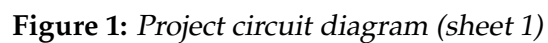

demod2

circuit board documentation

April 9, 2007

Figures

- Figures 1 to 12 on pages 2–13 show the project schematics.
- Figures 13 to 17 on pages 14–18 show various placeplan views of the circuit board to assist in populating it with components.



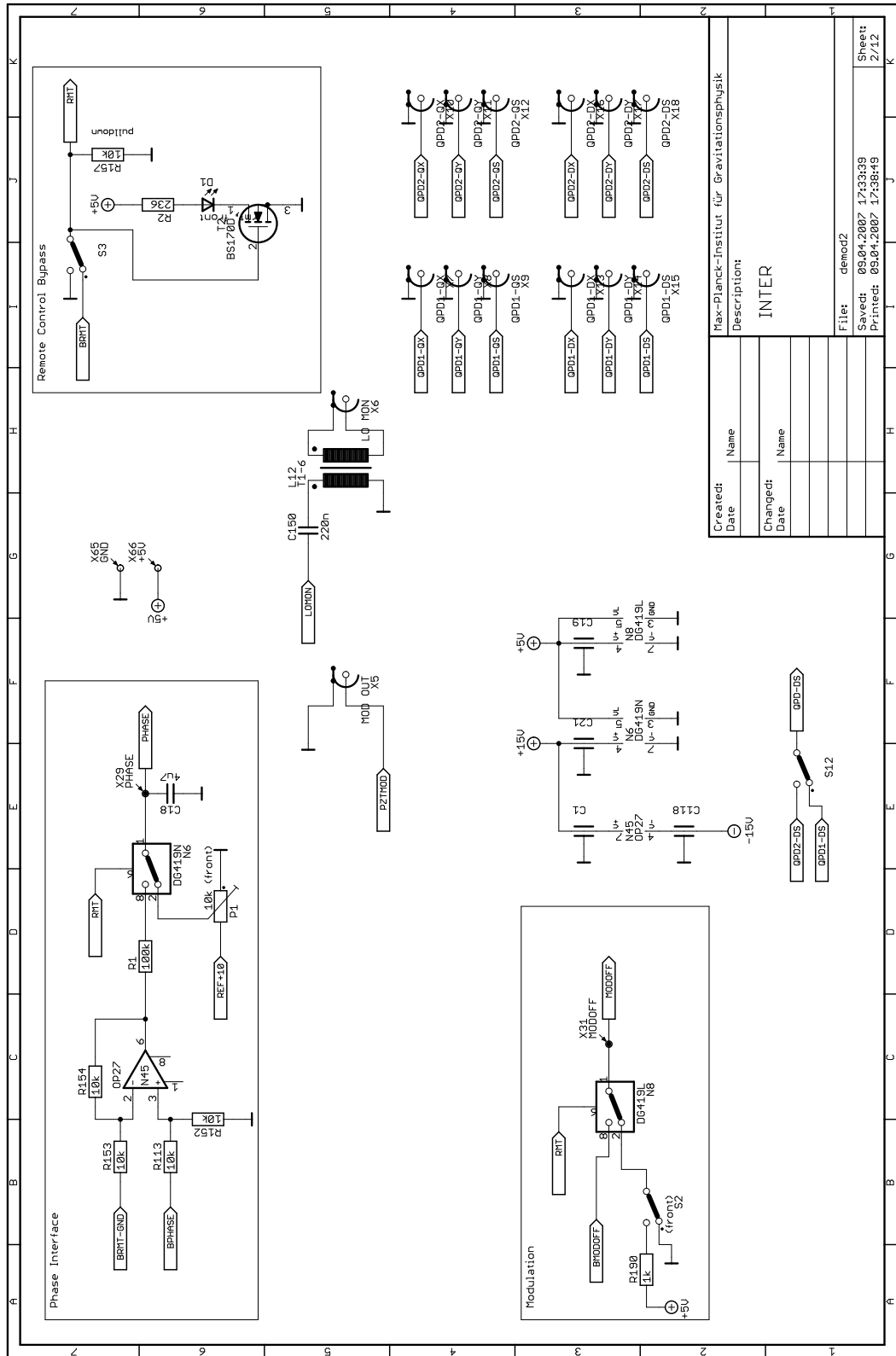
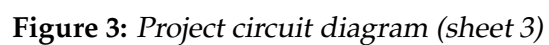
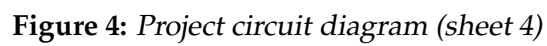


Figure 2: Project circuit diagram (sheet 2)





