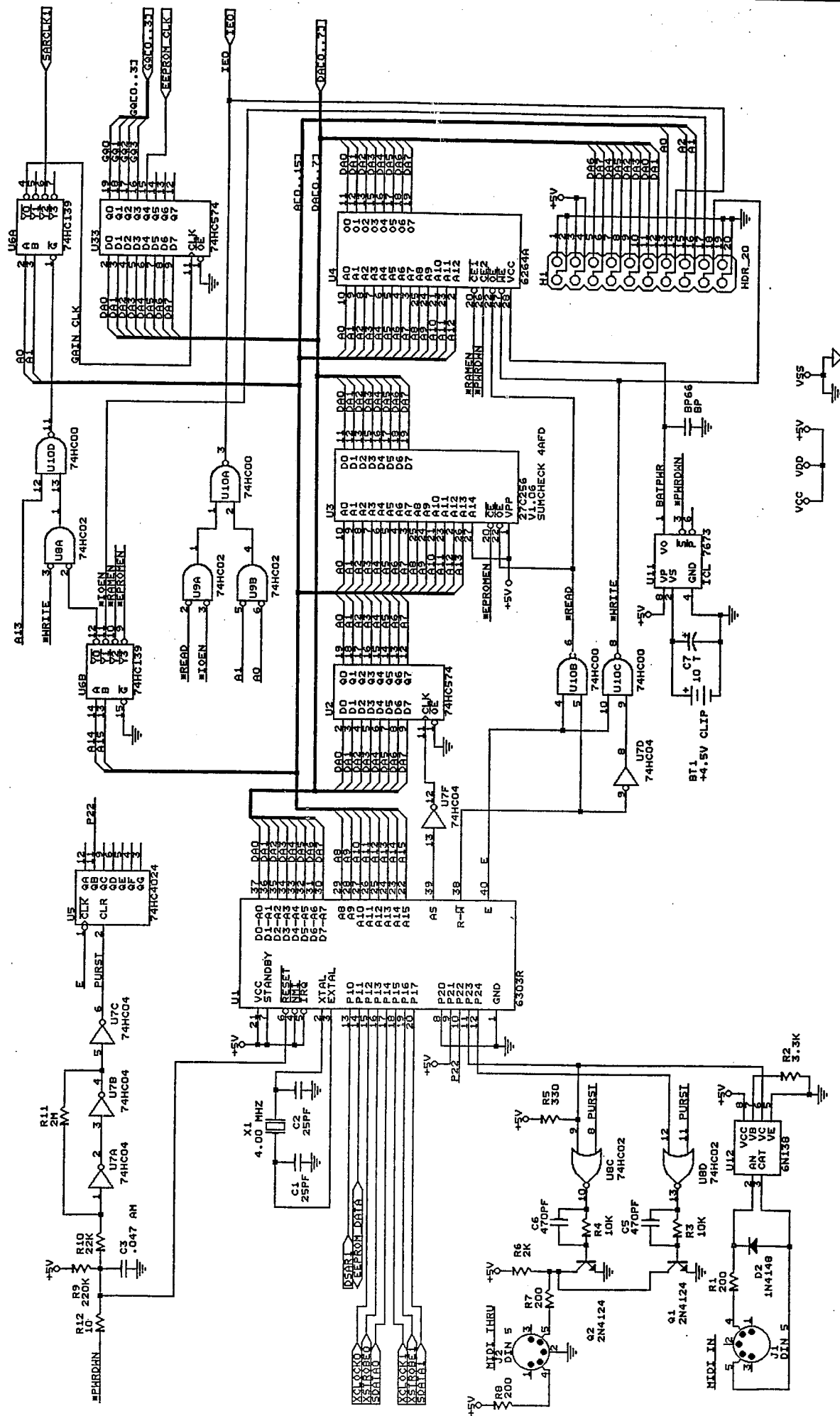


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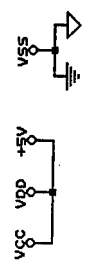
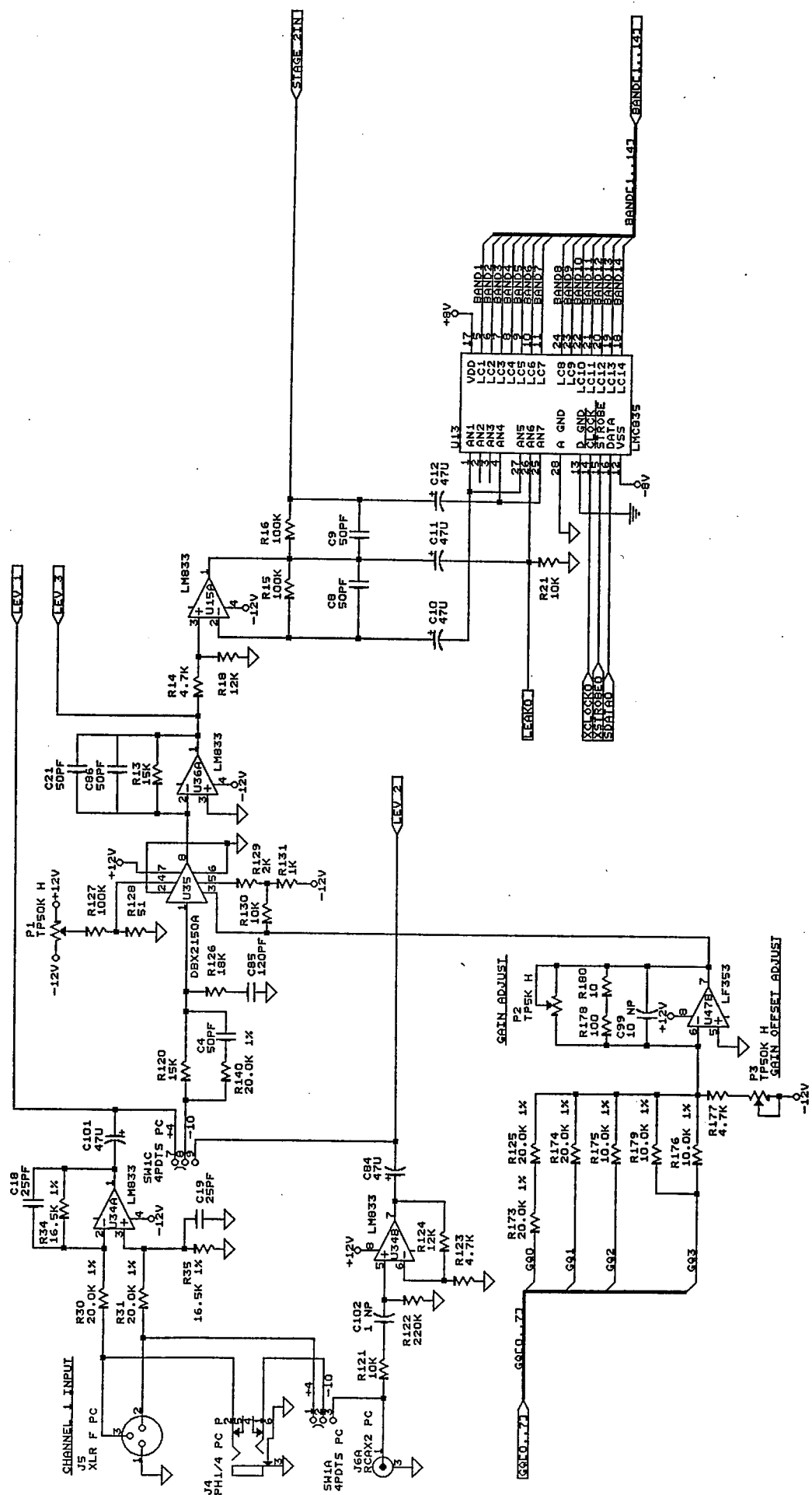
