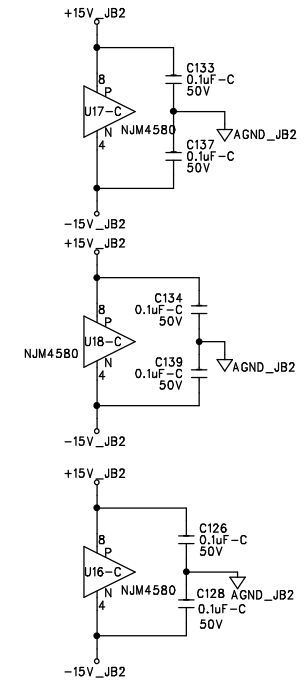
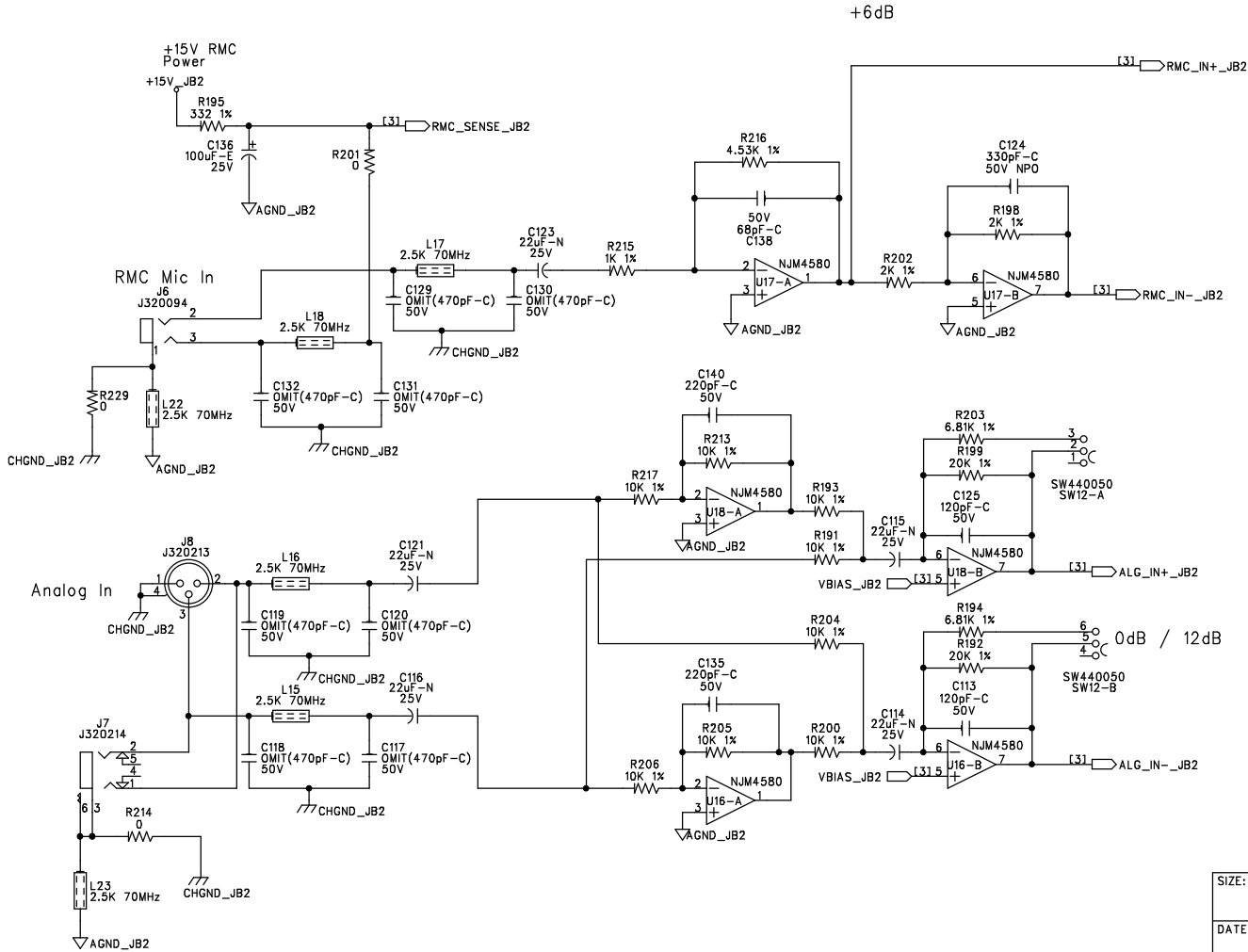
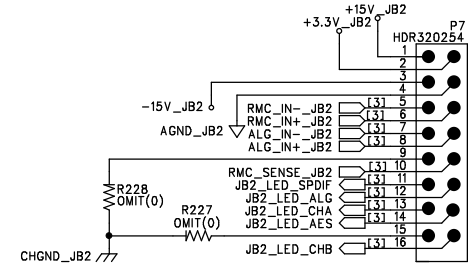
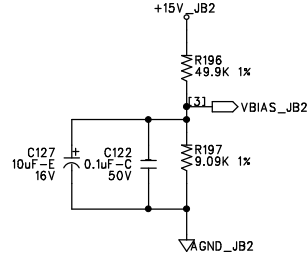
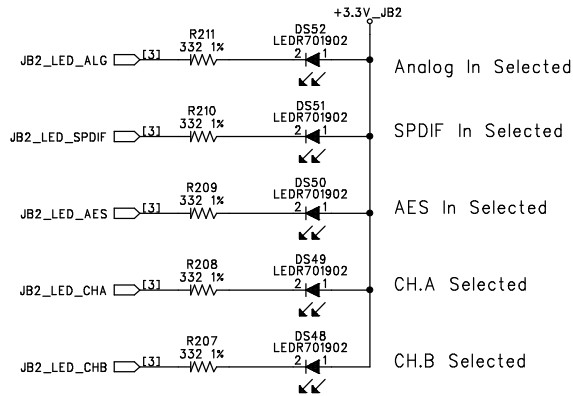
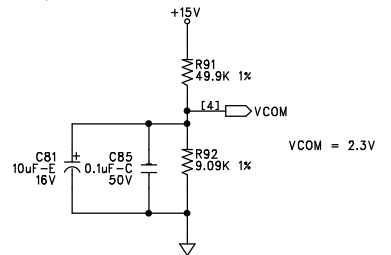
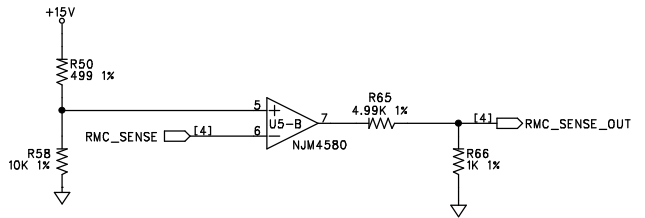
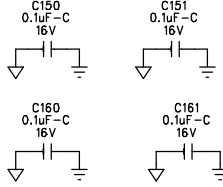
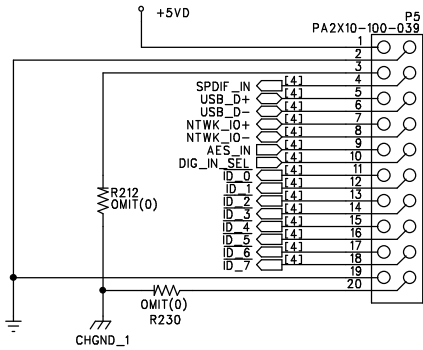


