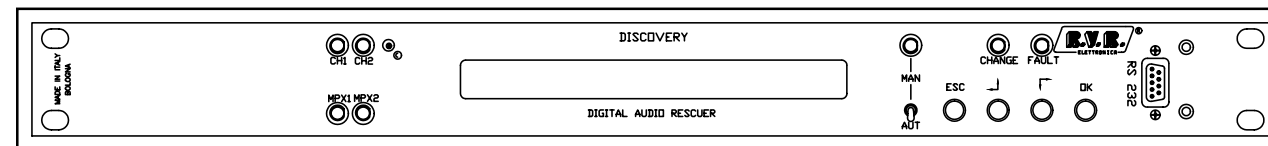


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# DISCOVERY



## User manual Volume 2: Technical Appendix

## Appendix A Piani di montaggio, schemi elettrici, liste componenti / *Component layouts, schematics, bills of material*

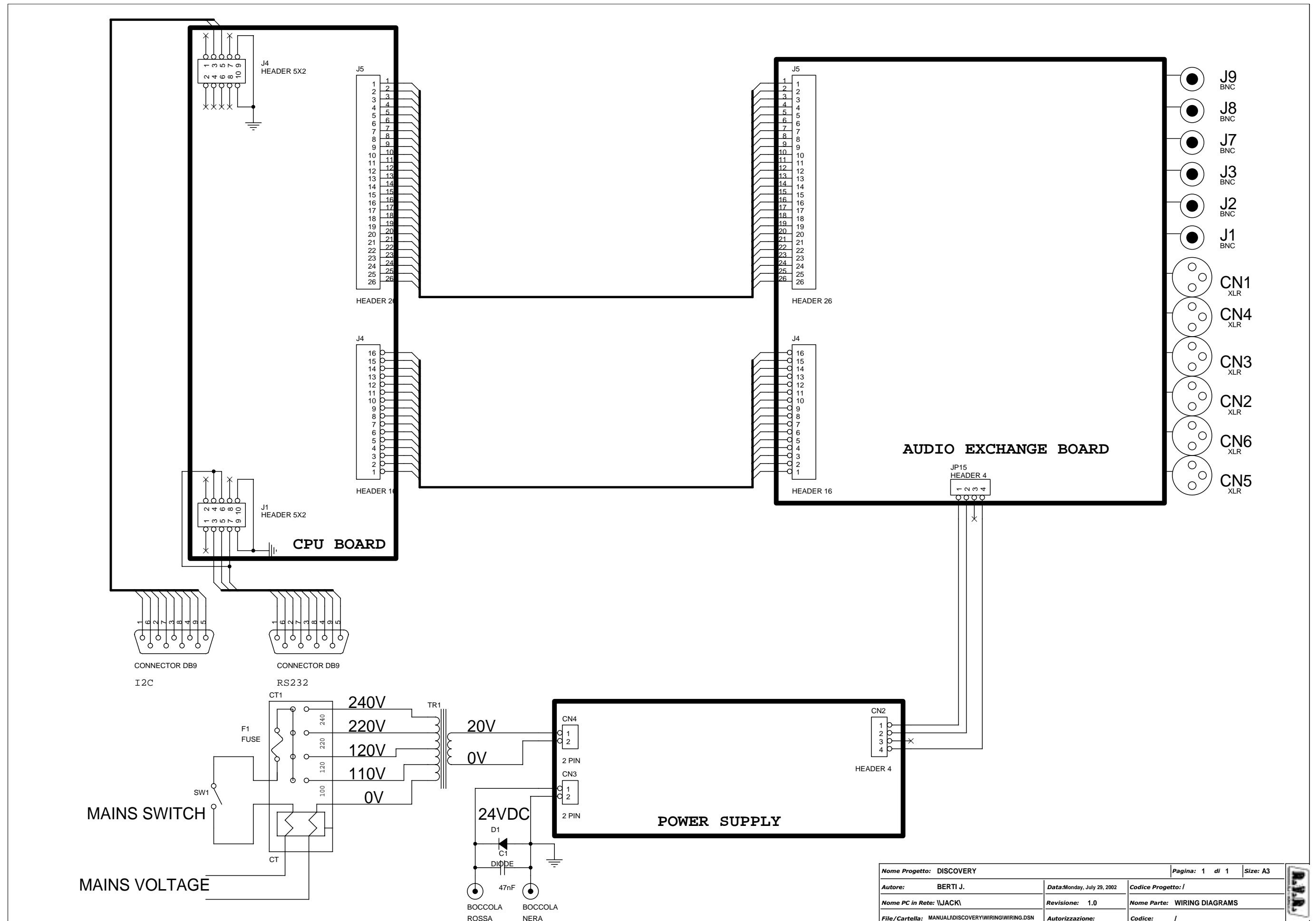
Questa parte del manuale contiene i dettagli tecnici riguardanti la costruzione delle singole schede componenti il DISCOVERY. L'appendice è composta dalle seguenti sezioni:

*This part of the manual contains the technical details about the different boards of the DISCOVERY. This appendix is composed of the following sections:*

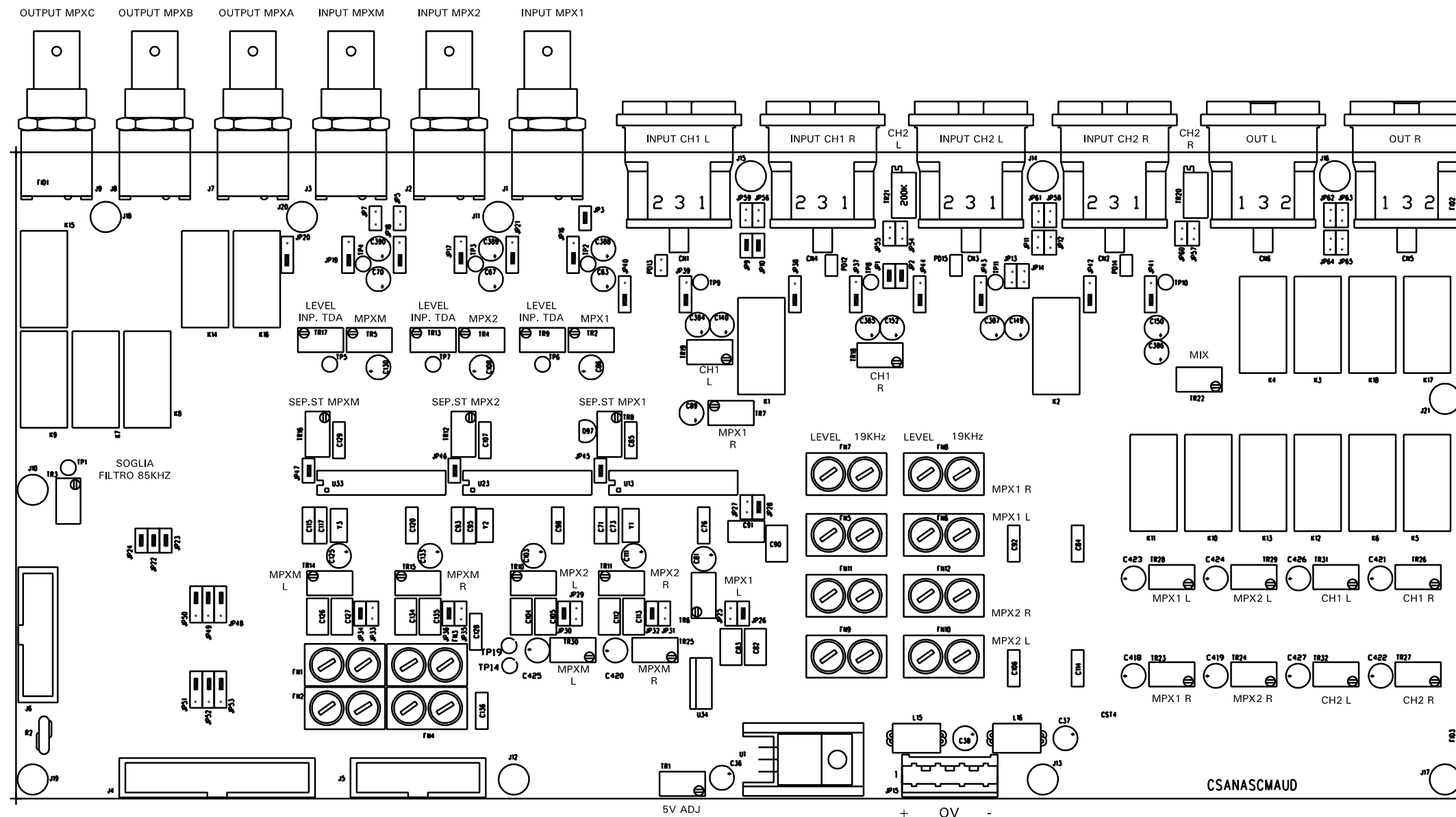
Description	RVR Code	Vers.	Pages
Wiring Diagrams	/	1.0	1
Audio exchange board	CSANASCMAUD	1.0	2
CPU board	CSCPUSCMAUD	1.0	20
Power supply	CSSWPSUP003	1.0	23