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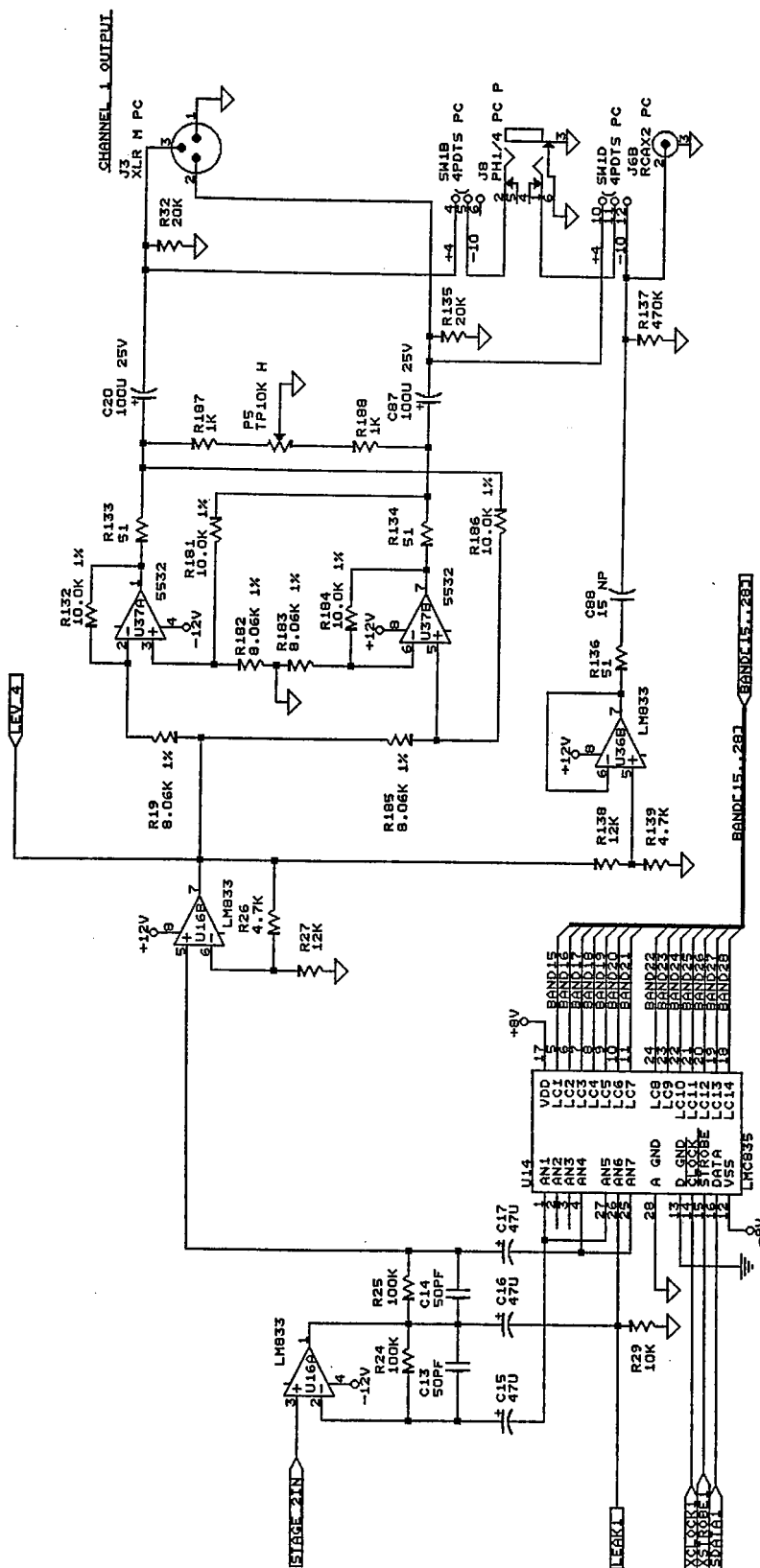
DOD Electronics, Inc.
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Salt Lake City, Utah 84107