SIZE: A	SHEET TITLE: I/O BOARD 1 (Digital I/O)	REVISION: A2
DATE: 07/19/05	DRAWING NO: 05-9988	SHEET: 2 OF 11

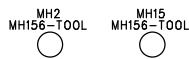
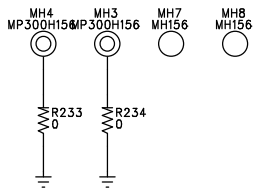
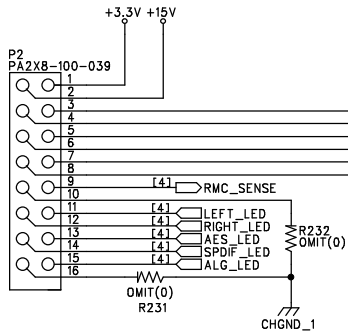


SIZE: A	SHEET TITLE: I/O BOARD 2	REVISION: A2
DATE: 07/19/05	DRAWING NO: 05-9988	SHEET: 3 OF 11

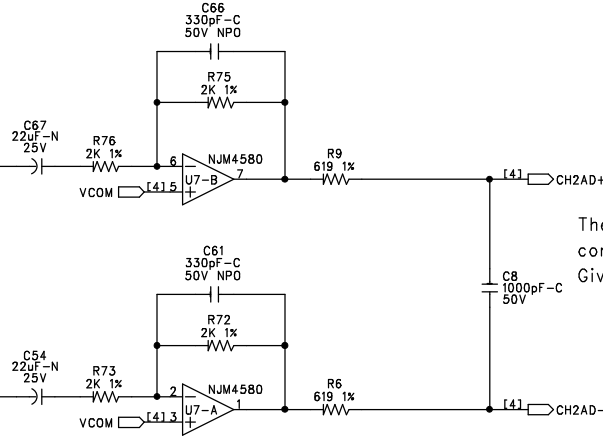
To IO Board 1



To IO Board 2



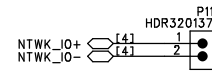
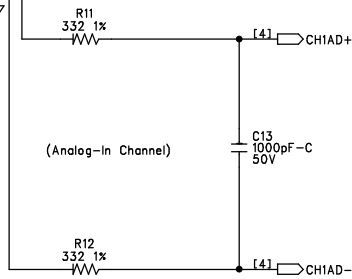
(RMC Channel)



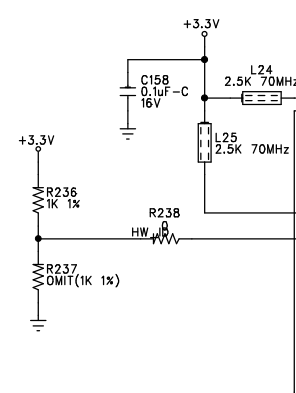
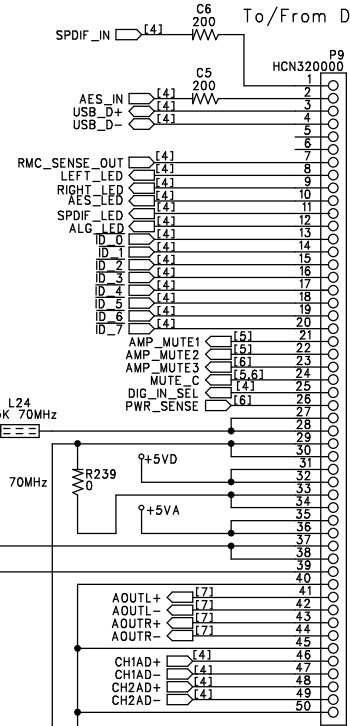
The other half of the pad consists of 2X 1.5K and 499 Giving -19.5dB

The other half of the pad consists of 2X 1K and 732 Giving -13.3dB

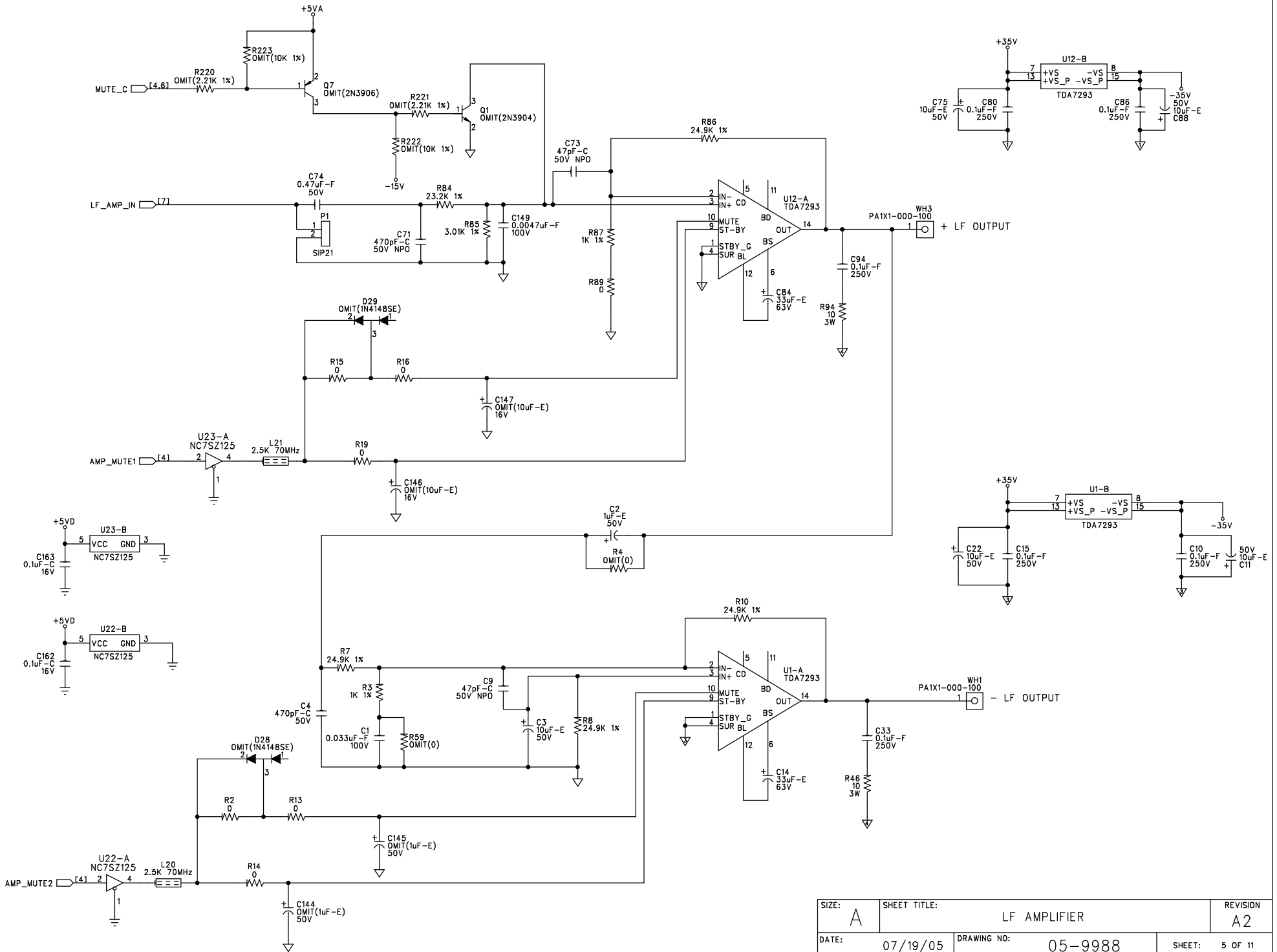
(Analog-In Channel)