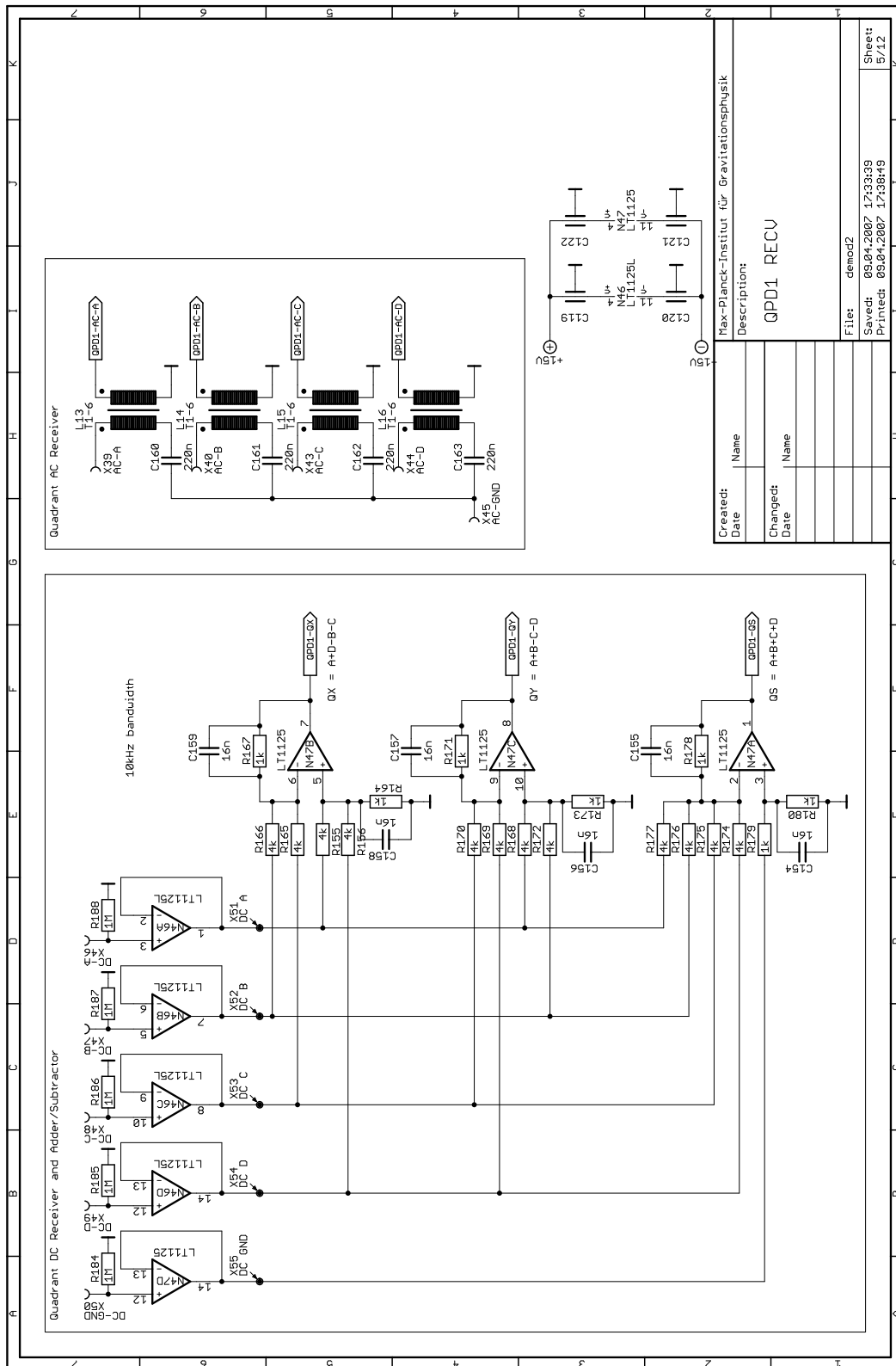


Figure 5: Project circuit diagram (sheet 5)

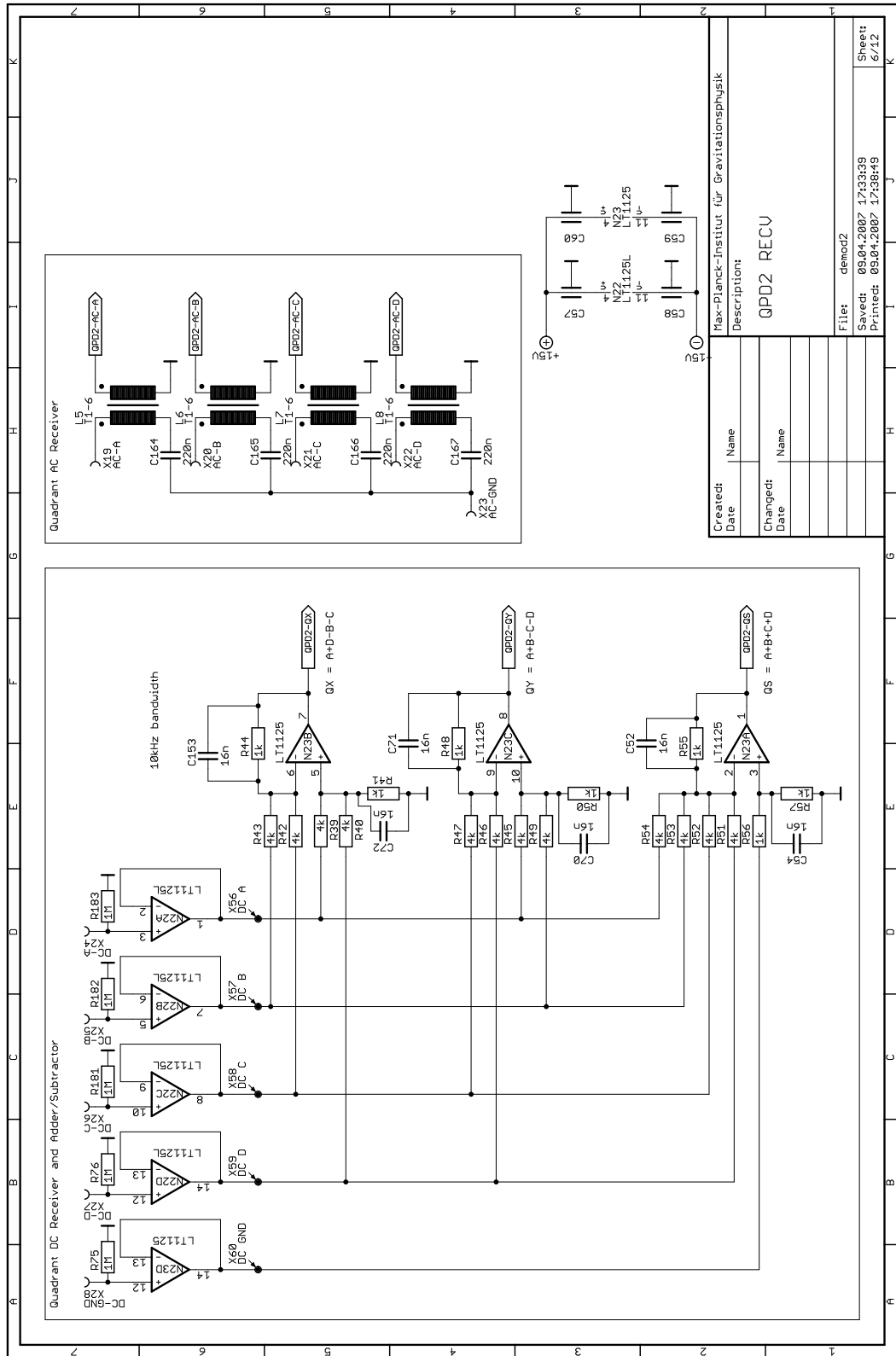


Figure 6: Project circuit diagram (sheet 6)