### Document History

Date	Version	Reason	Editor
27/11/03	2.0	First Release in A3 Format	J. Berti

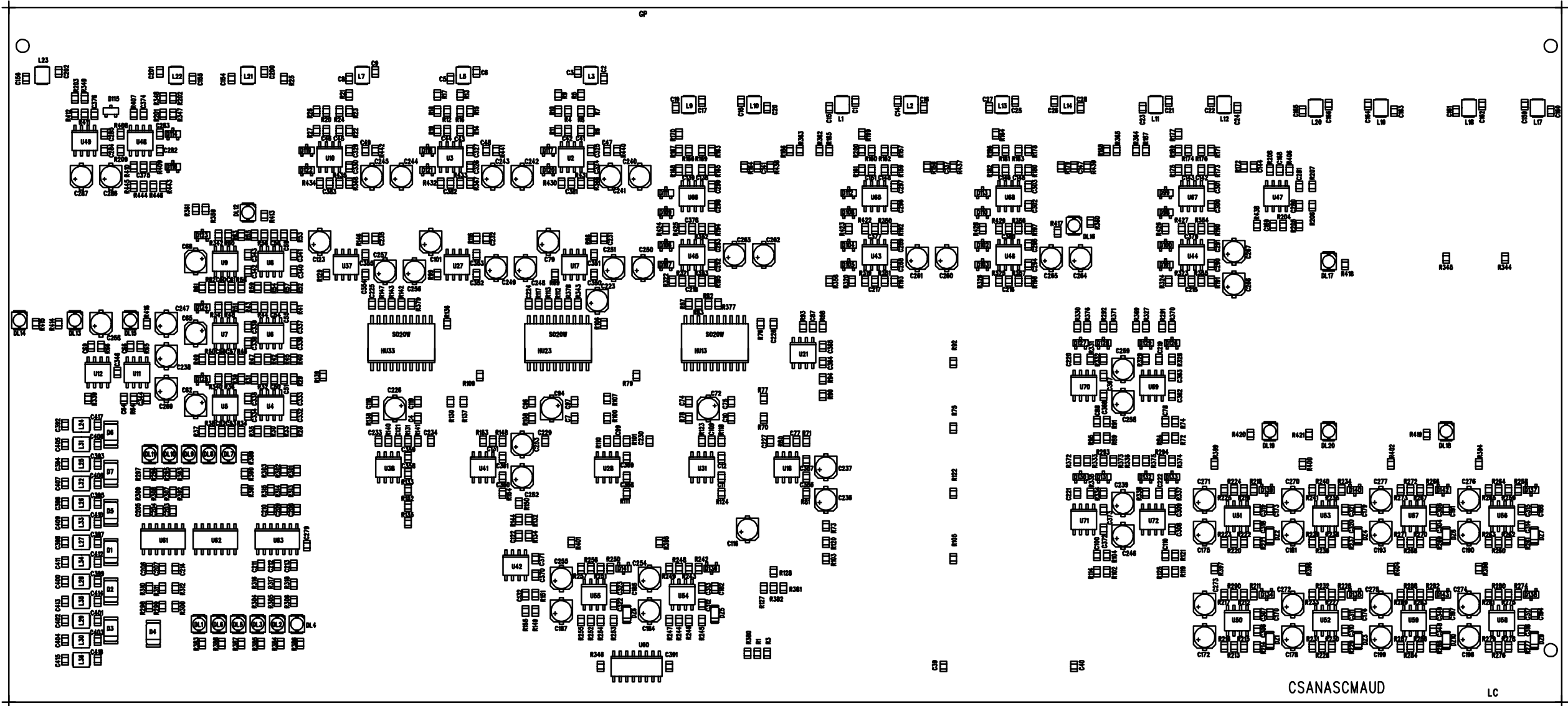


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