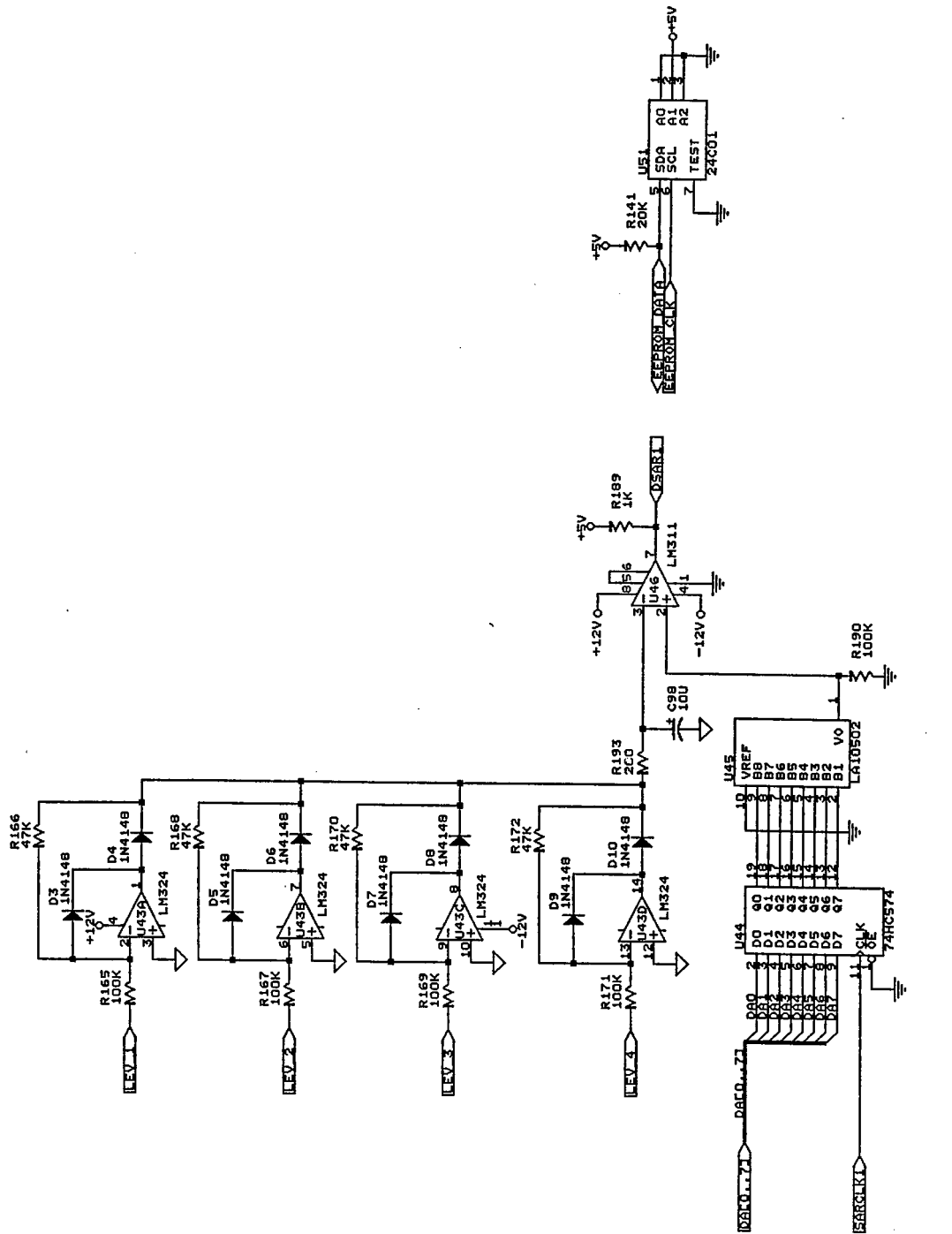
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MEQ-28 ANALOG