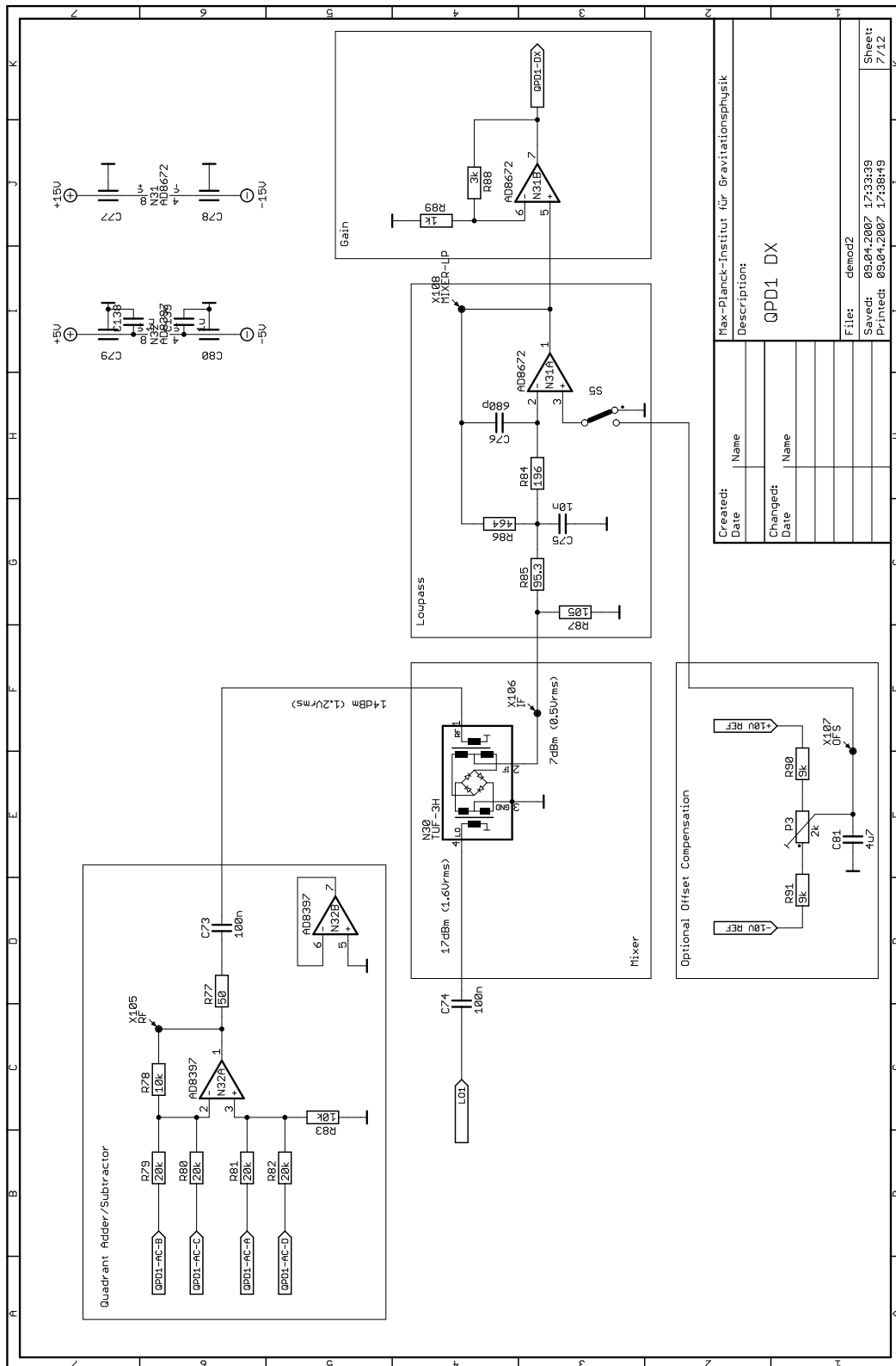


Figure 7: Project circuit diagram (sheet 7)

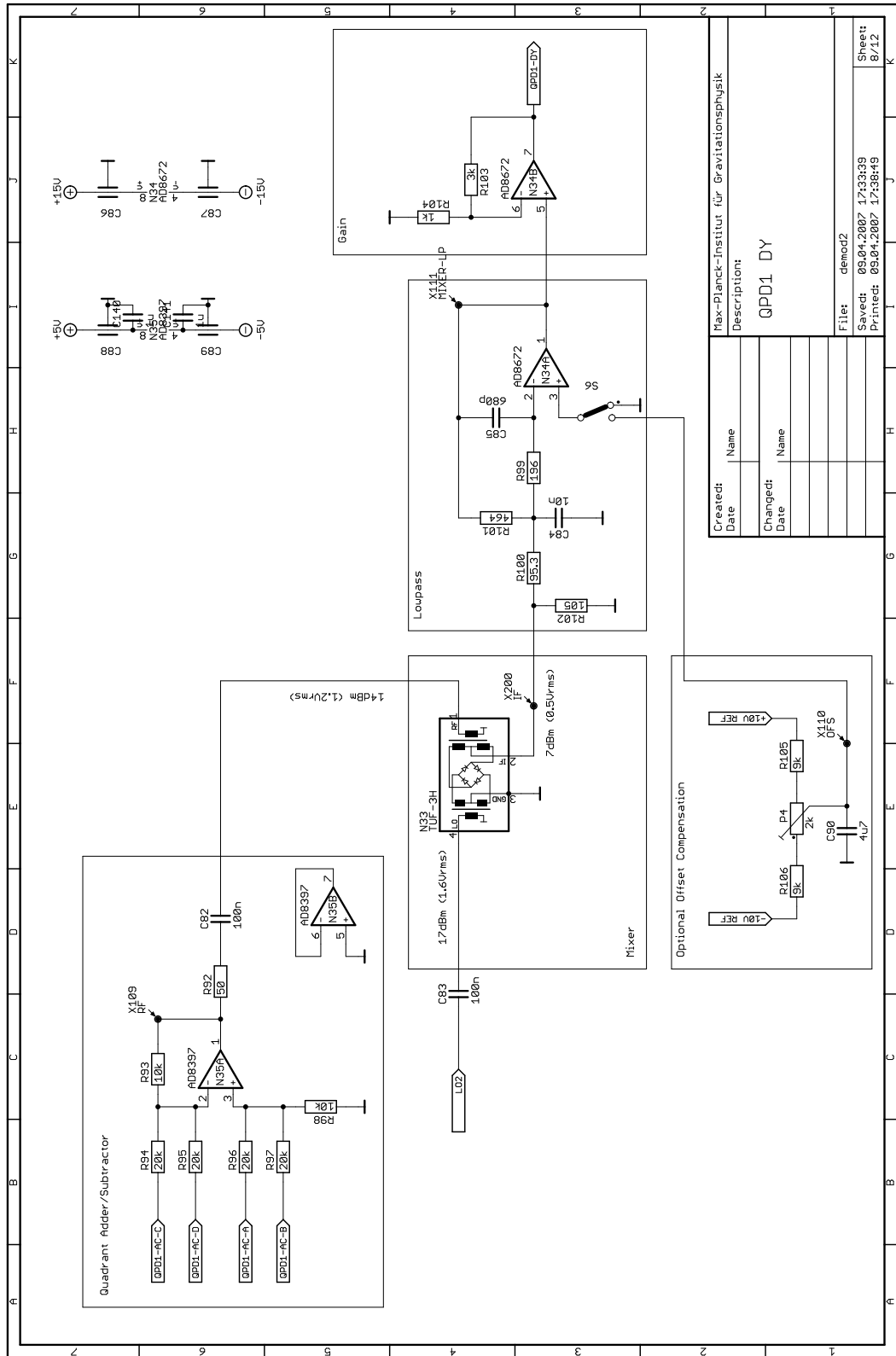
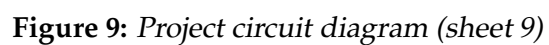


