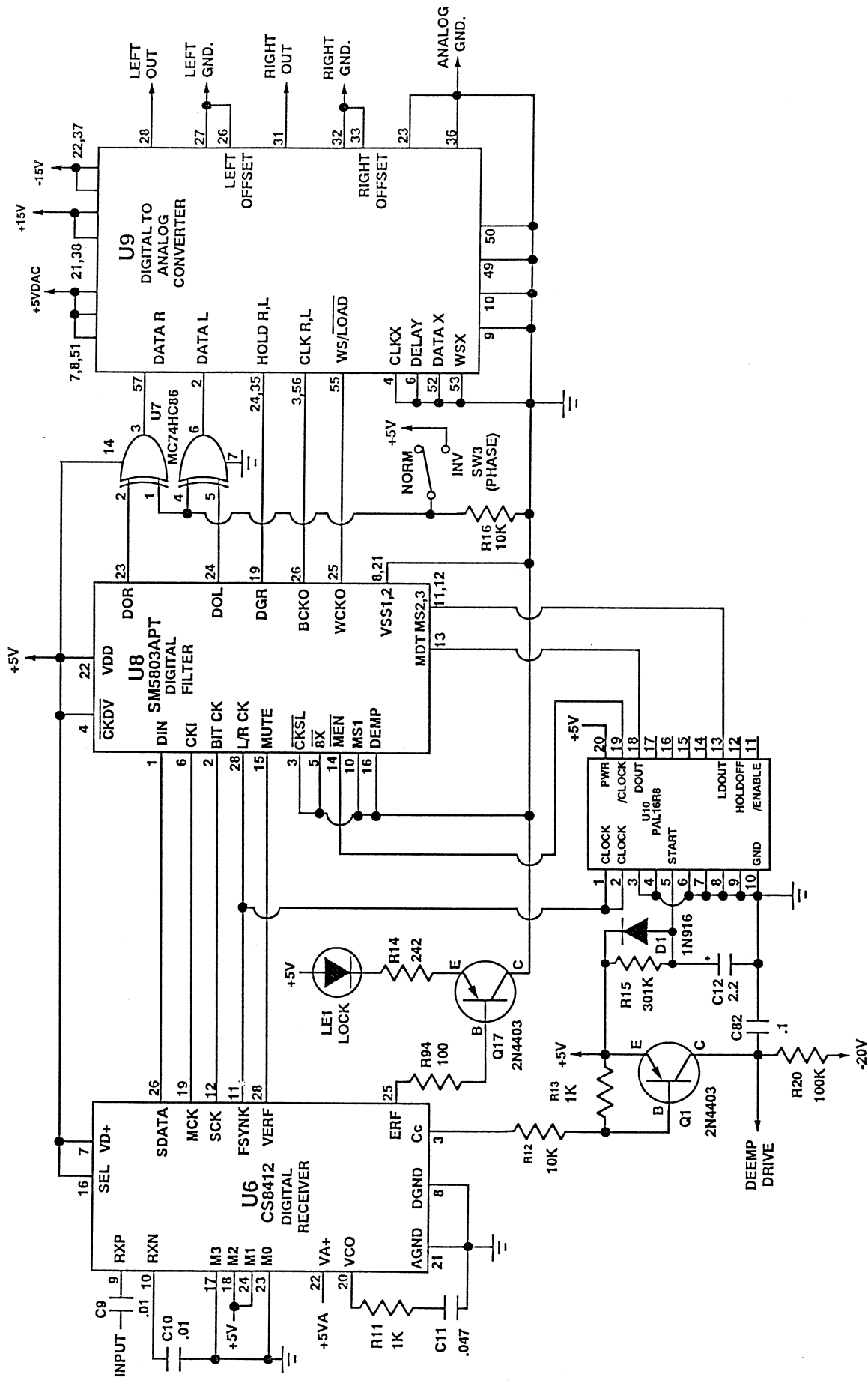
TO C16
PAGE 2

TOSLINK, PLASTIC
FIBER, DIGITAL OUT

DAC2 INPUT
PAGE 1 of 6
11-6-92

AUDIO RESEARCH CORPORATION
5740 GREEN CIRCLE DRIVE
MINNETONKA, MN 55343-4424

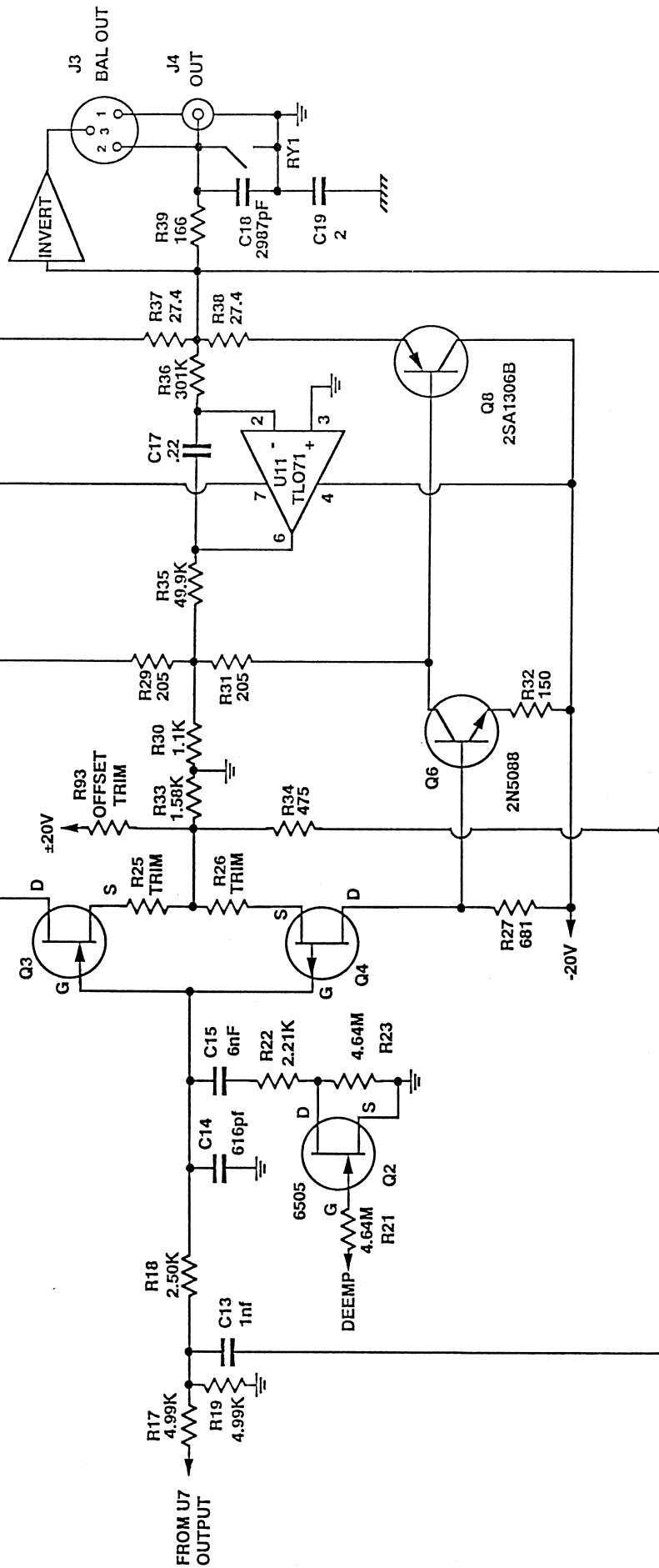
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Trim Procedure: Lift R17 from DAC and feed with Soundtech at 1Khz. Lift R35. Measure, DC Volts, Q7 emitter to Q8 emitter. Measure, DC Volts, output Ref GND. Connect R box, 1 ohm steps, across R25 and R26. Start with 299 ohm on both R boxes. Power unit, lower both R boxes until .450 - .520Vdc Q7 emitter to Q8 emitter. Set soundtech for +20V 2V rms output. Adjust balance (keeping .45 to .52 Vdc Q7 emitter to Q8 emitter) between R25 and R26 for distortion null, it should null at .005% typ. Note output offset. Add R box, 200K start, for R93 to +20V rail if offset +, add R93 to -20V rail if offset -. Adjust R93 for less than 2mV output offset. Recheck distortion null, then offset. Install fixed resistors for R25, R26, and R93.