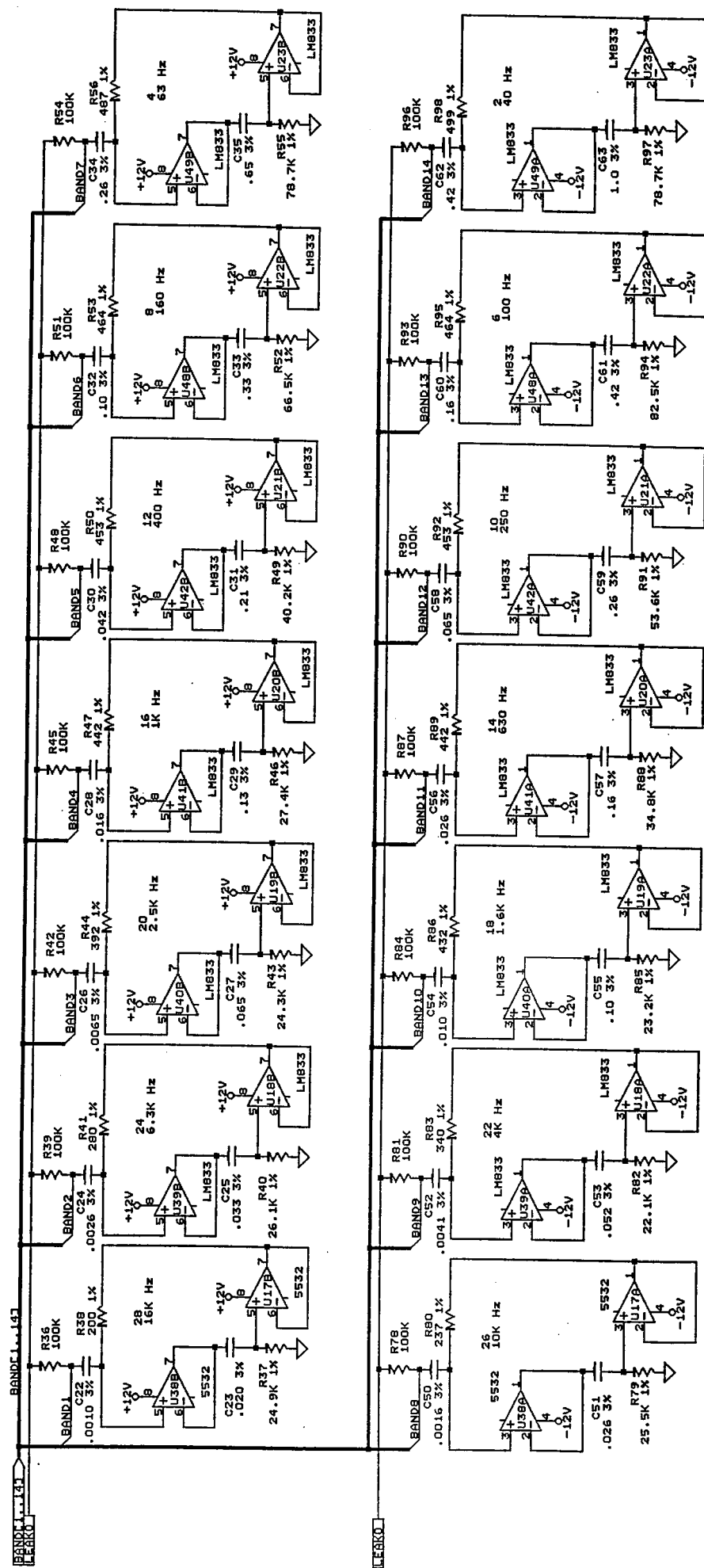
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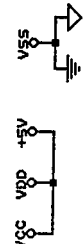
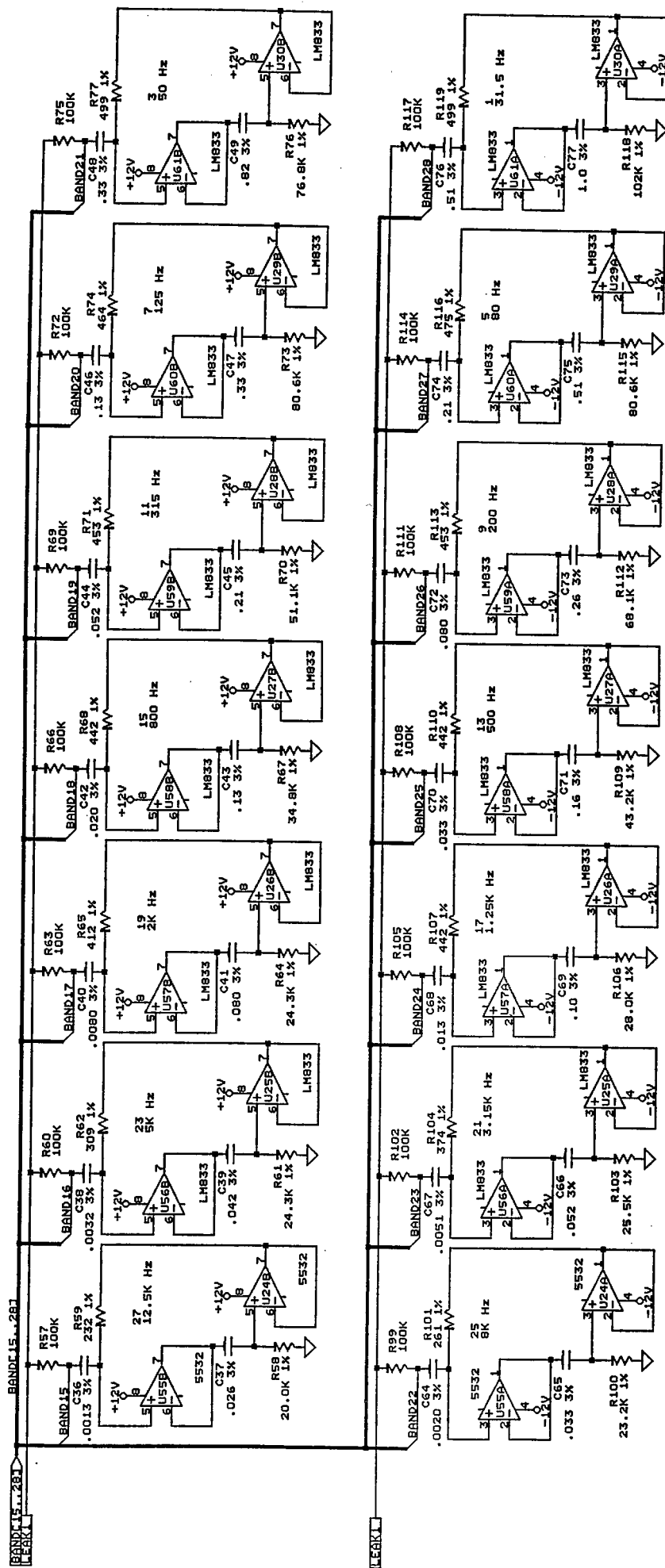