Figure 8: Project circuit diagram (sheet 8)



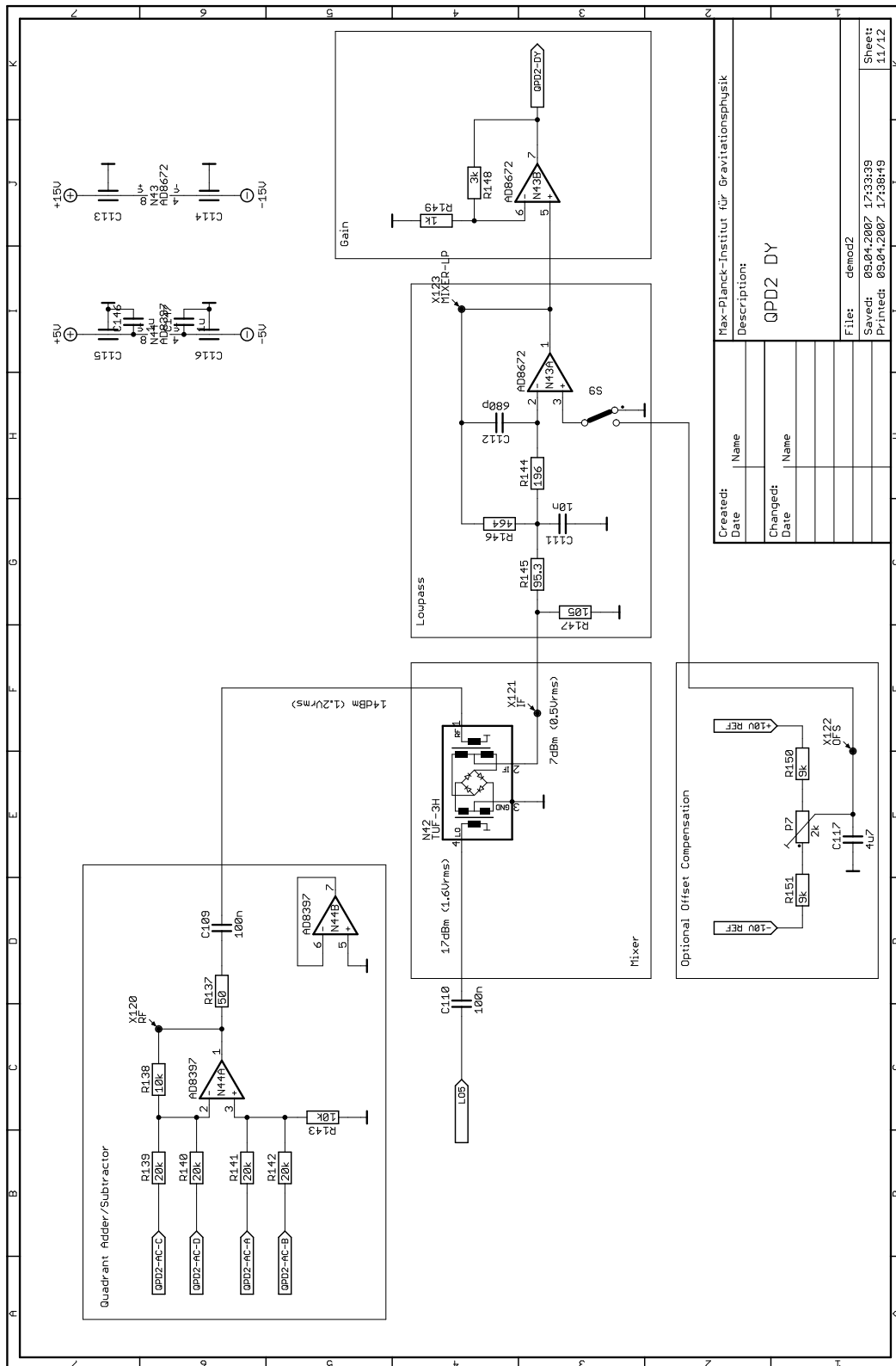


Figure 11: Project circuit diagram (sheet 11)