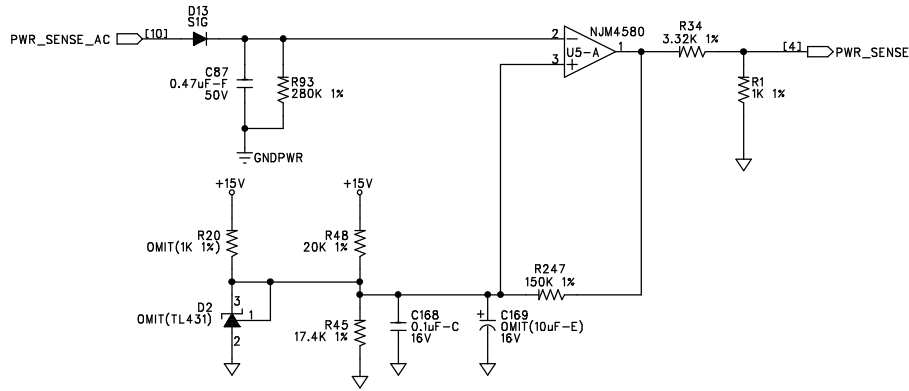
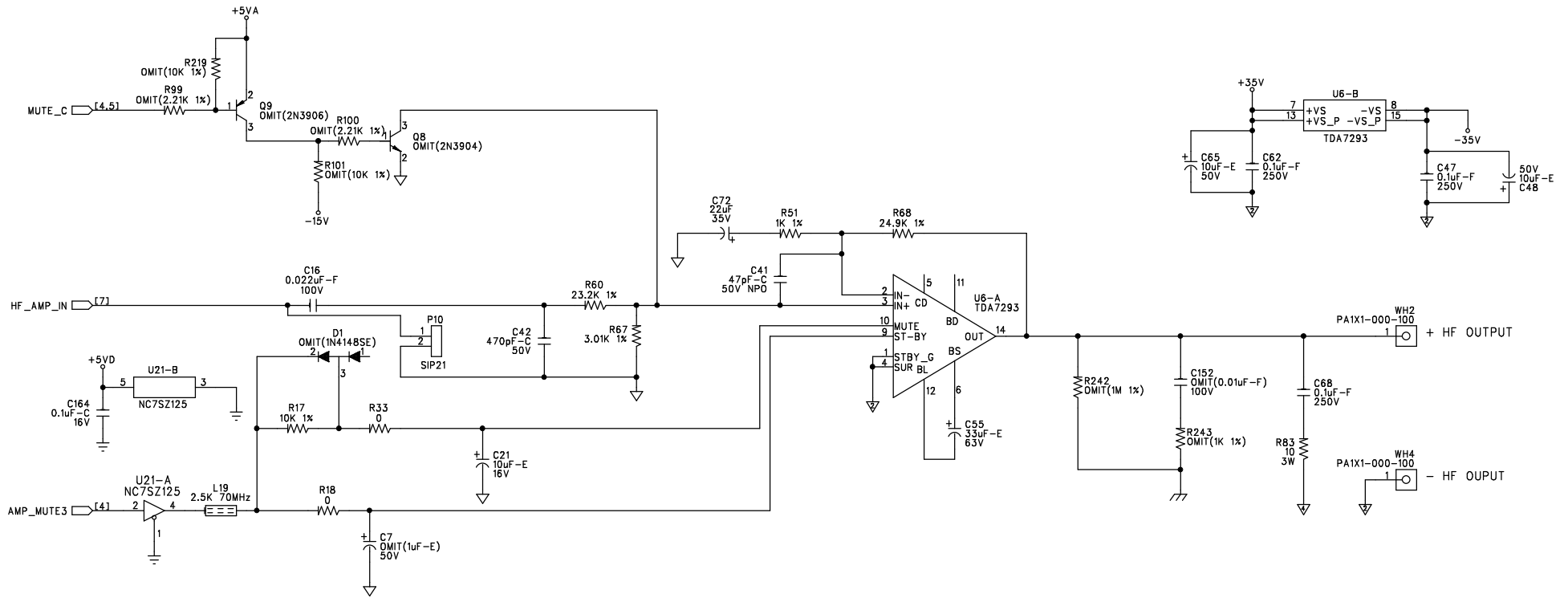
To/From Digital Board