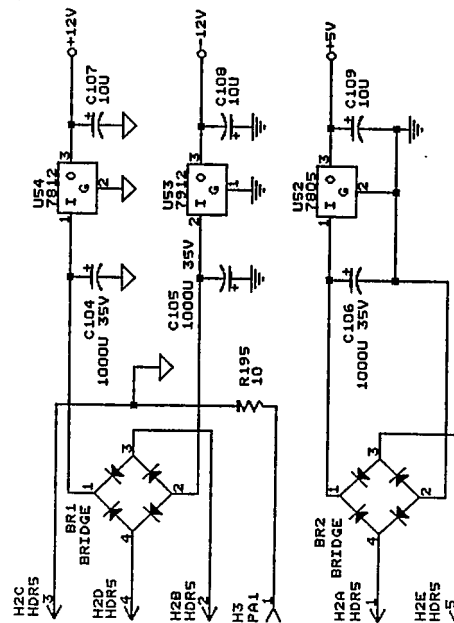
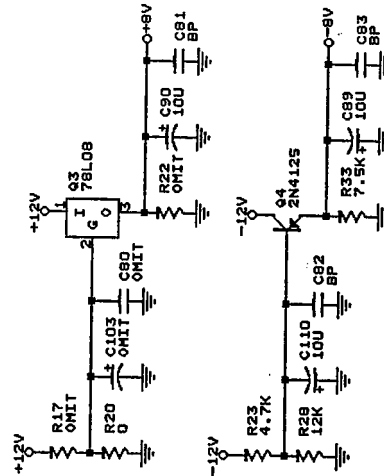
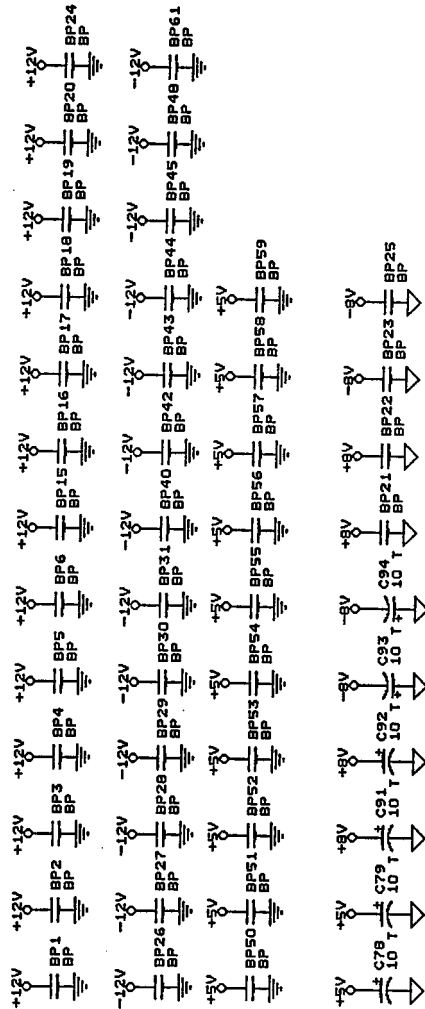
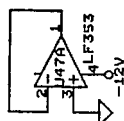
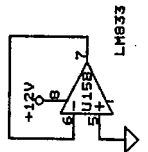
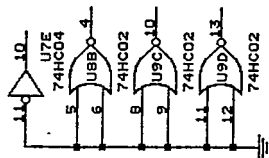
DOD Electronics, Inc.	
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Title	
Size	HEQ-28 LEVEL A-D CONVERTERS
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Size	Document Number	
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Size	HEQ-28 FILTERS
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LAST REF.

NOT USED
BP34,41,46,49
BP60,62-65
C4,21
D1
J7
P2,4
R142-164
R191-192,194

DOD Electronics Inc.