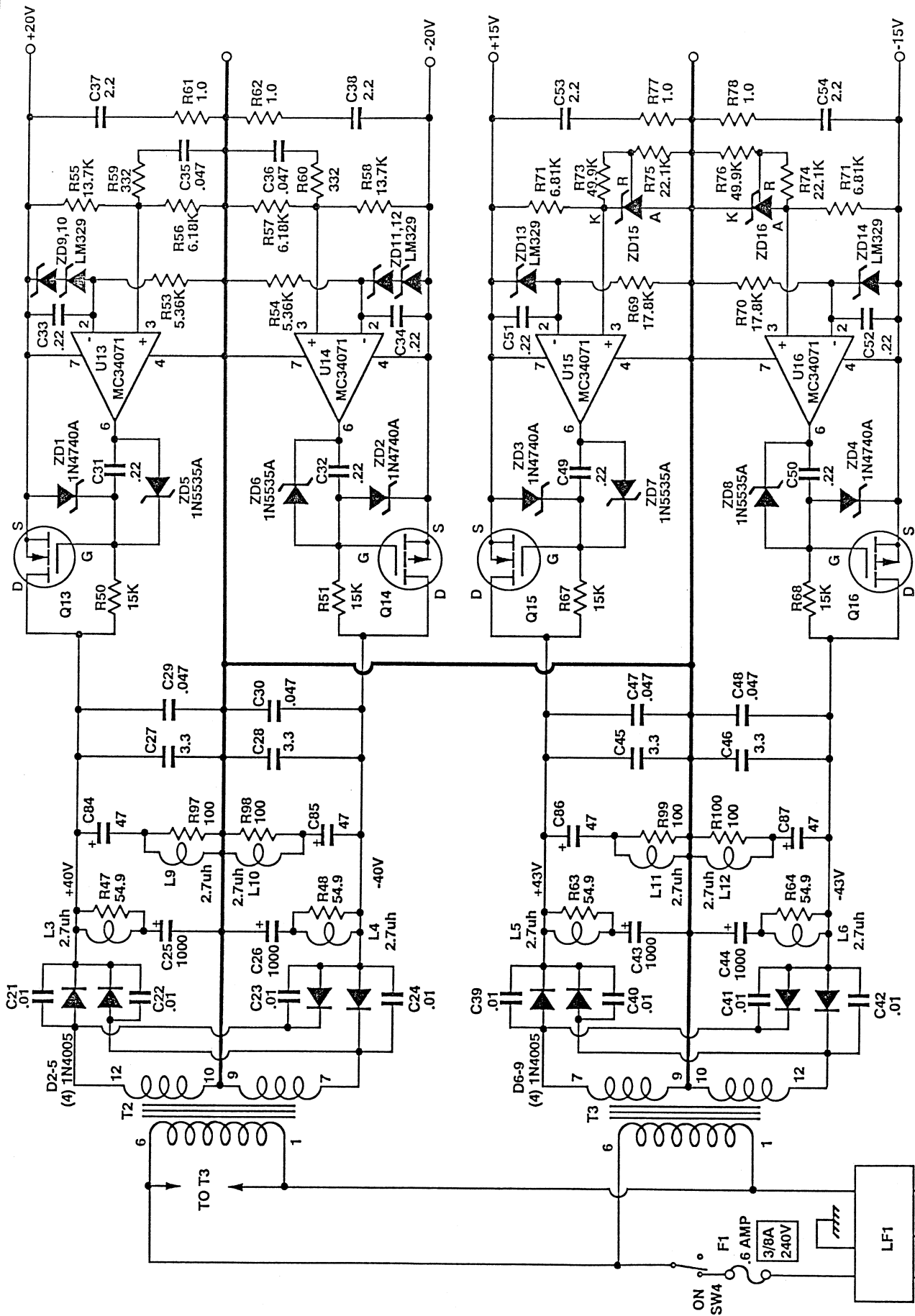


DAC2 ANALOG FILTER

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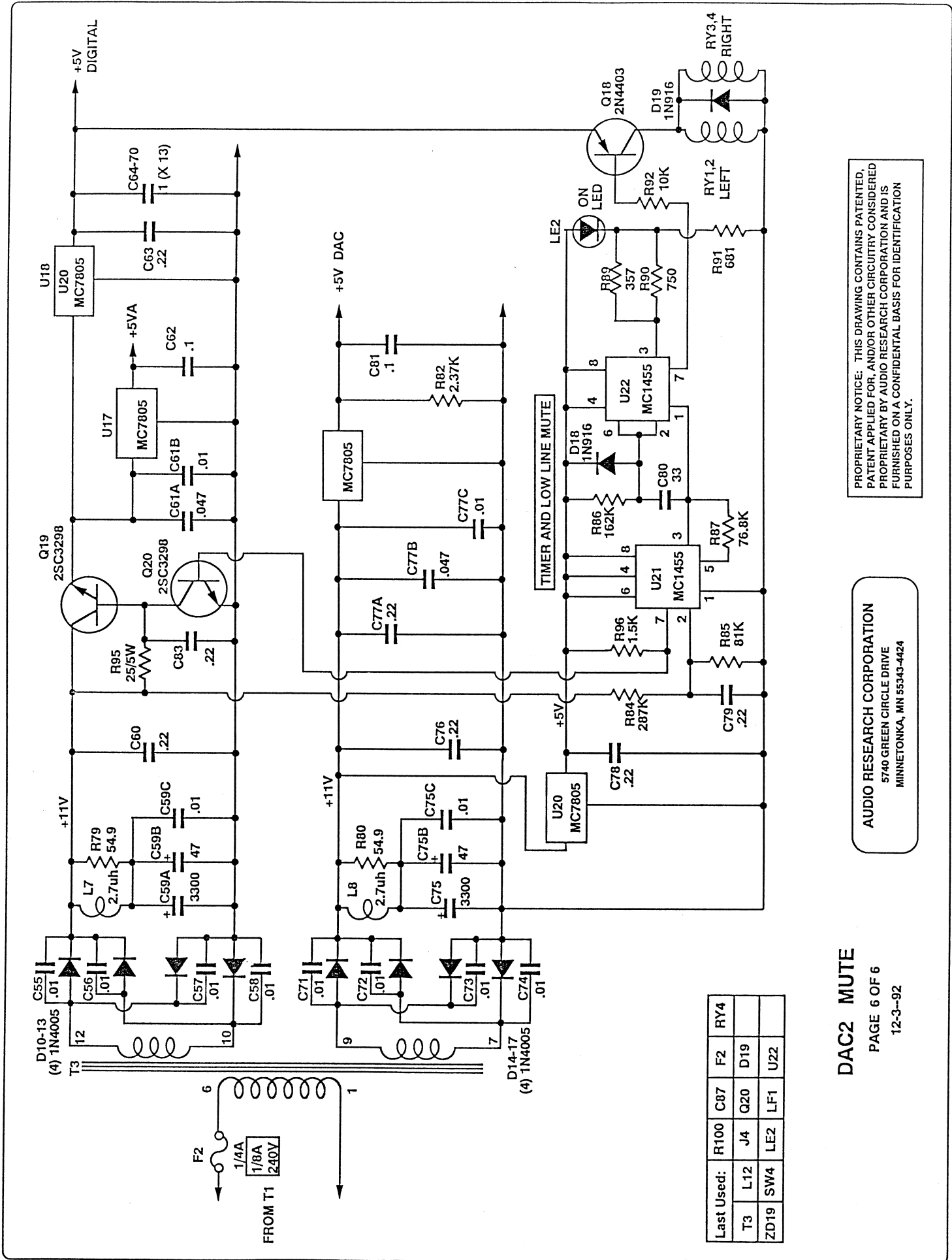


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DAC2 POWER SUPPLY
 PAGE 5 OF 6
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LF1
 BLK GRN WHT
 120 VAC 50/60 HZ