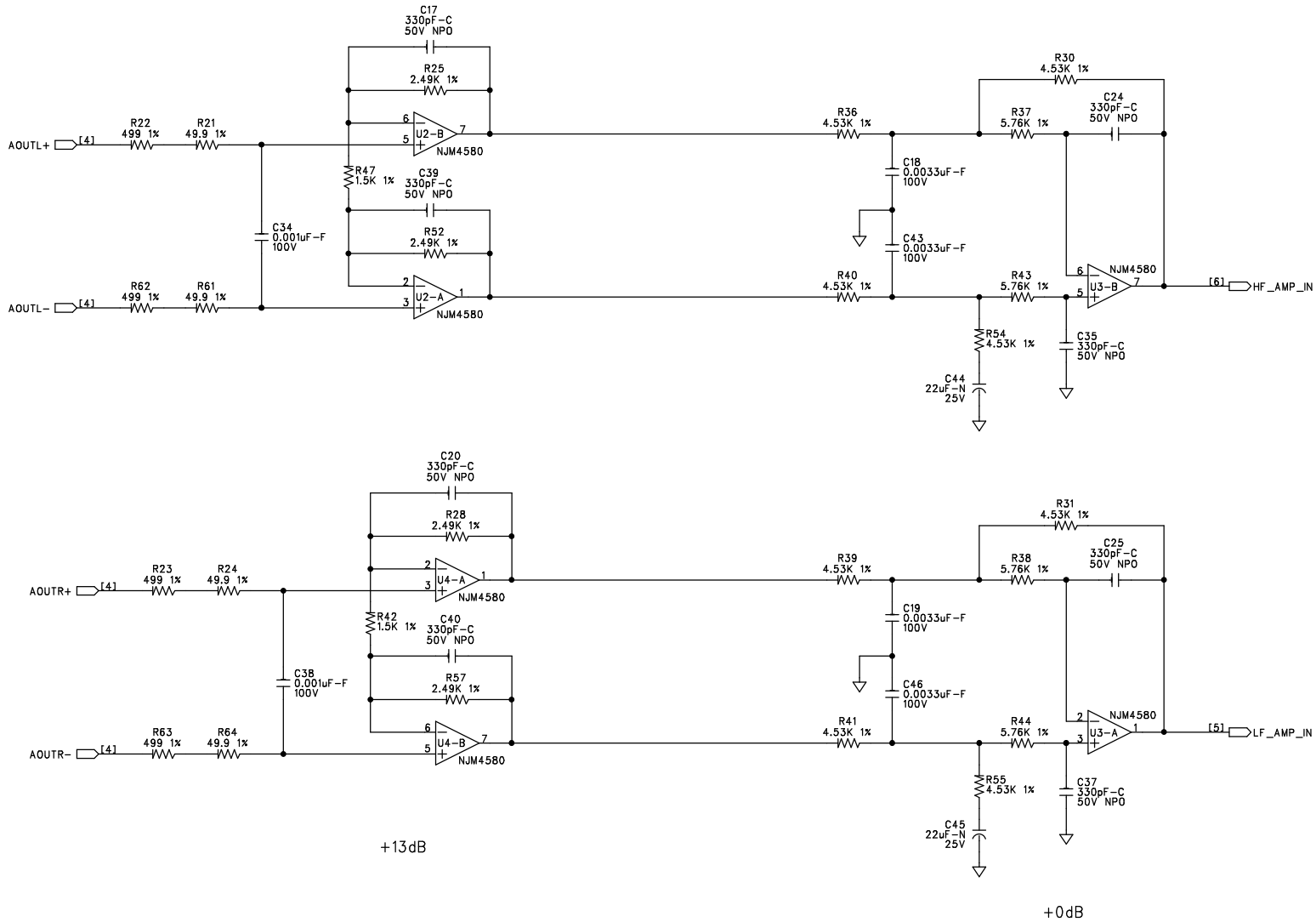
SIZE: A	SHEET TITLE: ANALOG INPUTS	REVISION: A2
DATE: 07/19/05	DRAWING NO: 05-9988	SHEET: 4 OF 11