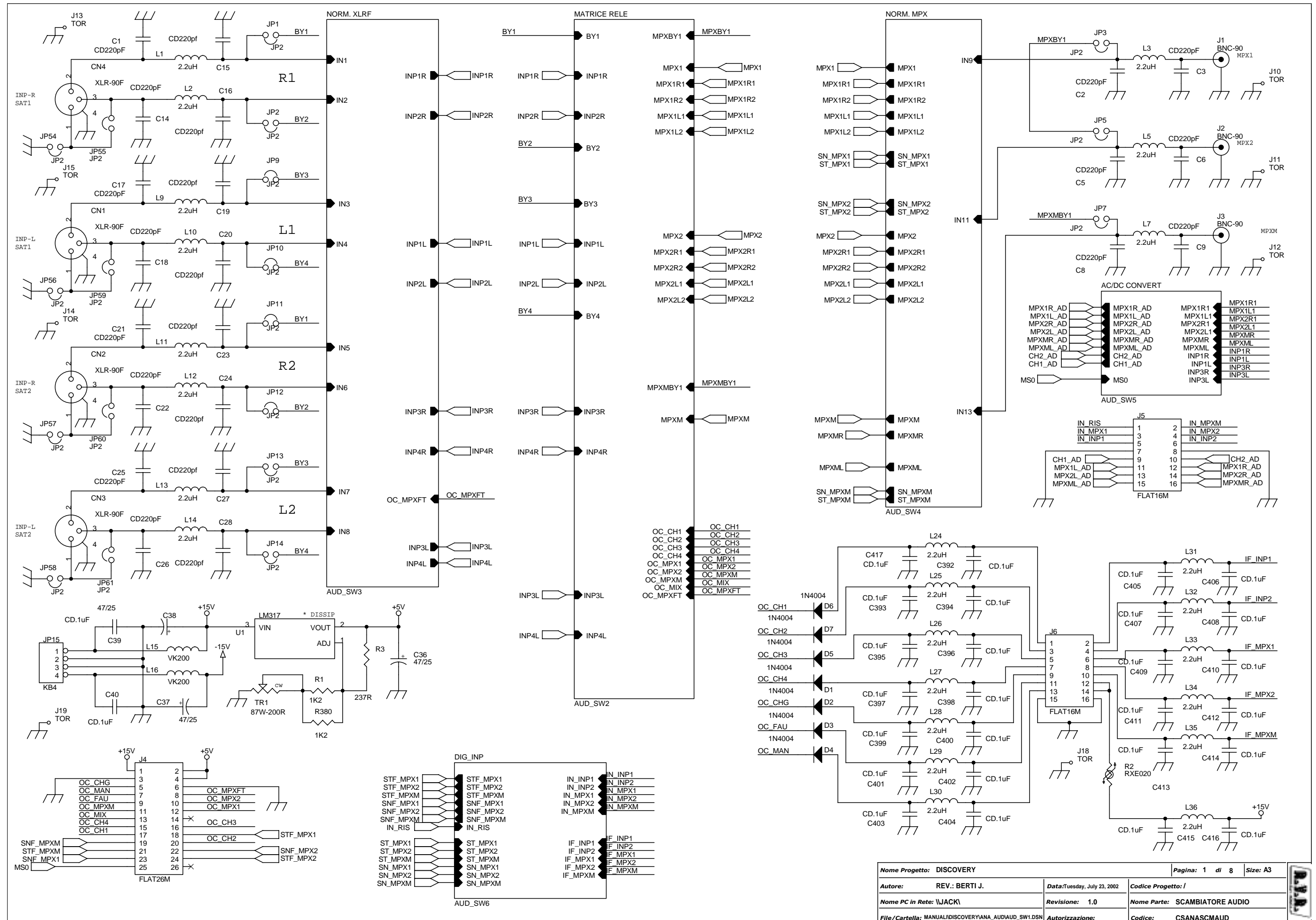
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Scala: /	Materiale: /	Trattamento: /	Profilo: /	