Last Used:	R100	C87	F2	RY4
T3	L12	J4	Q20	D19
ZD19	SW4	LE2	LF1	U22

DAC2 MUTE

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PRODUCT: DAC2

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
C CAPACITORS			
C 1,3,61,62,64-70,82	12	53100505	CAP. .1 UF 10% 63V
C 2,4	2	50220701	CAP. 22 UF 100V
C 6	1	53200003	CAP. 2 PF STY.
C 7,8	2	52100500	CAP. 0.1 UF 100V
C 9,10,21-24,39-42,55-58,71-74	18	52100400	CAP. .01 UF 200V
C 11	1	52470400	CAP. .047U CER
C 12	1	51220601	CAP. 2.2 UF +/-10% 25V
C 13,14A,15B,18B,20B	10	53560201	CAP. 560 PF +/-2.5% 630V
C 13	2	53100304	CAP. 1000PF 2.5% 630V.
C 14B	2	53560103	CAP. 56 PF +/-2% 630V DPN
C 15A,15B	4	53300303	CAP. 3000 PF +/-2.5% 630V DPN
C 15C	2	53150202	CAP. 150 PF 2 1/2% 630V PPN
C 16	2	53100101	CAP. 10 PF +/-1 PF 630V PPN
C 17,31-34,49-52,60,63,76-78,83	16	53220507	CAP. .22 UF 10% 160V
C18A,20A	4	53240305	CAP. .0024 PF 2% 630V
C 18C,20C	4	53270101	CAP. 27 PF +/-1PF 630V PNP
C 19,19A	4	52100601	CAP. 1.0UF 20% 50V
C 25,26,43,44	4	50100908	CAP. 1000 UF 63V
C 27,28,45,46	4	53330602	CAP. 3.3 UF 160V +/-10%
C 29,30,35,36,47,48,61A,77B	8	53470402	CAP. 0.047 UF 160V 10%
C 37,38,53,54	4	53220601	CAP. 2.2 UF 160V 10% MKP10
C 59,75	2	50330901	CAP. 3300UF 16V
C 59,75,77	3	53100410	CAP. .01 UF 400V MKP10
C 59B,75B,84,85,86,87	6	50470701	CAP. 47UF 35V
C 79	1	53220506	CAP. .22 MFD 100V
C 80	1	51330702	CAP. 33 UF +/-10% 16V
C 81	1	53100506	CAP. .1 UF 160V
D DIODES			
D 1,18,19	3	30500910	1N916B
D 2-17	16	30500400	IN4005 GENERAL INSTRUMENT
F FUSES			
F 1	1	34500270	FUSE, 6/10 AMP
F 2	1	34500102	FUSE, 1/4 250V
J CONNECTORS			
J 1	1	23202210	BNC CONNECTOR
J 2	1	23201990	XLR FEMALE INPUT
J 3	2	23201980	CONNECTOR, XLR BOARD MT. BL1
J 4L	1	23201510	CHASSIS JACK, WHITE
J 4R	1	23201509	CHASSIS JACK, RED
L INDUCTORS			
L 1,2	2	61000170	CHOKE, 5.5 UH
L 3-12	10	61000190	CHOKE, 2.7UH +/-10%

PRODUCT: DAC2

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
LE PANEL INDICATOR			
LE 1,2	2	34300102	L.E.D. COLLAR & RETAINING RING
LF LINE FILTER			
LF 1	1	59000001	LINE FILTER
Q TRANSISTORS			
Q 1,5	3	30003000	TRANSISTOR, 2N5087 PNP
Q 2	2	30006505	FET, WHITE GREEN
Q 3	2	30006528	FET, WHITE RED GRAY
Q 4	2	30006424	FET, GRAY YELLOW
Q 6	2	30003100	TRANSIST., 2N5088, 2N5209, 2N5210
Q 7, 11, 19, 20	6	30010100	2SC3298B
Q 8, 12	4	30010000	2SA1306B
Q 9, 10	4	30006626	FET, VIOLET RED BLUE
Q 13, 15	2	30006812	FET, YELLOW GRAY
Q 14, 16	2	30007029	FET, GRAY WHITE
Q 17, 18	2	30002900	TRANSISTOR, 2N4403
R RESISTORS			
R R22, 30A, 30B	6	42221303	RES. 2.21K 1% MK-3 50PPM
R 1, 3, 5	3	42200303	RES. 2K MK-3 1% 50PPM
R 2	1	42750103	RES. 75 OHM 1% MK-3 50PPM
R 4	1	42110203	RES. 110 OHM +/- 1% MK-3 50PPM
R 6, 7, 12, 16, 92	5	42100403	RES. 10K +/- 1% MK-3 50PPM
R 8, 9	2	42243503	RES. 243K 1% MK3 50PPM
R 10A, 50, 51, 67, 68	5	42150403	RES. 15K 1% MK-3 50PPM
R 10B, 69, 70	3	42178403	RES. 17.8K 1% MK-3 50PPM
R 11, 13	4	42100303	RES. 1K 1% MK-3 50PPM
R 14A, 89	2	42357203	RES. 357 OHM 1% MK-3 50PPM
R 14B, 90	2	42750203	RES. 750 OHM 1% MK-3 50PPM
R 15, 36	3	42301503	RES. 301K 1% MK-3 50PPM
R 17, 18A, 18B, 19	8	42499303	RES. 4.99K 1% MK-3 50PPM
R 20	2	42100503	RES. 100K +/- 1% MK-3 50PPM
R 21, 23	4	42464603	RES. 4.64 MEG. 1% MK-3 50PPM
R 24, 27, 91	5	42681203	RES. 681 OHM 1% MK-3 50PPM
R 25A, 26A, 42	6	42499203	RES. 499 OHM 1% MK-3 50PPM
R 28, 32	4	42150203	RES. 150 OHM 1% MK-3 50PPM
R 29, 31	2	42205203	RES. 205 OHM 1% MK-3 50PPM
R 33A, 33B	4	42316303	RES. 3.16K 1% MK-3 50PPM
R 34	2	42475203	RES. 475 OHM 1% MK-3 50PPM
R 35, 73, 76	4	42499403	RES. 49.9K 1% MK-3 50PPM
R 37A-B, 38A-B, 43A, 44A-B, 45A-B, 47, 48	24	42549103	RES. 54.9 OHM 1% MK-3 50PPM
R 63, 64, 79, 80			
R 39A, 39B, 46A, 46B, 59, 60	10	42332203	RES. 332 OHM 1% MK-3 50PPM
R 40A, 41	4	42196403	RES. 19.6K 1% MK-3 50PPM
R 40B	2	42124603	RES. 1.24 MEG 1% MK-350PPM
R 53, 54	2	42536303	RES. 5.36K 1% MK-3 50PPM
R 55A, 55B, 58A, 58B	4	42274403	RES. 27.4K 1% MK-3 50PPM
R 56A, 57A	2	42118403	RES. 11.8K 1% MK-3 50PPM
R 56B, 57B	2	42130403	RES. 13K 1% MK-3 50PPM
R 61, 62, 77, 78	4	43100002	RES. 1 OHM 2W 5% W.W.
R 71, 72	2	42681303	RES. 6.81K 1% MK-3 50PPM