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MEQ-28 POWER SUPPLY

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	Part	Ami	Samm	Description
44	BP1,BP2,BP3,BP4,BP5,BP6, BP BP15,BP16,BP17,BP18,BP19, BP20,BP21,BP22,BP23,BP24, BP25,BP26,BP27,BP28,BP29, BP30,BP31,BP40,BP42,BP43, BP44,BP45,BP48,BP50,BP51, BP52,BP53,BP54,BP55,BP56, BP57,BP58,BP59,BP61,BP66, C81,C82,C83	37L	62-0067	0.047 uF Capacitor 20% 50V Axial Monolithic
2	BR1,BR2	BRIDGE	70-0129	Bridge Rectifier
1	BT1	+4.5V CLI	24-1021	Holder For 4.5V Alkaline Bat., EVEREADY Part #523
4	C1,C2,C18,C19	25PF	62-0001	25 pF Capacitor 5% 50V Ceramic Disc
1	C3	.047 AM	37L 62-0067	0.047 uF Capacitor 20% 50V Axial Monolithic
7	C4,C8,C9,C13,C14,C21,C86	50PF	62-0008	50 pF Capacitor 5% 50V Ceramic Disc
2	C5,C6	470PF	62-0003	470 pF Capacitor 20% 50V Ceramic Disc
7	C7,C78,C79,C91,C92,C93, C94	10 T	62-0163	10 uF Capacitor 10% 16V Tantalum
8	C10,C11,C12,C15,C16,C17, C84,C101	47U	60-0054	47 uF Capacitor +80,-20% 16V Electrolytic
2	C20,C87	100U 25V	60-0055	100 uF Capacitor +80,-20% 25V Electrolytic
1	C22	.0010 3%	56-0071	0.0010 uF Capacitor 3% 100V Polyester Film
2	C23,C42	.020 3%	56-0084	0.020 uF Capacitor 3% 100V Polyester Film
1	C24	.0026 3%	56-0170	0.0026 uF Capacitor 3% 100V Polyester Film
3	C25,C65,C70	.033 3%	56-0177	0.033 uF Capacitor 3% 100V Polyester Film
1	C26	.0065 3%	56-0172	0.0065 uF Capacitor 3% 100V Polyester Film
2	C27,C58	.065 3%	56-0180	0.065 uF Capacitor 3% 100V Polyester Film
1	C28	.016 3%	56-0083	0.016 uF Capacitor 3% 100V Polyester Film
3	C29,C43,C46	.13 3%	56-0183	0.13 uF Capacitor 3% 100V Polyester Film
2	C30,C39	.042 3%	56-0178	0.042 uF Capacitor 3% 100V Polyester Film
3	C31,C45,C74	.21 3%	56-0185	0.21 uF Capacitor 3% 100V Polyester Film
3	C32,C55,C69	.10 3%	56-0091	0.10 uF Capacitor 3% 100V Polyester Film
3	C33,C47,C48	.33 3%	56-0187	0.33 uF Capacitor 3% 100V Polyester Film
3	C34,C59,C73	.26 3%	56-0186	0.26 uF Capacitor 3% 100V Polyester Film
1	C35	.65 3%	56-0190	0.65 uF Capacitor 3% 100V Polyester Film
1	C36	.0013 3%	56-0072	0.0013 uF Capacitor 3% 100V Polyester Film
3	C37,C51,C56	.026 3%	56-0175	0.026 uF Capacitor 3% 100V Polyester Film
1	C38	.0032 3%	56-0076	0.0032 uF Capacitor 3% 100V Polyester Film
1	C40	.0080 3%	56-0080	0.0080 uF Capacitor 3% 100V Polyester Film
2	C41,C72	.080 3%	56-0090	0.080 uF Capacitor 3% 100V Polyester Film
3	C44,C53,C66	.052 3%	56-0179	0.052 uF Capacitor 3% 100V Polyester Film
1	C49	.82 3%	56-0191	0.82 uF Capacitor 3% 100V Polyester Film
1	C50	.0016 3%	56-0073	0.0016 uF Capacitor 3% 100V Polyester Film
1	C52	.0041 3%	56-0171	0.0041 uF Capacitor 3% 100V Polyester Film
1	C54	.010 3%	56-0081	0.010 uF Capacitor 3% 100V Polyester Film
3	C57,C60,C71	.16 3%	56-0093	0.16 uF Capacitor 3% 100V Polyester Film
2	C61,C62	.42 3%	56-0188	0.42 uF Capacitor 3% 100V Polyester Film
2	C63,C77	1.0 3%	56-0192	1.00 uF Capacitor 3% 100V Polyester Film
1	C64	.0020 3%	56-0074	0.0020 uF Capacitor 3% 100V Polyester Film
1	C67	.0051 3%	56-0078	0.0051 uF Capacitor 3% 100V Polyester Film
1	C68	.013 3%	56-0082	0.013 uF Capacitor 3% 100V Polyester Film
2	C75,C76	.51 3%	56-0189	0.51 uF Capacitor 3% 100V Polyester Film
1	C85	120PF	62-0002	120 pF Capacitor 20% 50V Ceramic Disc