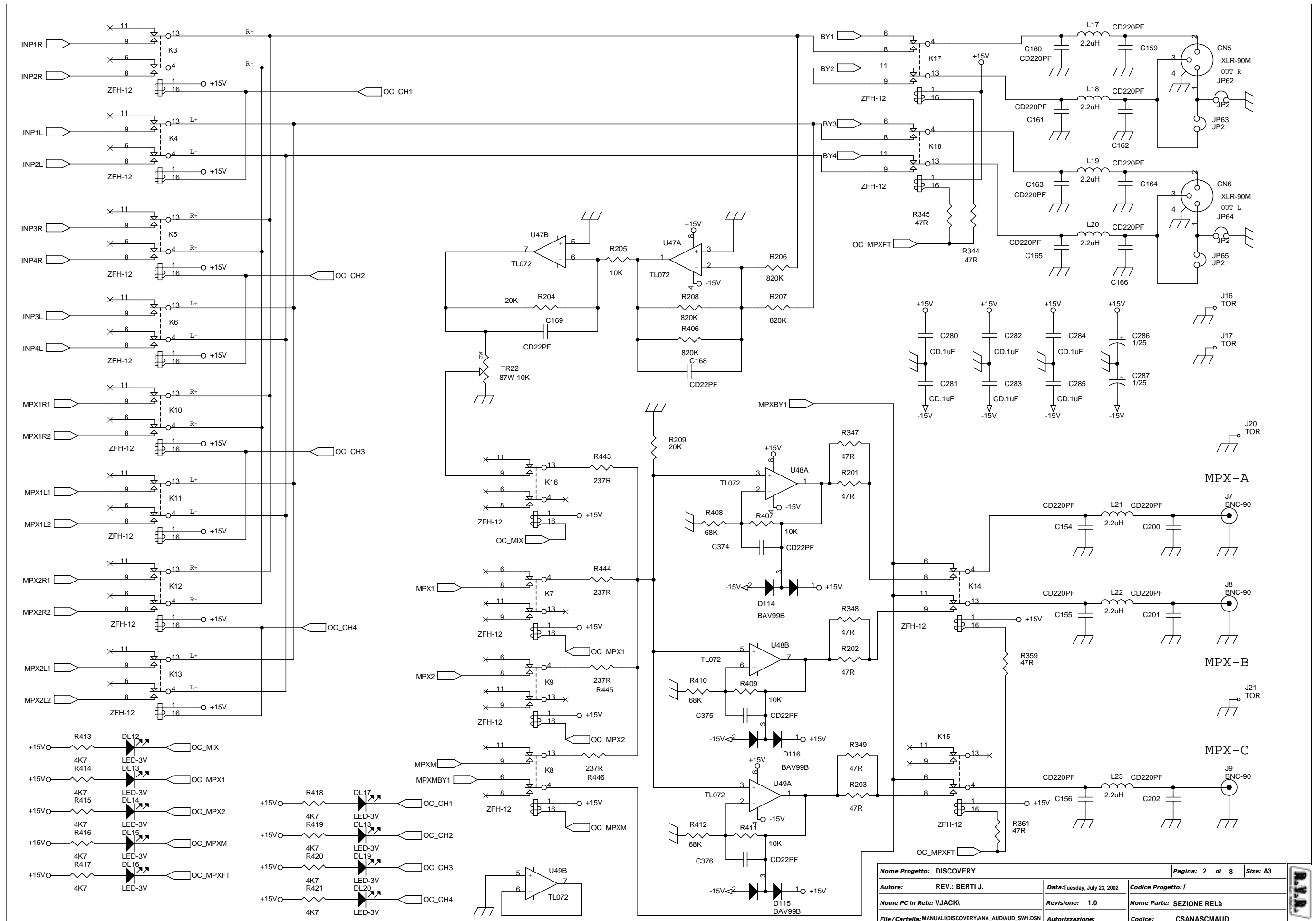
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Item	Q.ty	Reference	Part
1	4	CN1,CN2,CN3,CN4	XLR-90F
2	22	C1,C2,C3,C5,C6,C8,C9,C14, C15,C16,C17,C18,C19,C20, C21,C22,C23,C24,C25,C26, C27,C28	CD220pF
3	3	C36,C37,C38	47/25
4	28	C39,C40,C392,C393,C394, C395,C396,C397,C398,C399, C400,C401,C402,C403,C404, C405,C406,C407,C408,C409, C410,C411,C412,C413,C414, C415,C416,C417	CD.1uF
5	7	D1,D2,D3,D4,D5,D6,D7	1N4004
6	19	JP1,JP2,JP3,JP5,JP7,JP9, JP10,JP11,JP12,JP13,JP14, JP54,JP55,JP56,JP57,JP58, JP59,JP60,JP61	JP2
7	1	JP15	KB4
8	3	J1,J2,J3	BNC-90
9	1	J4	FLAT26M
10	2	J6,J5	FLAT16M
11	8	J10,J11,J12,J13,J14,J15, J18,J19	TOR
12	24	L1,L2,L3,L5,L7,L9,L10, L11,L12,L13,L14,L24,L25, L26,L27,L28,L29,L30,L31, L32,L33,L34,L35,L36	2.2uH
13	2	L16,L15	VK200
14	2	R1,R380	1K2
15	1	R2	RXE020
16	1	R3	237R
17	1	TR1	87W-200R
18	1	U1	LM317