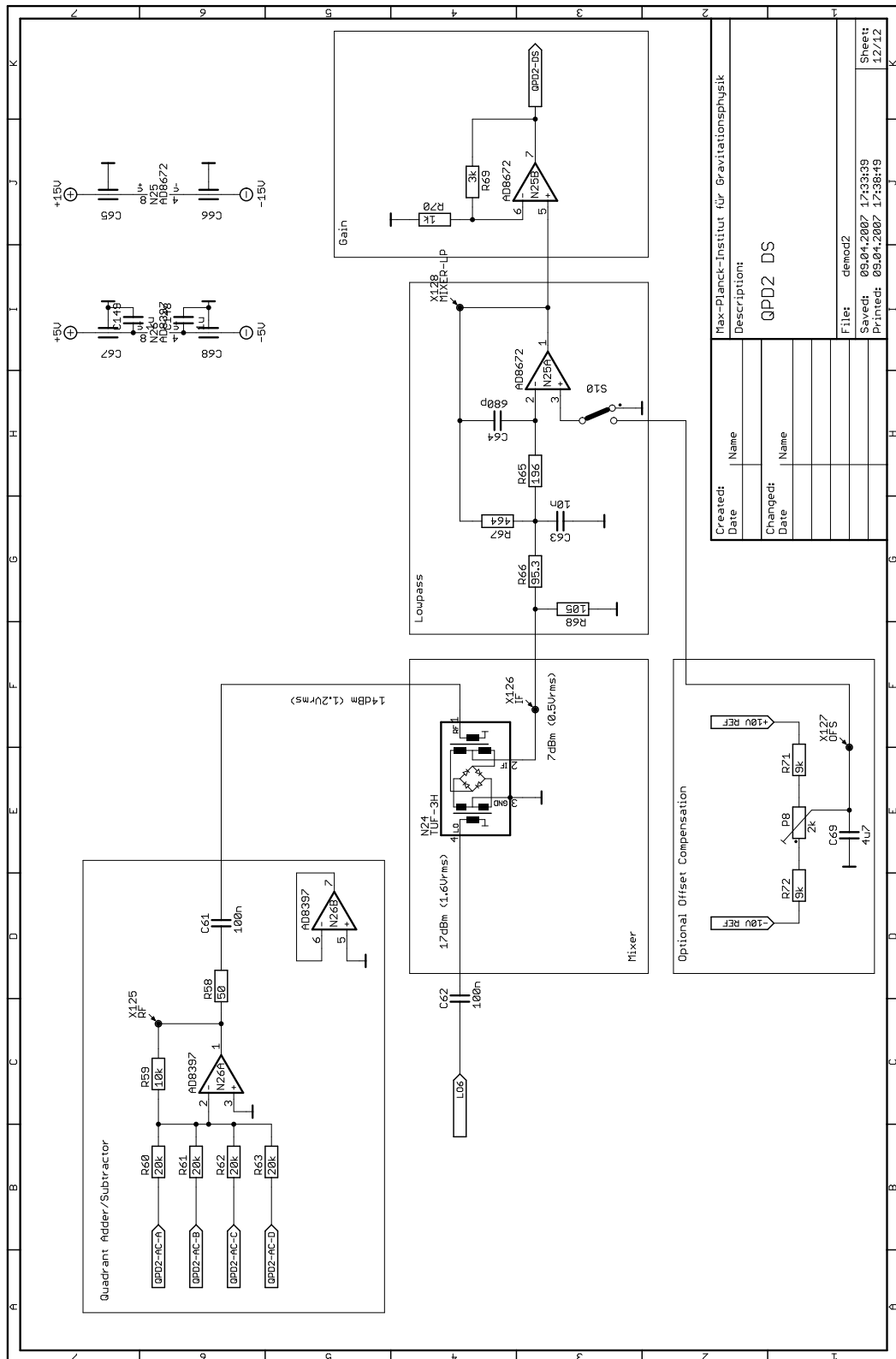


Figure 12: Project circuit diagram (sheet 12)