SIZE:	A	SHEET TITLE:	LF AMPLIFIER	REVISION:	A2
DATE:	07/19/05	DRAWING NO:	05-9988	SHEET:	5 OF 11

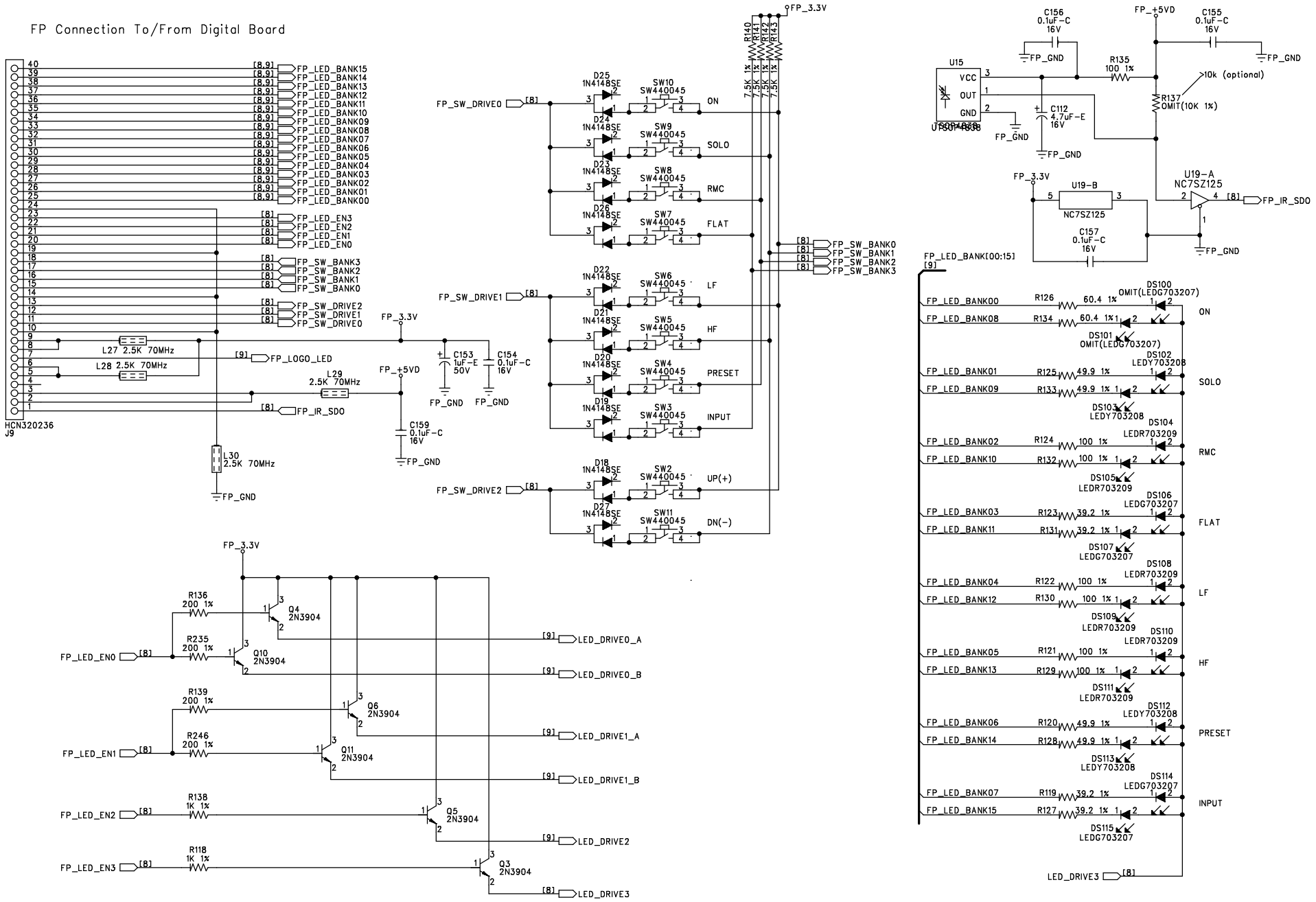


SIZE: A	SHEET TITLE: HF AMPLIFIER	REVISION: A2
DATE: 07/19/05	DRAWING NO: 05-9988	SHEET: 6 OF 11

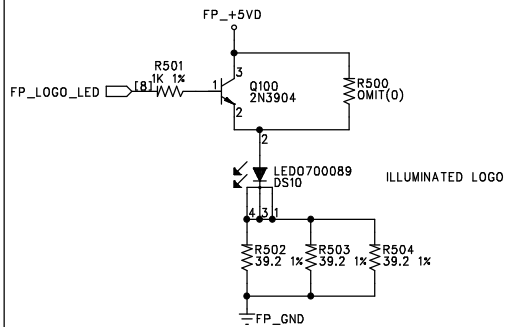
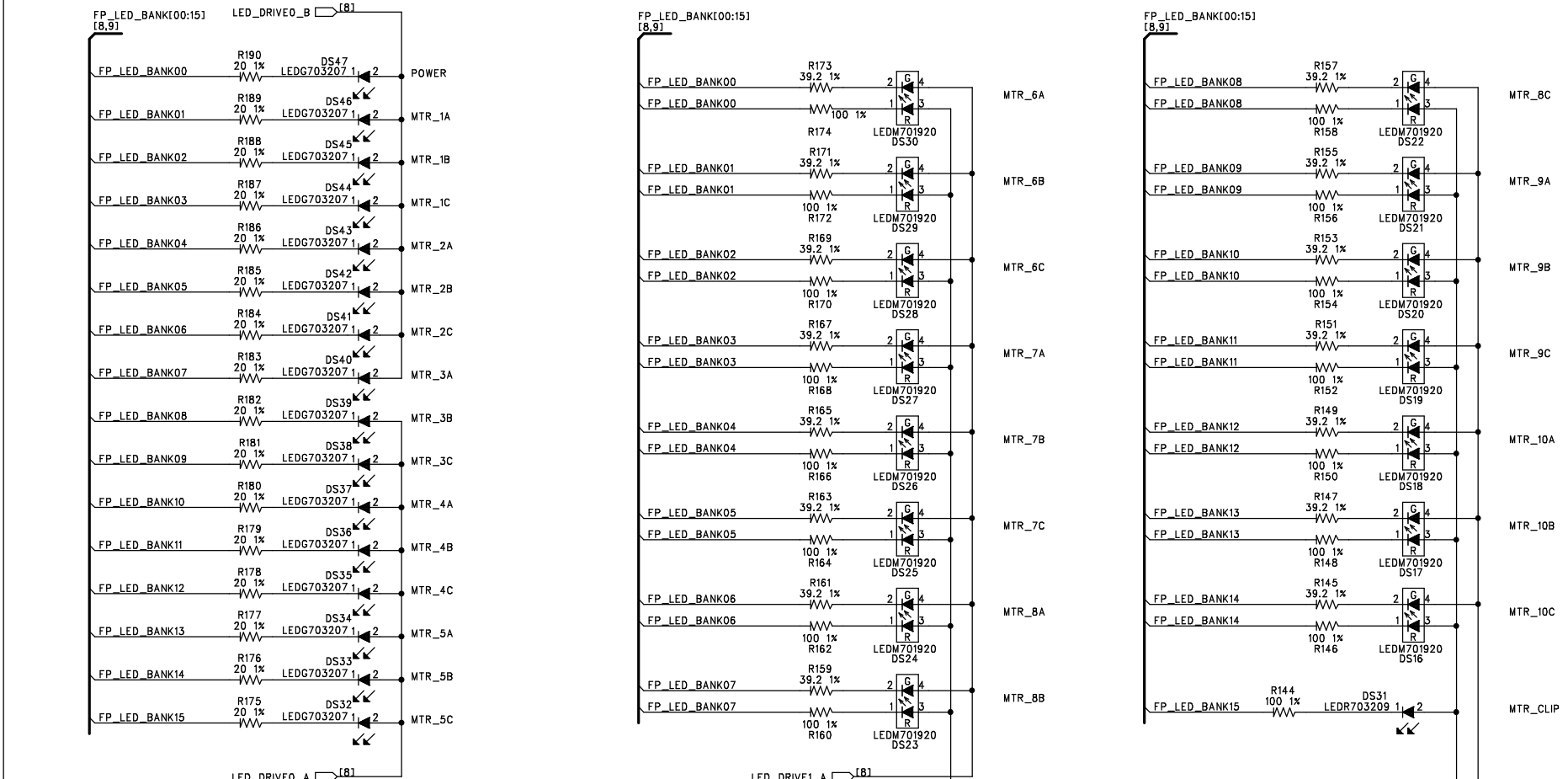