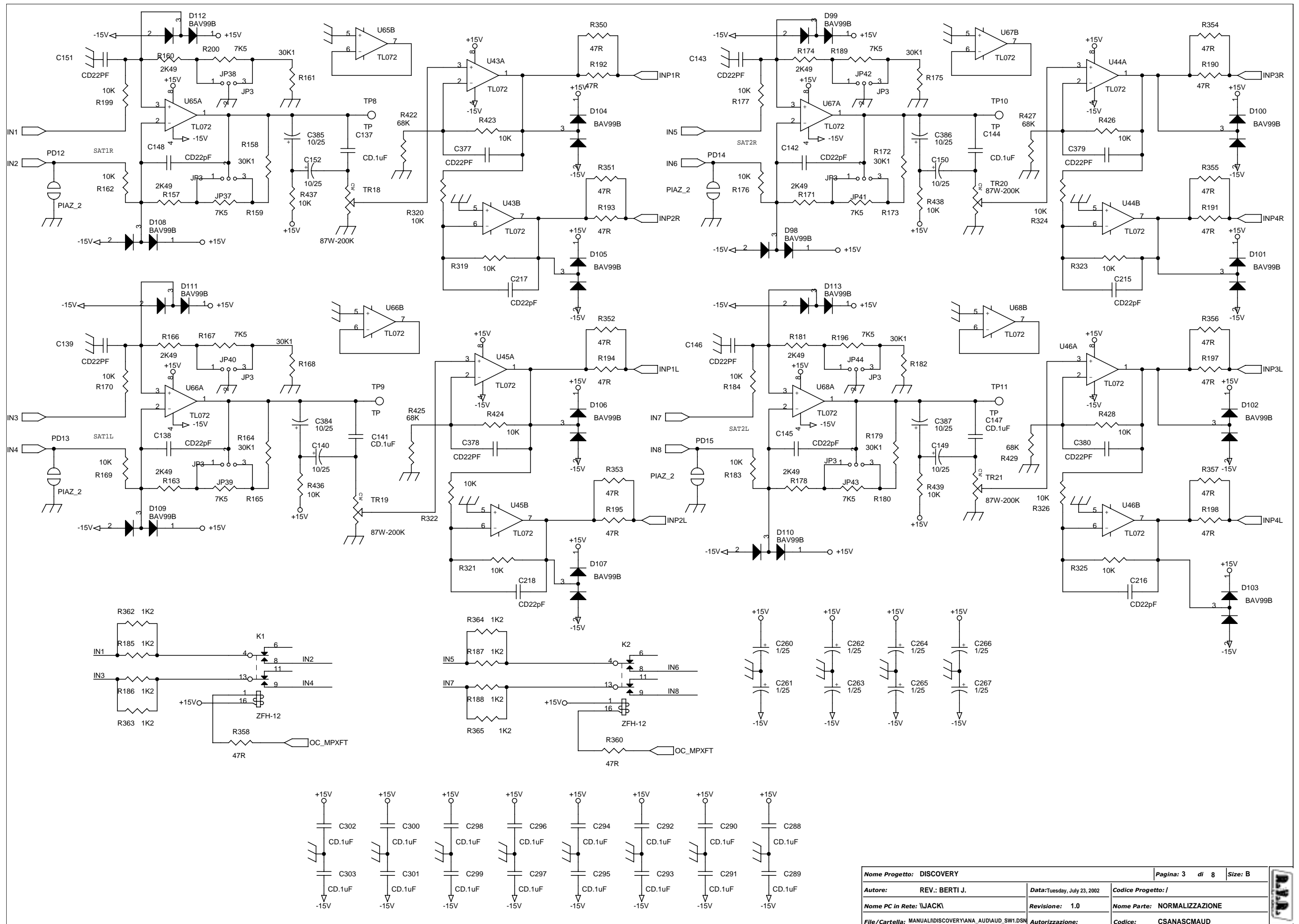
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