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Part	Ami	Samm	Description
1 C88	15 NP	60-0053	15 uF Cap. +80,-20% 16V Electrolytic, Non Polar
7 C89,C90,C98,C107,C108, C109,C110	10U	60-0049	10 uF Capacitor +80,-20% 16V Electrolytic
1 C99	10 NP	60-0051	10 uF Cap. +80,-20% 16V Electrolytic, Non Polar
1 C102	1 NP	60-0046	1 uF CAP. +80,-20% 16V Electrolytic, Non Polar
3 C104,C105,C106	1000U 35V	60-0063	1000 uF Capacitor +80,-20% 35V Electrolytic
9 D2,D3,D4,D5,D6,D7,D8,D9, D10	1N4148	30R 70-0002	1N4148 Silicon Switching Diode, 75 Volts PIV
1 H1	HDR_20	32-1055	20 Pin Header, 10 X 2, 0.1" spacing, 0.025 pins
1 H2	HDR5	32-1069	5 Pin Header, 0.1" spacing, 0.025" square pins
1 H3	PA1	????	1 Pin Pad
2 J1,J2	DIN 5	32-0092	5 Pin DIN Jack
1 J3	XLR M PC	32-0196	XLR Male, PCB Mount Jack
2 J4,J8	PH1/4 PC	32-0091	1/4 Phone Jack, PCB Mount
1 J5	XLR F PC	32-0197	XLR Female, PCB Mount Jack
1 J6	RCA X2 PC	32-0079	RCA X 2 PCB Mount Jack
2 P1,P3	TP50K H	42-0222	50 kOhm Trimpot, Horizontal Mount, 3/4 turn
1 P2	TP5K H	42-0219	5 kOhm Trimpot, Horizontal Mount, 10mm
1 P5	TP10K H	42-0211	10 kOhm Trimpot, Horizontal Mount, 3/4 turn
2 Q1,Q2	2N4124	70-1009	2N4124 NPN Gen. Purp. Amplifier/Switching Transistor
1 Q3	78L08	70-4016	78L08 +8 Volt 100 mA Voltage Regulator TO-92
1 Q4	2N4125	70-1008	2N4125 PNP Gen. Purp. Amplifier/Switching Transistor
4 R1,R7,R8,R193	200	38R 50-0004	200 Ohm Resistor 5% 1/4 Watt Carbon Film
1 R2	3.3K	32L 50-0014	3.3 kOhm Resistor 5% 1/4 Watt Carbon Film
6 R3,R4,R21,R29,R121,R130	10K	25L 50-0020	10 kOhm Resistor 5% 1/4 Watt Carbon Film
1 R5	330	44R 50-0005	330 Ohm Resistor 5% 1/4 Watt Carbon Film
2 R6,R129	2K	31L 50-0013	2 kOhm Resistor 5% 1/4 Watt Carbon Film
2 R9,R122	220K	27R 50-0040	220 kOhm Resistor 5% 1/4 Watt Carbon Film
1 R10	22K	27L 50-0025	22 kOhm Resistor 5% 1/4 Watt Carbon Film
1 R11	2M	42R 50-0046	2 MOhm Resistor 5% 1/4 Watt Carbon Film
3 R12,R180,R195	10	41L 50-0001	10 Ohm Resistor 5% 1/4 Watt Carbon Film
2 R13,R120	15K	40L 50-0019	15 kOhm Resistor 5% 1/4 Watt Carbon Film
6 R14,R23,R26,R123,R139, R177	4.7K	30L 50-0015	4.7 kOhm Resistor 5% 1/4 Watt Carbon Film
38 R15,R16,R24,R25,R36,R39, R42,R45,R48,R51,R54,R57, R60,R63,R66,R69,R72,R75, R78,R81,R84,R87,R90,R93, R96,R99,R102,R105,R108, R111,R114,R117,R127,R165, R167,R169,R171,R190	100K	26R 50-0036	100 kOhm Resistor 5% 1/4 Watt Carbon Film
4 R17,R22,C80,C103	OMIT		
5 R18,R27,R28,R124,R138	12K	43R 50-0021	12 kOhm Resistor 5% 1/4 Watt Carbon Film
4 R19,R182,R183,R185	8.06K 1%	52-0111	8.06 kOhm Resistor 1% 1/4 Watt Metal Film
1 R20	0	25R 50-0050	0 Ohm Resistor 5% 1/4 Watt Carbon Film
7 R30,R31,R58,R125,R140, R173,R174	20.0K 1%	35L 52-0091	20.0 kOhm Resistor 1% 1/4 Watt Metal Film
3 R32,R135,R141	20K	42L 50-0023	20 kOhm Resistor 5% 1/4 Watt Carbon Film
1 R33	7.5K	34L 50-0017	7.5 kOhm Resistor 5% 1/4 Watt Carbon Film
2 R34,R35	16.5K 1%	52-0094	16.5 kOhm Resistor 1% 1/4 Watt Metal Film
1 R37	24.9K 1%	52-0039	24.9 kOhm Resistor 1% 1/4 Watt Metal Film
1 R38	200 1%	52-0376	200 Ohm Resistor 1% 1/4 Watt Metal Film