SIZE: A	SHEET TITLE: ANALOG OUTPUTS	REVISION: A2
DATE: 07/19/05	DRAWING NO: 05-9988	SHEET: 7 OF 11

FP Connection To/From Digital Board



SIZE: A	SHEET TITLE: FP BOARD (SWITCHES)	REVISION: A2
DATE: 07/19/05	DRAWING NO: 05-9988	SHEET: 8 OF 11



SIZE: A	SHEET TITLE: FP BOARD (METER LEDS)	REVISION: A2
DATE: 07/19/05	DRAWING NO: 05-9988	SHEET: 9 OF 11

Bill Of Materials for 059988A2.sch on Tue Jul 19 17:07:51 2005

Qty	Reference	HMG#	Description	Audit	Schematic Part	PCB Decal
1	PCB1	80-9988	PCB 80-9988 (JBL T-8 ANALOG PCB	PT2044	80XXXXXY	BARCODE
1	BR1	70-0094	DIO BRGE RECT 200V 10A BK	PT2308	BR700094	BRIDGE4
18	A1 A6-7 A11 A13-26	NON-PART	NON-PART PCB ONLY BREAKOFF PART	PT1481	BRKOFF	BRKOFF
2	C34 C38	56-0000	CAP 0.001uF FILM PTR 100V 5% AF TA	PT1629	C0.001UF100JR	RFCC200
4	C18-19 C43 C46	56-0003	CAP 0.0033uF FILM PTR 100V 5% RF TA	PT1103	C0.0033UF100JR	RFCC200
1	C149	56-0004	CAP 0.0047uF FILM PTR 100V 5% RF TA	PT1201	C0.0047UF100JR	RFDC200
1	C148	62-0048	CAP 0.01uF CER 250V 20% Y5V RC BK	PT1939	C0.01UC250MR	RCWI400
4	C90-92 C95	62-1311	CAP 0.01uF CER 50V 20% Y5V 0603 TA	PT2665	C0.01UC50M0603	0603
1	C152	OMIT	OMIT CAP 0.01uF FILM PTR 100V 5% RF TA (56-0006)	PT1380	C0.01UF100JRO	RFDD200
1	C16	56-0008	CAP 0.022uF FILM PTR 100V 5% RF TA	PT1399	C0.022UF100JR	RFED200
1	C1	56-0009	CAP 0.033uF FILM PTR 100V 5% RF TA	PT1401	C0.033UF100JR	RFFE200
19	C106 C109 C150-151 C154-168	62-1310	CAP 0.1uF CER 16V 20% Y5V 0603 TA	PT2696	C0.1UC16M0603	0603
26	C23 C26-30 C36 C49-53 C63-64 C78-79 C85 C98 C122 C126 C128 C133-134 C137 C139 C143	62-1312	CAP 0.1uF CER 50V +80%/-20% Y5V 0603 TA	PT2687	C0.1UC50Z0603	0603
12	C10 C15 C33 C47 C62 C68-70 C80 C86 C89 C94	62-0076	CAP 0.1uF FILM MTPT 250V 5% RF BK	PT2143	C0.1UF250JR	RFMF300
2	C74 C87	56-0016	CAP 0.47uF FILM MTPT 50V 5% RF TA	PT1308	C0.47UF50JR	RFEF200
2	C32 C141	62-0049	CAP 1000pF CER 250V 20% Y5U RC BK	PT2046	C1000PC250MR	RCFI300
2	C8 C13	62-1308	CAP 1000pF CER 50V 20% Y5V 0603 TA	PT2651	C1000PC50M0603	0603
3	C60 C82-83	60-0064	CAP 1000uF EL 16V 20% GP 10x17R 5LL TA	PT1334	C1000UE16MR	REM200P
1	C136	60-0055	CAP 100uF EL 25V 20% GP 6x11R 5LS TA	PT1407	C100UE25MR	REG200P
4	C21 C81 C127 C142	60-0049-01	CAP 10uF EL 16V 20% GP 4X7R 5LS TA	PT1080	C10UE16MR	RED200P
3	C146-147 C169	OMIT	OMIT CAP 10uF EL 16V 20% GP 4X7R 5LS TA (60-0049-01)	PT1759	C10UE16MRO	RED200P
2	C56-57	60-0050-01	CAP 10uF EL 25V 20% GP 5x7R 5LS TA	PT1205	C10UE25MR	RED200P
7	C3 C11 C22 C48 C65 C75 C88	60-0090	CAP 10uF EL 50V 20% GP 5x11R 5LS TA	PT1206	C10UE50MR	REE200P
2	C58-59	60-1074	CAP 10uF EL 50V 20% HT 5x11R 5LS TA	PT1972	C10UE50MR1	REE200P
2	C113 C125	62-1304	CAP 120pF CER 50V 5% NPO 0603 TA	PT2655	C120PC50J0603	0603
2	C2 C153	60-0044-01	CAP 1uF EL 50V 20% GP 5x7R 5LS TA	PT1079	C1UE50MR	RED200P
3	C7 C144-145	OMIT	OMIT CAP 1uF EL 50V 20% GP 5x7R 5LS TA (60-0044-01)	PT2447	C1UE50MRO	RED200P
2	C135 C140	62-1305	CAP 220pF CER 50V 10% X7R 0603 TA	PT2654	C220PC50K0603	0603
1	C72	60-0010	CAP 22uF EL 35V 20% GP 5x11R 5LS TA	PT2110	C22UE35MR	REE200P
9	C44-45 C54 C67 C114-116 C121 C123	60-0402	CAP 22uF ELNP 25V 20% GP 6x11R 5LS TA	PT1084	C22UN25MR	REG200
11	C17 C20 C24-25 C35 C37 C39-40 C61 C66 C124	62-1320	CAP 330pF CER 50V 5% NPO 0603 TA	PT2941	C330PC50J0603	0603
3	C14 C55 C84	60-0324	CAP 33uF EL 63V 20% GP 6x11R 5LS TA	PT1436	C33UE63MR	REG200P
1	C112	60-0048-01	CAP 4.7uF EL 16V 20% GP 5x7R 5LS TA	PT1294	C4.7UE16MR	REE200P
1	C71	62-1314	CAP 470pF CER 50V 5% NPO 0603 TA	PT2921	C470PC50J0603	0603
9	C4 C42 C97 C99-100 C105 C107-108 C110	62-1307	CAP 470pF CER 50V 10% X7R 0603 TA	PT2652	C470PC50K0603	0603
13	C101-104 C111 C117-120 C129-132	OMIT	OMIT CAP 470pF CER 50V 10% X7R 0603 TA (62-1307)	PT2777	C470PC50K0603O	0603
2	C93 C96	60-0060	CAP 470uF EL 35V 20% GP 10x20R 5LL TA	PT1081	C470UE35MR	REM200P
3	C9 C41 C73	62-1302	CAP 47pF CER 50V 5% NPO 0603 TA	PT2657	C47PC50J0603	0603
2	C76-77	60-0003	CAP 5600uF EL 50V 20% GP 30x30R 10LS BK	PT2021	C5600UE50MR	REZE400P
1	C138	62-1303	CAP 68pF CER 50V 5% NPO 0603 TA	PT2656	C68PC50J0603	0603
12	D18-27 D30-31	70-0113	DIO MMBD4148SE DUAL 75V 600mA SOT-23 TA	PT1326	D1N4148SE-S	SOT-23
3	D1 D28-29	OMIT	OMIT DIO MMBD4148SE DUAL 75V 600mA SOT-23 TA (70-0113)	PT1327	D1N4148SE-S-O	SOT-23
13	D4-7 D9-17	70-3203	DIO RECT S1G 400V 1.0A SMA TA	PT2081	DS1G-S	DO-214AC/SMA
1	D2	OMIT	OMIT DIO TL431 PROGRAMMABLE PRECISION REF TO92(RAC)-V TA (72-3601)	PT3253	DTL431-R-O	TO92(RAC)-V
8	A3 A5 A8 A10 A27-30	NON-PART	NON-PART FIDUCIAL TARGET FOR AUTO INSERTION	PT2904	FIDUCIAL-AI	FIDUCIAL-AI
4	A2 A4 A9 A12	NON-PART	NON-PART FIDUCIAL TARGET FOR XRAY	PT2905	FIDUCIAL-XRAY	FIDUCIAL-XRAY