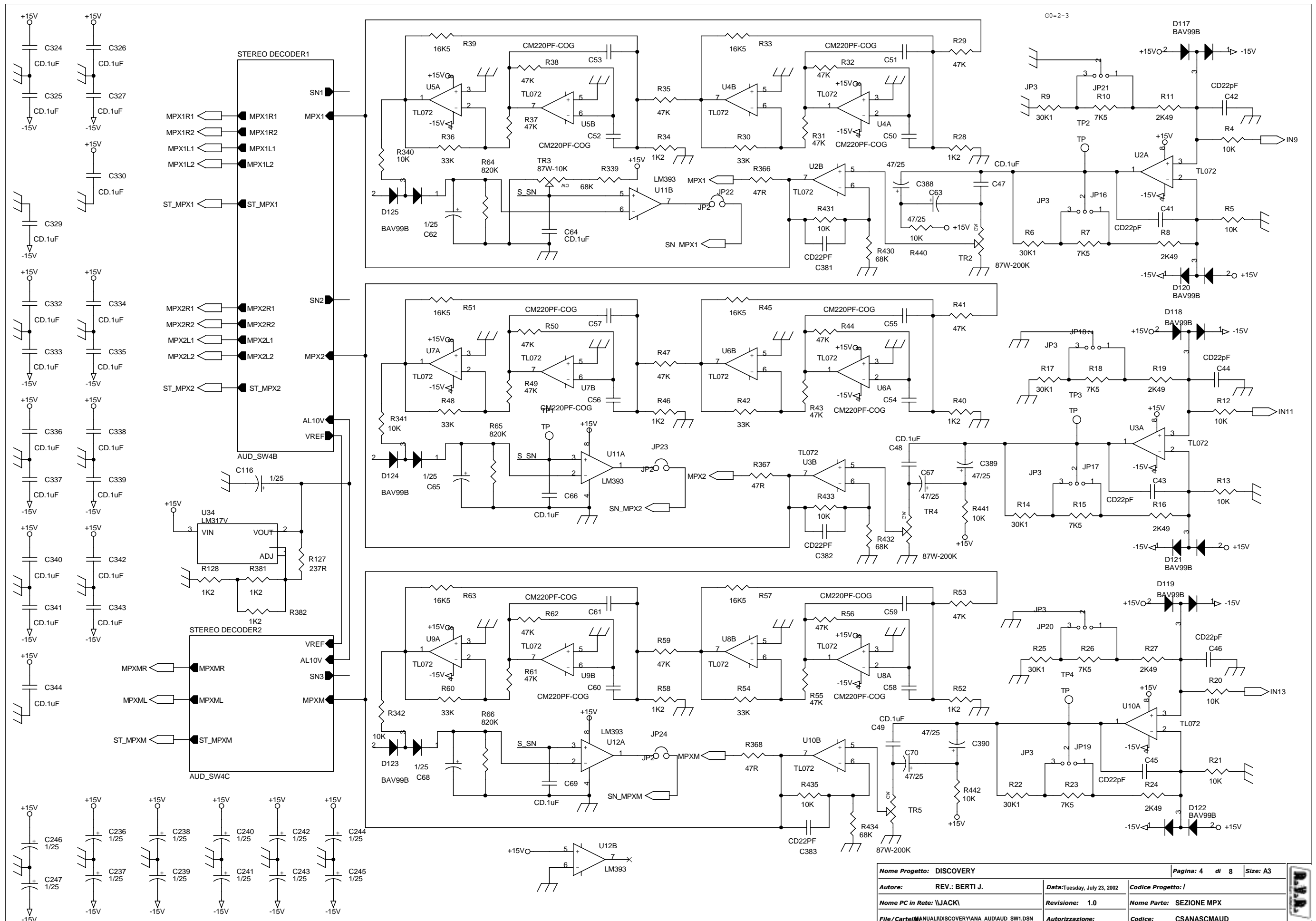
SEZIONE RELè Bill Of Materials