Quan	Reference	Part	Ami	Samm	Description	
1	R40	26.1K 1%		52-0037	26.1 kOhm Resistor 1%	1/4 Watt Metal Film
1	R41	280 1%		52-0362	280 Ohm Resistor 1%	1/4 Watt Metal Film
3	R43,R61,R64	24.3K 1%		52-0086	24.3 kOhm Resistor 1%	1/4 Watt Metal Film
1	R44	392 1%		52-0348	392 Ohm Resistor 1%	1/4 Watt Metal Film
1	R46	27.4K 1%		52-0085	27.4 kOhm Resistor 1%	1/4 Watt Metal Film
5	R47,R68,R89,R107,R110	442 1%		52-0343	442 Ohm Resistor 1%	1/4 WattMetal Film
1	R49	40.2K 1%		52-0078	40.2 kOhm Resistor 1%	1/4 Watt Metal Film
4	R50,R71,R92,R113	453 1%		52-0342	453 Ohm Resistor 1%	1/4 Watt Metal Film
1	R52	66.5K 1%		52-0014	66.5 kOhm Resistor 1%	1/4 Watt Metal Film
3	R53,R74,R95	464 1%		52-0341	464 Ohm Resistor 1%	1/4 WattMetal Film
2	R55,R97	78.7K 1%		52-0071	78.7 kOhm Resistor 1%	1/4 Watt Metal Film
1	R56	487 1%		52-0339	487 Ohm Resistor 1%	1/4 WattMetal Film
1	R59	232 1%		52-0370	232 Ohm Resistor 1%	1/4 Watt Metal Film
1	R62	309 1%		52-0358	309 Ohm Resistor 1%	1/4 Watt Metal Film
1	R65	412 1%		52-0346	412 Ohm Resistor 1%	1/4 Watt Metal Film
2	R67,R88	34.8K 1%		52-0031	34.8 KOhm Resistor 1%	1/4 Watt Metal Film
1	R70	51.1K 1%		52-0019	51.1 kOhm Resistor 1%	1/4 Watt Metal Film
2	R73,R115	80.6K 1%		52-0007	80.6 kOhm Resistor 1%	1/4 Watt Metal Film
1	R76	76.8K 1%		52-0008	76.8 kOhm Resistor 1%	1/4 Watt Metal Film
3	R77,R98,R119	499 1%		52-0338	499 Ohm Resistor 1%	1/4 WattMetal Film
2	R79,R103	25.5K 1%		52-0038	25.5 kOhm Resistor 1%	1/4 Watt Metal Film
1	R80	237 1%		52-0369	237 Ohm Resistor 1%	1/4 Watt Metal Film
1	R82	22.1K 1%		52-0089	22.1 kOhm Resistor 1%	1/4 Watt Metal Film
1	R83	340 1%		52-0354	340 Ohm Resistor 1%	1/4 Watt Metal Film
2	R85,R100	23.2K 1%		52-0087	23.2 kOhm Resistor 1%	1/4 Watt Metal Film
1	R86	432 1%		52-0344	432 Ohm Resistor 1%	1/4 Watt Metal Film
1	R91	53.6K 1%		52-0147	53.6 kOhm Resistor 1%	1/4 Watt Metal Film
1	R94	82.5K 1%		52-0006	82.5 kOhm Resistor 1%	1/4 Watt Metal Film
1	R101	261 1%		52-0365	261 Ohm Resistor 1%	1/4 Watt Metal Film
1	R104	374 1%		52-0350	374 Ohm Resistor 1%	1/4 Watt Metal Film
1	R106	28.0K 1%		52-0035	28.0 kOhm Resistor 1%	1/4 Watt Metal Film
1	R109	43.2K 1%		52-0025	43.2 kOhm Resistor 1%	1/4 Watt Metal Film
1	R112	68.1K 1%		52-0013	68.1 kOhm Resistor 1%	1/4 Watt Metal Film
1	R116	475 1%		52-0340	475 Ohm Resistor 1%	1/4 WattMetal Film
1	R118	102K 1%		52-0304	102 kOhm Resistor 1%	1/4 Watt Metal Film
1	R126	18K	36L	50-0022	18 kOhm Resistor 5%	1/4 Watt Carbon Film
4	R128,R133,R134,R136	51	37R	50-0002	51 Ohm Resistor 5%	1/4 Watt Carbon Film
4	R131,R187,R188,R189	1K	26L	50-0012	1 kOhm Resistor 5%	1/4 Watt Carbon Film
7	R132,R175,R176,R179,R181, R184,R186	10.0K 1%	34R	52-0107	10.0 kOhm Resistor 1%	1/4 Watt Metal Film
1	R137	470K	28L	50-0042	470 kOhm Resistor 5%	1/4 Watt Carbon Film
4	R166,R168,R170,R172	47K	28R	50-0030	47 kOhm Resistor 5%	1/4 Watt Carbon Film
1	R178	100	29R	50-0003	100 Ohm Resistor 5%	1/4 Watt Carbon Film
1	SW1	4PDTS PC		44-0026	4 Pole Double Throw I/O Switch (small), PC Mount	
1	U1	6303R		72-3151	1 MHZ MPU	40-DIP
3	U2,U33,U44	74HC574		72-1112	Octal D-Type Pos. Edge Triggered Flip-Flops	20-DIP
1	U3	27C256		72-3144	32K X 8 CMOS EPROM	28-DIP
1	U4	6264A		72-3147	8K X 8 CMOS STATIC RAM	28-DIP
1	U5	74HC4024		72-1097	Asynchronous 7 Bit Binary Counter	14-DIP
1	U6	74HC139		72-1100	Dual 2 Line to 4 Line Decoder/Demultiplexer	16-DIP
1	U7	74HC04		72-1098	Hex Inverter	14-DIP
2	U8,U9	74HC02		72-1091	Quadruple 2-Input Positive-Nor Gate	14-DIP

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Bill Of Materials

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Quan Reference

Part

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Description

1	U10	74HC00	72-1090	Quadruple 2-Input Positive-Nand Gate	14-DIP
1	U11	ICL 7673	72-4142	Battery Backup Switch	8-DIP
1	U12	6N138	70-2139	OPTO-ISOLATOR	8-DIP
2	U13,U14	LMC835	72-4245	14 Band Digitally Ctrl'd Graphic EQ Sw	28-DIP
28	U15,U16,U18,U19,U20,U21, U22,U23,U25,U26,U27,U28, U29,U30,U34,U36,U39,U40, U41,U42,U48,U49,U56,U57, U58,U59,U60,U61	LM833	72-4246	Low Noise Dual Audio Operational Amp	8-DIP
5	U17,U24,U37,U38,U55	5532	72-4023	5532 Low Noise Dual Op-Amp	8-DIP
1	U35	DBX2150A	72-4051	DBX 2150A Voltage Controlled Amplifier	8-Dip
1	U43	LM324	72-4028	Low Power Quad Operational Amplifier	14-DIP
1	U45	LA10502	54-0351	8 Bit R-2R Ladder, 5.00 kOhm 1% Thick Film	10 SIP
1	U46	LM311	72-4027	LM311 Analog Voltage Comparator	8-DIP
1	U47	LF353	72-4030	LF353 Wide Bandwidth Dual JFET Input Op-Amp	8-DIP
1	U51	24C01	72-3075	256 X 8 Serial EEPROM	8-DIP
1	U52	7805	70-4014	7805 +5 Volt 1 Amp Voltage Regulator	TO-220
1	U53	7912	70-4017	7912 -12 Volt 1 Amp Voltage Regulator	TO-220
1	U54	7812	70-4013	7812 +12 Volt 1 Amp Voltage Regulator	TO-220
1	X1	4.00 MHZ	76-0334	4.00 MHZ Crystal	