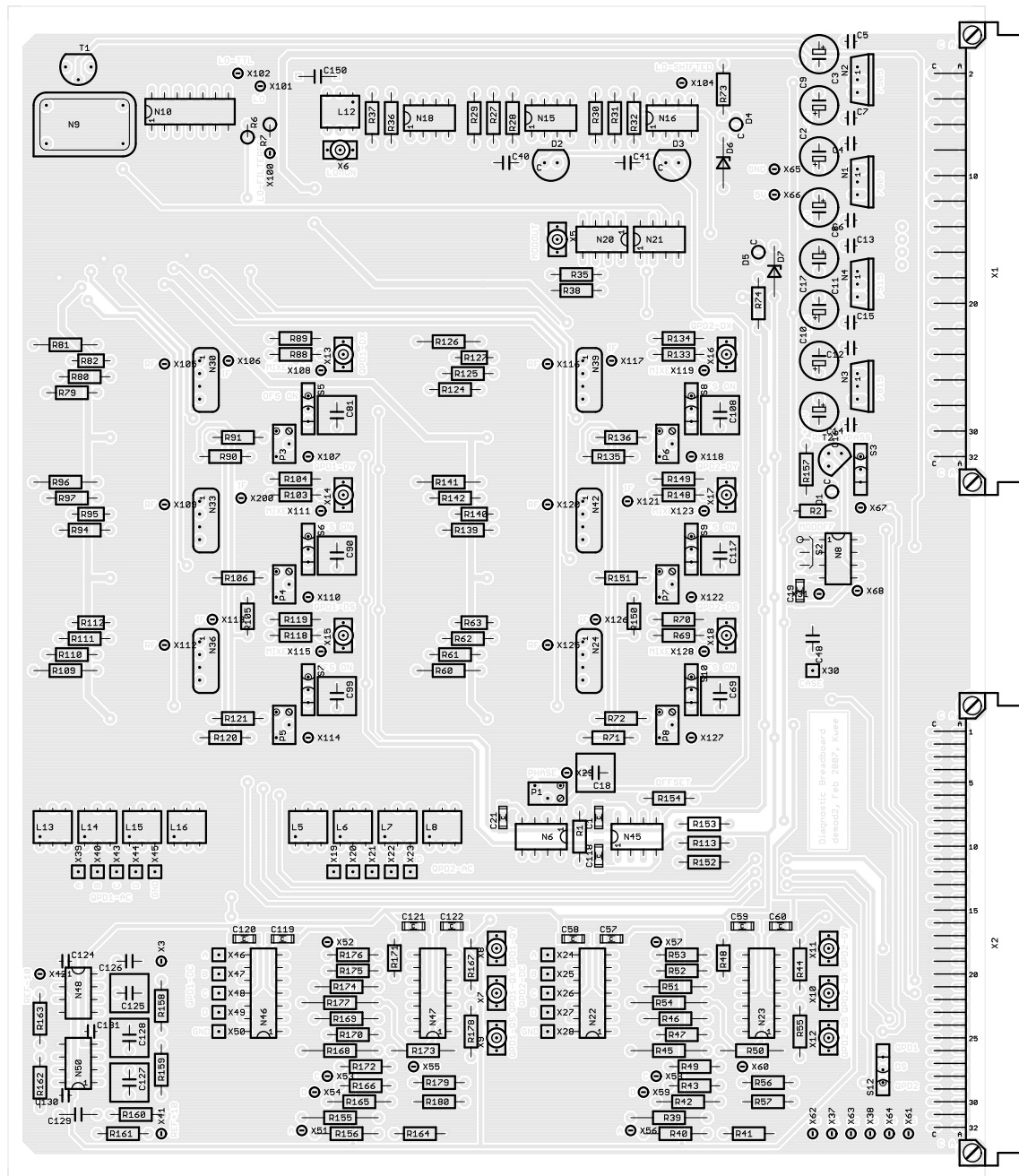


Figure 13: Board top view showing placeplan with component names

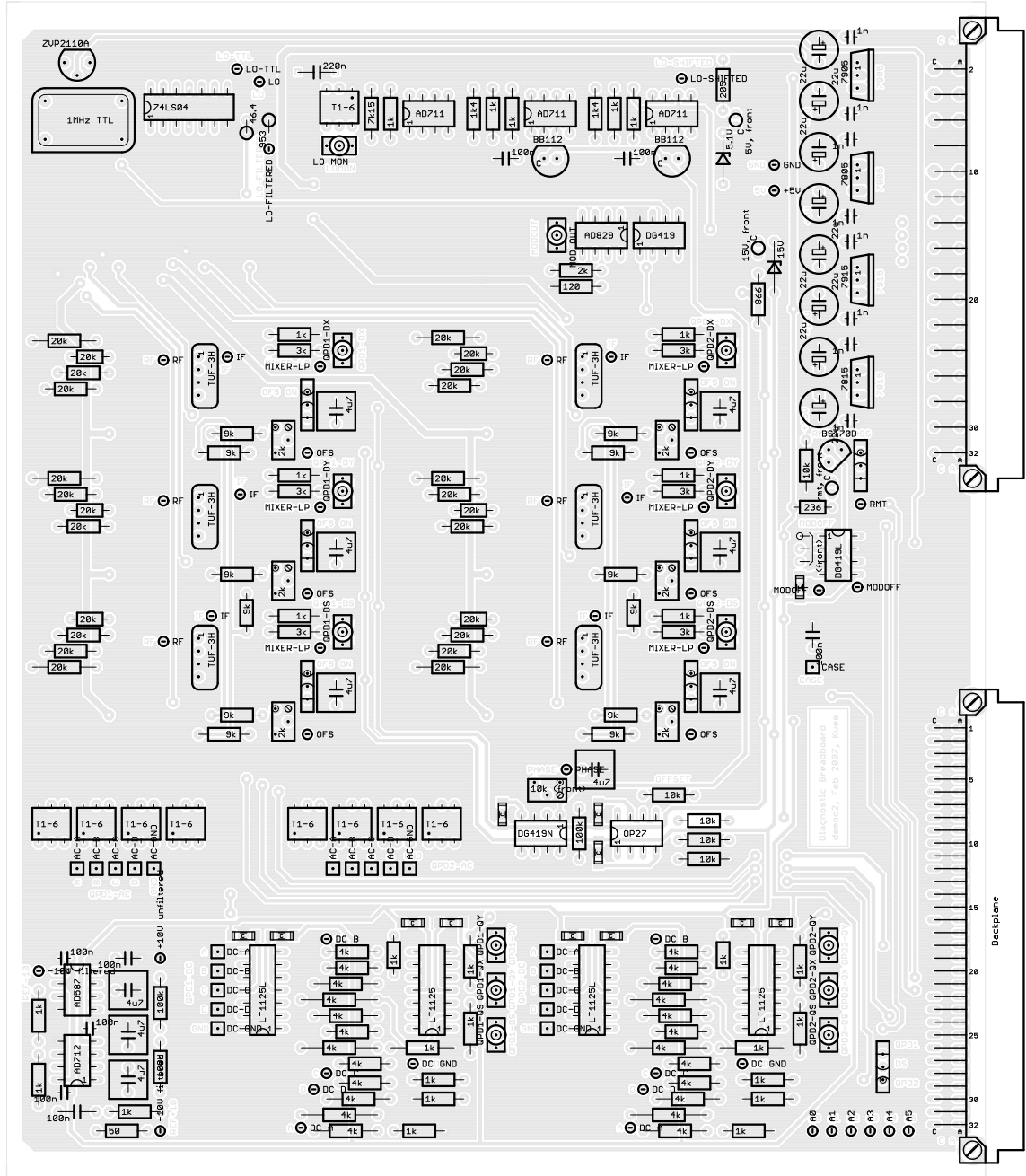
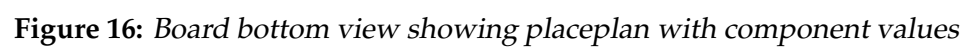
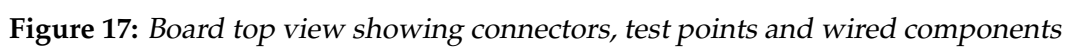