PRODUCT: DAC2

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
R 74,75	2	42221403	RES. 22.1K 1% MK-3 50PPM
R 83	1	42237303	RES. 2.37K 1% MK-3 50PPM
R 84	1	42150503	RES. 150K 1% MK-3 50PPM
R 84B	1	42137503	RES. 137K 1%MK-3 50PPM
R 85A,85B,86	3	42162503	RES. 162K 1% MK-3 50PPM
R 87	1	42768403	RES. 76.8K 1%MK-3 50PPM
R 94,97-100	5	42100203	RES. 100 OHM 1% MK-3 50PPM
R 95	1	43250100	RES. 25 OHM - 5W W.W.
R 96	1	42150303	RES. 1.50K 1% MK-3 50PPM
RY RELAYS			
RY 1-4	4	64101010	RELAY, 5V DAC1
SW SWITCHES			
SW 1	1	24101500	TOGGLE,RECEIVER
SW 2	1	24101700	TOGGLE,INPUT
SW 3,4	2	24101600	TOGGLE,INVERT <i>+Pwr</i>
T TRANSFORMERS			
T 1	1	60010300	XFR. PULSE PE65612
T 2	1	60009200	XFR. ANALOG
T 3	1	60009300	XFR. DIGITAL
T 4	1	60009400	XFR. 5 VOLT
U INTEGRATED CIRCUITS			
U 1	1	34100001	RECEIVER, GLASS FIBER
U 2	1	34100002	RECEIVER, PLASTIC FIBER
U 3	1	31003220	LINE RECEIVER, C MOS
U 4	1	31003600	IC, DATA MULTIPLEXER
U 5	1	34100010	TOTX176
U 6	1	31004400	CRYSTAL CS8412 RCVR.
U 7	1	31004500	XOR, SN74HC86N
U 8	1	31003100	IC, DIGITAL FILTER
U 9	1	31003010	DUAL 20 BIT DAC
U 10	1	31004610	PAL, PROGRAMMED
U 11	1	31001901	TLO71CP TESTED (RED LINE)
U 12	1	31002300	IC, OP-AMP
U 13,14,15,16	4	31002200	MC34071P
U 17,18,19,20	4	31002910	IC, 5V REGULATOR
U 21,22	2	31000801	TIMER
ZD ZENER DIODES			
ZD 1-4	4	30500300	IN4740A
ZD 5-8	4	30504210	IN5535A (KNOX ONLY)
ZD 9-14	6	31000705	LM329DZ GREEN
ZD 15,16	2	31002600	ZENER DIODE, TL431CLP ADJ