1	P9	32-0000	HCN 50 PN 0.5 MM CNTS 1X50 FML RA	PT2824	HCN320000	HC320000
1	J9	32-0236	HCN CONN 40 PIN 0.5MM CNTS 1X40 RA FML	PT3244	HCN320236	HC401H050LSPFS
1	P11	32-0137	HDR 2P 0.098" SPC 1X2 SHD VRT M	PT1854	HDR320137	HC21V98SP
1	P4	32-0235	HDR 2 PN 0.165 SPC 1X2 LKG SHD POL HOR M	PT3245	HDR320235	HC21H217165LSPM
1	P3	32-0246	HDR 6 PN 2X3 165X217 LKG SHD POL HOR M	PT3246	HDR320246	HC23H217165LPM
1	P12	32-0247	HDR 3 PN 1X3 165X217 LKG SHD POL HOR M	PT3247	HDR320247	HC31H217165LPM
1	P7	32-0254	HDR 16 PN 0.1 SPC 2X8 RA ML	PT3250	HDR320254	HC82H
1	P6	32-0255	HDR 20 PN 0.1 SPC 2X10 RA ML	PT3249	HDR320255	HC102H
1	HS1	70-4215	HEATSINK TO-220 VERT	PT1339	HS704215	HS704215
1	J6	32-0094	CON JACK 1/8" PHONE INS HZ MT	PT2443	J320094	J320094
1	J5	32-0110	CON JACK RCA DUAL PCB MNT SLV/ WHT	PT1320	J320110	J320110
1	J1	32-0185	CON JACK USB SHLD I/O TYPE B RCPTL	PT2877	J320185	J320185
2	J4 J8	32-0213	CON JACK XLR R/A PCA A SERIES NON-LOCKING	PT2016	J320213	XLRF-2
1	J7	32-0214	CON JACK 1/4 PHONO FULL THREAD SLIM GND	PT3074	J320214	J320214
1	P8	32-0261	CON ASSY IEC AC JACK JBL T6/T8	PT3255	J320261	J320261
1	J2	32-1134	CON JACK RJ45 DUAL 8 PIN RA PCB MOUNT	PT1911	J321134	JR45_8P_DUAL
1	LBL1	30-0121	LABEL BARCODE AUTOINSERTABLE RAW	PT2790	LABEL300121	LABEL300121
27	DS1-7 DS32-47	70-3207	LED GREEN D1206 T&R	PT1902	LEDG703207	D1206
	DS106-107 DS114-115					
2	DS100-101	OMIT	OMIT LED GREEN D1206 T&R (70-3207)	PT3037	LEDG703207-0	D1206
15	DS16-30	70-1920	LED RED/GRN WT/DIF SM 1210 TA	PT2428	LEDM701920	LED1210
1	DS10	70-0089	LED ORANGE SM EXTRA BRIGHT	PT3256	LEDO700089	P-LCC-4
5	DS48-52	70-1902	LED RED R/A ANTI-TIP	PT1133	LEDR701902	D701902
7	DS31 DS104-105	70-3209	LED RED D1206 T&R	PT1901	LEDR703209	D1206
	DS108-111					
4	DS102-103 DS112-113	70-3208	LED YEL 1206 TA	PT1900	LEDY703208	D1206
1	L1	26-0215	IND FBD 70 OHM @ 100MHz RIC200 TA	PT1262	LFB260215	RIC200
26	L2-3 L5-9 L11-25	26-0217	IND FBD 2.5K OHM @ 70MHz 0805 TA	PT1261	LFB260217	0805
	L27-30					
2	GP1-2	NON-PART	NON-PART MECCA GND/PWR TIE POINT 2 POS	PT2970	MECCA2	MECCA2
1	GP4	NON-PART	NON-PART MECCA GND/PWR TIE POINT 3 POS	PT2481	MECCA3	MECCA3
1	GP3	NON-PART	NON-PART MECCA GND/PWR TIE POINT 6 POS	PT2483	MECCA6	MECCA6
6	MH11-14 MH30-31	NON-PART	NON-PART MOUNTING HOLE 0.130" NON-PLATED #4	PT1242	MH130	MH130
7	MH1 MH5-10	NON-PART	NON-PART MOUNTING HOLE 0.156" NON-PLATED #6	PT3000	MH156	MH156
2	MH2 MH15	NON-PART	NON-PART TOOLING PIN HOLE 156MIL HOLE	PT2794	MH156-TOOL	MH156-TOOL
4	MH3-4 MP1-2	NON-PART	NON-PART MECHANICAL PLATED HOLE 300 PAD 156 HOLE #6	PT3001	MP300H156	MP300H156
1	J3	32-0205	CON PLUG XLR CHASSIS PCB MNT HOR A SERIES	PT2372	P320205	XLRM-1
5	WH1-5	NON-PART	NON-PART PD ARY 1 PN 0.100" HLE	PT3106	PA1X1-000-100	PA1X1-000-100
1	P5	NON-PART	NON-PART PD ARY 20 PN 2 X 10 0.100" SC 0.039" HLE	PT2965	PA2X10-100-039	PA2X10-100-039
1	P2	NON-PART	NON-PART PAD ARRAY 16 PIN 2X8	PT3252	PA2X8-100-039	PA2X8-100-039
7	Q3-6 Q10-11 Q100	70-1058	XSTR 2N3904 NPN SOT-23 TA	PT1203	Q2N3904-S	SOT-23
2	Q1 Q8	OMIT	OMIT XSTR 2N3904 NPN SOT-23 T&R (70-1058)	PT2126	Q2N3904-S-0	SOT-23
2	Q7 Q9	OMIT	OMIT XSTR 2N3906 PNP SOT-23 SM TA (70-1059)	PT2834	Q2N3906-S-0	SOT-23
26	R2 R13-16 R18-19	50-1300	RES 0 5% 1/16W SM 0603 TA	PT2508	R0-B5-0603	0603
	R29 R33 R49 R53 R89					
	R104 R201 R214 R218					
	R224 R229 R233-234					
	R238-241 R244-245					
14	R4 R56 R59 R115-116	OMIT	OMIT RES 0 5% 1/16W SM 0603 TA (50-1300)	PT2509	R0-B5-06030	0603
	R212 R225-228					
	R230-232 R500					
2	L4 L10	OMIT	OMIT RES 0 5% 1/10W SM 0805 TA (50-1531)	PT1006	R0-C5-08050	0805
6	R5 R69-70 R74 R88	50-0317	RES 0 5% 1/4W CF RR TA	PT1008	R0-E5-R	RRA200
	R90					
2	R42 R47	52-1314	RES 1.5K 1% 1/16W SM 0603 TA	PT2551	R1.5KB1-0603	0603
25	R102 R105 R121-122	52-1304	RES 100 1% 1/16W SM 0603 TA	PT2512	R100-B1-0603	0603
	R124 R129-130 R132					
	R135 R144 R146 R148					
	R150 R152 R154 R156					
	R158 R160 R162 R164					
	R166 R168 R170 R172					
	R174					
3	R46 R83 R94	50-0063	RES 10 5% 3W MOF FL AR TA	PT2056	R10-I5-A	AR200800