Figure 14: Board top view showing placeplan with component values



Figure 15: Board bottom view showing placeplan with component names





Circuit lists

Value list: The following list shows all components available on the board (sorted by part *values*) and can be used to quickly gather components. Additional information can possibly be found directly on board (or in the schematics).

```

1 EAGLE Version 4.16r1 Copyright (c) 1988-2006 CadSoft
2 Board value list of 'demod2.brd'
3 Exported at 2007-04-09 17:39
4 Created with macro 'plot.ulp' (c) Andreas Weidner
5 Shown are: Value,Package,Number,Names (Library)
6
7 ---C---
8
9          CF01          (54*)   C1, C19, C21, C30, C31, C32, C33, C34, C35,
10                                     C36, C37, C38, C39, C43, C44, C45, C46,
11                                     C49, C50, C53, C56, C57, C58, C59, C60,
12                                     C65, C66, C67, C68, C77, C78, C79, C80,
13                                     C86, C87, C88, C89, C95, C96, C97, C98,
14                                     C104, C105, C106, C107, C113, C114, C115,
15                                     C116, C118, C119, C120, C121, C122
16                                     (divers)
17 (56p)          C0805          (1*)   C151 (divers)
18 *              C0805          (2*)   C55, C152 (divers)
19 1n              C01N           (8*)   C4, C5, C6, C7, C12, C13, C14, C15
20                                     (divers)
21 1u              C1206          (22*)  C20, C22, C24, C123, C132, C133, C134,
22                                     C135, C136, C137, C138, C139, C140, C141,
23                                     C142, C143, C144, C145, C146, C147, C148,
24                                     C149 (divers)
25 2n2             C0805          (3*)   C25, C27, C28 (divers)
26 2n7             C0805          (1*)   C26 (divers)
27 3p              C0805          (1*)   C51 (divers)
28 4u7             C02A           (10*)  C18, C69, C81, C90, C99, C108, C117, C125,
29                                     C127, C128 (divers)
30 10n              C0805          (7*)   C29, C63, C75, C84, C93, C102, C111
31                                     (divers)
32 16n              C0805          (12*)  C52, C54, C70, C71, C72, C153, C154, C155,
33                                     C156, C157, C158, C159 (divers)
34 22u              CE02D          (8*)   C2, C3, C8, C9, C10, C11, C16, C17
35                                     (divers)
36 100n             C01N           (3*)   C124, C130, C131 (divers)
37                  C02N           (4*)   C40, C41, C48, C126 (divers)
38                  C03N           (1*)   C129 (divers)
39                  C0805          (14*)  C42, C47, C61, C62, C73, C74, C82, C83,
40                                     C91, C92, C100, C101, C109, C110
41                                     (divers)
42 220n             C03R           (1*)   C150 (divers)
43                  C1206          (8*)   C160, C161, C162, C163, C164, C165, C166,
44                                     C167 (divers)
45 680p             C0805          (6*)   C64, C76, C85, C94, C103, C112 (divers)
46 820p             C0805          (1*)   C23 (divers)
47
48 ---D---
49 5.1V             DZ04N          (1*)   D6 (divers)
50 5V, front        DL03N          (1*)   D4 (opto)
51 15V              DZ04N          (1*)   D7 (divers)
52 15V, front       DL03N          (1*)   D5 (opto)
53 BB112            DC01A          (2*)   D2, D3 (divers)
54 rmt, front       DL03N          (1*)   D1 (opto)

```

55	---L---			
56	22u	L1008	(1*)	L1 (divers)
57	33u	L1008	(3*)	L2,L3,L4 (divers)
58	T1-6	LT11-W38	(1*)	L12 (divers)
59		LT11-X65	(8*)	L5,L6,L7,L8,L13,L14,L15,L16
60				(divers)
61				
62	---N---			
63	1MHz TTL	GEN01	(1*)	N9 (digital)
64	74LS04	DIP14L	(1*)	N10 (digital)
65	7805	TO220N	(1*)	N1 (ic)
66	7815	TO220N	(1*)	N3 (ic)
67	7905	TO220N	(1*)	N2 (ic)
68	7915	TO220N	(1*)	N4 (ic)
69	AD587	DIP08L	(1*)	N48 (ic)
70	AD711	DIP08N	(3*)	N15,N16,N18 (opamps)
71	AD712	DIP08L	(1*)	N50 (opamps)
72	AD829	DIP08L	(1*)	N20 (opamps)
73	AD8397	S008	(10*)	N11,N12,N13,N14,N26,N32,N35,N38,
74				N41,N44 (opamps)
75	AD8672	S008	(6*)	N25,N31,N34,N37,N40,N43 (opamps)
76	DG419	DIP08L	(1*)	N21 (ic)
77	DG419L	DIP08L	(1*)	N8 (ic)
78	DG419N	DIP08N	(1*)	N6 (ic)
79	LT1125	DIP14L	(2*)	N23,N47 (opamps)
80	LT1125L	DIP14L	(2*)	N22,N46 (opamps)
81	OP27	DIP08L	(1*)	N45 (opamps)
82	TUF-3H	MC-B02	(6*)	N24,N30,N33,N36,N39,N42 (ic)
83				
84	---P---			
85	2k	PT01N	(6*)	P3,P4,P5,P6,P7,P8 (divers)
86	10k (front)	PT01N	(1*)	P1 (divers)
87				
88	---R---			
89	0	R0805	(1*)	R3 (divers)
90	1M	R0805	(10*)	R75,R76,R181,R182,R183,R184,R185,
91				R186,R187,R188 (divers)
92	1k	R03N	(2*)	R48,R171 (divers)
93		R04N	(24*)	R27,R28,R31,R32,R36,R41,R44,R55,
94				R56,R57,R70,R89,R104,R119,R134,
95				R149,R160,R162,R163,R164,R167,R178,
96				R179,R180 (divers)
97		R05N	(2*)	R50,R173 (divers)
98		R0805	(13*)	R8,R9,R10,R11,R12,R13,R14,R15,R16,
99				R17,R18,R19,R190 (divers)
100	1k4	R04N	(2*)	R29,R30 (divers)
101	2k	R04N	(1*)	R35 (divers)
102		R1206	(1*)	R34 (divers)
103	3k	R04N	(6*)	R69,R88,R103,R118,R133,R148
104				(divers)
105	4k	R04N	(10*)	R43,R47,R49,R52,R53,R166,R170,R172,
106				R175,R176 (divers)
107		R05N	(8*)	R40,R42,R46,R51,R156,R165,R169,R174
108				(divers)
109		R06N	(6*)	R39,R45,R54,R155,R168,R177 (divers)
110	7k15	R04N	(1*)	R37 (divers)
111	9k	R03N	(2*)	R105,R150 (divers)
112		R04N	(10*)	R71,R72,R90,R91,R106,R120,R121,
113				R135,R136,R151 (divers)

114	10k	R04N	(5*)	R113,R152,R153,R154,R157 (divers)
115		R0805	(10*)	R59,R78,R83,R93,R98,R108,R123,R128, R138,R143 (divers)
116				
117	20k	R03N	(6*)	R63,R82,R95,R112,R127,R140 (divers)
118		R04N	(12*)	R61,R62,R79,R80,R94,R97,R110,R111, R124,R125,R139,R142 (divers)
119				
120		R05N	(6*)	R60,R81,R96,R109,R126,R141 (divers)
121	46.4	R01N	(1*)	R6 (divers)
122	50	R04N	(1*)	R161 (divers)
123		R0805	(13*)	R20,R21,R22,R23,R24,R25,R26,R58, R77,R92,R107,R122,R137 (divers)
124				
125	95.3	R0805	(6*)	R66,R85,R100,R115,R130,R145 (divers)
126				
127	100k	R04N	(3*)	R1,R158,R159 (divers)
128	105	R0805	(6*)	R68,R87,R102,R117,R132,R147 (divers)
129				
130	120	R04N	(1*)	R38 (divers)
131	196	R0805	(6*)	R65,R84,R99,R114,R129,R144 (divers)
132	205	R04N	(1*)	R73 (divers)
133	236	R03N	(1*)	R2 (divers)
134	287	R0805	(1*)	R4 (divers)
135	464	R0805	(6*)	R67,R86,R101,R116,R131,R146 (divers)
136				
137	866	R04N	(1*)	R74 (divers)
138	953	R01N	(1*)	R7 (divers)
139	INF	R0805	(1*)	R5 (divers)
140				
141	---S---			
142		S1X2S01N	(8*)	S3,S5,S6,S7,S8,S9,S10,S12 (divers)
143	(front)	S1X2W01N	(1*)	S2 (divers)
144				
145	---T---			
146	BS170D	T092D	(1*)	T2 (transistors)
147	ZVP2110A	T092N	(1*)	T1 (transistors)
148				
149	---X---			
150		XB32AC-GEO	(1*)	X1 (connectors)
151	+5V	XTN	(1*)	X66 (connectors)
152	+10V filtered	XTN	(1*)	X41 (connectors)
153	+10V unfiltered	XTN	(1*)	X3 (connectors)
154	-10V filtered	XTN	(1*)	X42 (connectors)
155	A0	XTN	(1*)	X62 (connectors)
156	A1	XTN	(1*)	X37 (connectors)
157	A2	XTN	(1*)	X63 (connectors)
158	A3	XTN	(1*)	X38 (connectors)
159	A4	XTN	(1*)	X64 (connectors)
160	A5	XTN	(1*)	X61 (connectors)
161	AC-A	XP01N	(2*)	X19,X39 (connectors)
162	AC-B	XP01N	(2*)	X20,X40 (connectors)
163	AC-C	XP01N	(2*)	X21,X43 (connectors)
164	AC-D	XP01N	(2*)	X22,X44 (connectors)
165	AC-GND	XP01N	(2*)	X23,X45 (connectors)
166	Backplane	XB64AC	(1*)	X2 (connectors)
167	CASE	XP01N	(1*)	X30 (connectors)
168	D0	XTN	(1*)	X35 (connectors)
169	D1	XTN	(1*)	X33 (connectors)
170	D2	XTN	(1*)	X36 (connectors)
171	D3	XTN	(1*)	X34 (connectors)
172	DC A	XTN	(2*)	X51,X56 (connectors)

173	DC B	XTN	(2*)	X52,X57 (connectors)
174	DC C	XTN	(2*)	X53,X58 (connectors)
175	DC D	XTN	(2*)	X54,X59 (connectors)
176	DC GND	XTN	(2*)	X55,X60 (connectors)
177	DC-A	XP01N	(2*)	X24,X46 (connectors)
178	DC-B	XP01N	(2*)	X25,X47 (connectors)
179	DC-C	XP01N	(2*)	X26,X48 (connectors)
180	DC-D	XP01N	(2*)	X27,X49 (connectors)
181	DC-GND	XP01N	(2*)	X28,X50 (connectors)
182	GND	XTN	(1*)	X65 (connectors)
183	IF	XTN	(6*)	X106,X113,X117,X121,X126,X200
184				(connectors)
185	LO	XTN	(1*)	X101 (connectors)
186	LO MON	XC174N	(1*)	X6 (connectors)
187	LO-FILTERED	XTN	(1*)	X100 (connectors)
188	LO-SHIFTED	XTN	(1*)	X104 (connectors)
189	LO-TTL	XTN	(1*)	X102 (connectors)
190	MIXER-LP	XTN	(6*)	X108,X111,X115,X119,X123,X128
191				(connectors)
192	MOD OUT	XC174N	(1*)	X5 (connectors)
193	MODOFF	XTN	(2*)	X31,X68 (connectors)
194	OFS	XTN	(6*)	X107,X110,X114,X118,X122,X127
195				(connectors)
196	PHASE	XTN	(1*)	X29 (connectors)
197	QPD1-DS	XC174N	(1*)	X15 (connectors)
198	QPD1-DX	XC174N	(1*)	X13 (connectors)
199	QPD1-DY	XC174N	(1*)	X14 (connectors)
200	QPD1-QS	XC174N	(1*)	X9 (connectors)
201	QPD1-QX	XC174N	(1*)	X7 (connectors)
202	QPD1-QY	XC174N	(1*)	X8 (connectors)
203	QPD2-DS	XC174N	(1*)	X18 (connectors)
204	QPD2-DX	XC174N	(1*)	X16 (connectors)
205	QPD2-DY	XC174N	(1*)	X17 (connectors)
206	QPD2-QS	XC174N	(1*)	X12 (connectors)
207	QPD2-QX	XC174N	(1*)	X10 (connectors)
208	QPD2-QY	XC174N	(1*)	X11 (connectors)
209	RF	XTN	(6*)	X105,X109,X112,X116,X120,X125
210				(connectors)
211	RMT	XTN	(1*)	X67 (connectors)