18	R17 R58 R107-114 R191 R193 R200 R204-206 R213 R217	52-1338	RES 10K 1% 1/16W SM 0603 TA	PT2584 R10KB1-0603	0603
5	R101 R137 R219 R222-223	OMIT	OMIT RES 10K 1% 1/16W SM 0603 TA (52-1338)	PT2628 R10KB1-06030	0603
7	R26-27 R95-98 R117	50-1306	RES 110 5% 1/16W SM 0603 TA	PT2524 R110-B5-0603	0603
1	R247	52-1362	RES 150K 1% 1/16W SM 0603 TA	PT2615 R150KB1-0603	0603
1	R45	52-1345	RES 17.4K 1% 1/16W SM 0603 TA	PT2597 R17.4KB1-0603	0603
13	R1 R3 R32 R51 R66 R77-78 R87 R118 R138 R215 R236 R501	52-1313	RES 1K 1% 1/16W SM 0603 TA	PT2550 R1KB1-0603	0603
3	R20 R237 R243	OMIT	OMIT RES 1K 1% 1/16W SM 0603 TA (52-1313)	PT2943 R1KB1-06030	0603
1	R242	OMIT	OMIT RES 1M 1% 1/16W SM 0603 TA (52-1372)	PT2852 R1MB1-06030	0603
4	R99-100 R220-221	OMIT	OMIT RES 2.21K 1% 1/16W SM 0603 TA (52-1317)	PT3232 R2.21KB1-06030	0603
4	R25 R28 R52 R57	52-1318	RES 2.49K 1% 1/16W SM 0603 TA	PT2556 R2.49KB1-0603	0603
5	R79 R136 R139 R235 R246	52-1306	RES 200 1% 1/16W SM 0603 TA	PT2514 R200-B1-0603	0603
2	C5-6	50-0109	RES 200 OHM 5% 1/8W CF AR TA	MRC060 R200-D5-A	AR400
16	R175-190	52-1300	RES 20 1% 1/16W SM 0603 TA	PT2507 R20-B1-0603	0603
3	R48 R192 R199	52-1346	RES 20K 1% 1/16W SM 0603 TA	PT2598 R20KB1-0603	0603
2	R60 R84	52-1348	RES 23.2K 1% 1/16W SM 0603 TA	PT2600 R23.2KB1-0603	0603
5	R7-8 R10 R68 R86	52-1349	RES 24.9K 1% 1/16W SM 0603 TA	PT2601 R24.9KB1-0603	0603
1	R93	52-1365	RES 280K 1% 1/16W SM 0603 TA	PT2618 R280KB1-0603	0603
6	R72-73 R75-76 R198 R202	52-1316	RES 2K 1% 1/16W SM 0603 TA	PT2553 R2KB1-0603	0603
2	R67 R85	52-1321	RES 3.01K 1% 1/16W SM 0603 TA	PT2559 R3.01KB1-0603	0603
3	R34 R81-82	52-1324	RES 3.32K 1% 1/16W SM 0603 TA	PT2562 R3.32KB1-0603	0603
12	R11-12 R71 R80 R103 R106 R195 R207-211	52-1307	RES 332 1% 1/16W SM 0603 TA	PT2543 R332-B1-0603	0603
22	R119 R123 R127 R131 R145 R147 R149 R151 R153 R155 R157 R159 R161 R163 R165 R167 R169 R171 R173 R502-504	52-1301	RES 39.2 1% 1/16W SM 0603 TA	PT2515 R39.2-B1-0603	0603
9	R30-31 R36 R39-41 R54-55 R216	52-1327	RES 4.53K 1% 1/16W SM 0603 TA	PT2565 R4.53KB1-0603	0603
2	R35 R248	52-1328	RES 4.64K 1% 1/16W SM 0603 TA	PT2568 R4.64KB1-0603	0603
1	R65	52-1329	RES 4.99K 1% 1/16W SM 0603 TA	PT2566 R4.99KB1-0603	0603
8	R21 R24 R61 R64 R120 R125 R128 R133	52-1302	RES 49.9 1% 1/16W SM 0603 TA	PT2510 R49.9-B1-0603	0603
2	R91 R196	52-1356	RES 49.9K 1% 1/16W SM 0603 TA	PT2609 R49.9KB1-0603	0603
5	R22-23 R50 R62-63	52-1308	RES 499 1% 1/16W SM 0603 TA	PT2545 R499-B1-0603	0603
4	R37-38 R43-44	52-1331	RES 5.76K 1% 1/16W SM 0603 TA	PT2576 R5.76KB1-0603	0603
2	R194 R203	52-1333	RES 6.81K 1% 1/16W SM 0603 TA	PT2578 R6.81KB1-0603	0603
2	R126 R134	52-1303	RES 60.4 1% 1/16W SM 0603 TA	PT2511 R60.4-B1-0603	0603
2	R6 R9	52-1309	RES 619 1% 1/16W SM 0603 TA	PT2546 R619-B1-0603	0603
4	R140-143	52-1335	RES 7.5K 1% 1/16W SM 0603 TA	PT2581 R7.5KB1-0603	0603
2	R92 R197	52-1337	RES 9.09K 1% 1/16W SM 0603 TA	PT2583 R9.09KB1-0603	0603
2	P1 P10	OMIT	OMIT HDR 2 PIN 0.1" SPC 1X2 0.025" SQ PIN VRT MALE	DWB SIP21	SIP21
10	SW2-11	44-0045	SWITCH SPST MINI MOMENTARY SMT	PT3108 SW440045	SW4PTACT-3
1	SW12	44-0050	SWITCH DPDT MINI IN-OUT 6 PIN E-SWITCH	PT1256 SW440050	SW440050
1	SW1	44-0183	SW 8 POSITION SPST RA	PT3109 SW440183	SW440183
1	TR1	26-3605	XFR SHIELDED DIGITAL AUDIO SM TA	PT2431 TR263605	XFR-11
1	U13	72-5426	IC, 74AC04, HEX INVERTER, SO14, T&R	PT1325 U74AC04-S	SO14
1	U11	70-4014	V-REG, 7805, +5V, 1.5 AMP, TO-220	PT1591 U7805	TO220(IGO)-V
1	U8	70-4123	V-REG, 7815, +15V, 1 AMP, TO-220	PT1592 U7815	TO220(IGO)-V
1	U9	70-4124	V-REG, 7915, -15V, 1 AMP, TO-220	PT1594 U7915	TO220(GIO)-V
1	U20	72-0104	IC AM26C32CD QUAD DIFF LINE RCVR 5V SM	PT3134 UAM26C32CD-S	SO16
1	U10	70-4021	V-REG, LD1117V33, +3.3V, 0.8 AMP, TO-220, BULK	PT1795 ULD1117V33	TO220(GOI)-V
7	U14 U19 U21-25	72-5434	IC NC7SZ125 TNYLGC UHS BUFFER SM TA	PT1881 UNC7SZ125-S	SOT23-5
8	U2-5 U7 U16-18	72-1480	IC NJM4580 DUAL OP-AMP SO8	PT1374 UNJM4580-S	SO8
3	U1 U6 U12	72-0021	IC TDA7293 120V 100 W DMOS AUDIO AMP W/ MUTE/ST-BY VERT BK	PT2695 UTDA7293	MULTIWATT15-V

1 U15

72-0164

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IC IR RECEIVER MODULE TSOP4838 38kHz

PT3258 UTSOP4838

TSOP4838