Page1

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3	5	C168,C169,C374,C375,C376	CD22PF
4	6	C280,C281,C282,C283,C284, C285	CD.1uF
5	2	C287,C286	1/25
6	9	DL12,DL13,DL14,DL15,DL16, DL17,DL18,DL19,DL20	LED-3V
7	3	D114,D115,D116	BAV99B
8	4	JP62,JP63,JP64,JP65	JP2
9	3	J7,J8,J9	BNC-90
10	4	J16,J17,J20,J21	TOR
11	16	K3,K4,K5,K6,K7,K8,K9,K10, K11,K12,K13,K14,K15,K16, K17,K18	ZFH-12
12	7	L17,L18,L19,L20,L21,L22, L23	2.2uH
13	10	R201,R202,R203,R344,R345, R347,R348,R349,R359,R361	47R
14	2	R209,R204	20K
15	4	R205,R407,R409,R411	10K
16	4	R206,R207,R208,R406	820K
17	3	R408,R410,R412	68K
18	9	R413,R414,R415,R416,R417, R418,R419,R420,R421	4K7
19	4	R443,R444,R445,R446	237R
20	1	TR22	87W-10K
21	3	U47,U48,U49	TL072

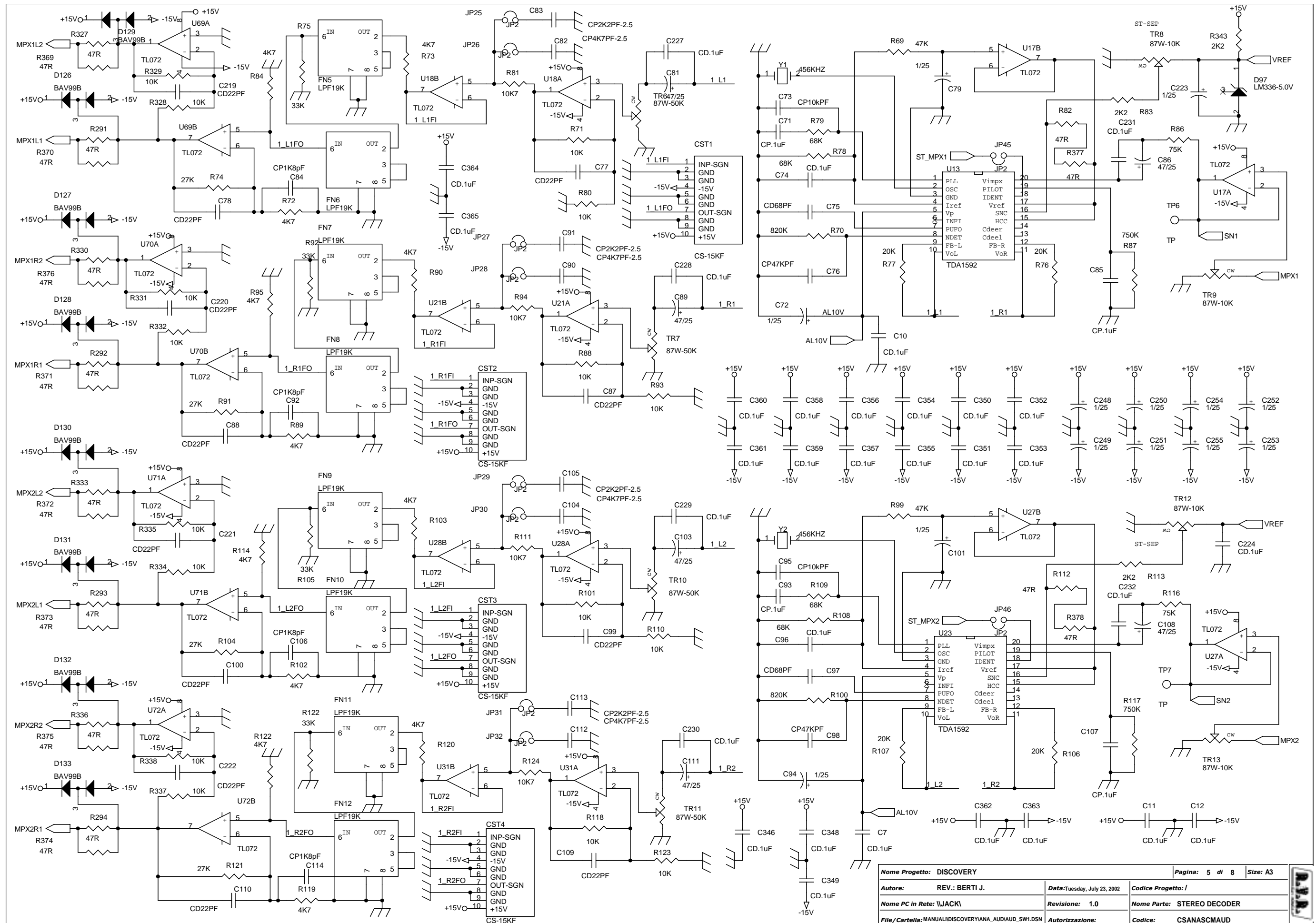


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2	16	C138,C139,C142,C143,C145, C146,C148,C151,C215,C216, C217,C218,C377,C378,C379, C380	CD22pF
3	8	C140,C149,C150,C152,C384, C385,C386,C387	10/25
4	8	C260,C261,C262,C263,C264, C265,C266,C267	1/25
5	16	D98,D99,D100,D101,D102, D103,D104,D105,D106,D107, D108,D109,D110,D111,D112, D113	BAV99B
6	8	JP37,JP38,JP39,JP40,JP41, JP42,JP43,JP44	JP3
7	2	K1,K2	ZFH-12
8	4	PD12,PD13,PD14,PD15	PIAZ_2
9	8	R157,R160,R163,R166,R171, R174,R178,R181	2K49
10	8	R158,R161,R164,R168,R172, R175,R179,R182	30K1
11	8	R159,R165,R167,R173,R180, R189,R196,R200	7K5
12	24	R162,R169,R170,R176,R177, R183,R184,R199,R319,R320, R321,R322,R323,R324,R325, R326,R423,R424,R426,R428, R436,R437,R438,R439	10K
13	8	R185,R186,R187,R188,R362, R363,R364,R365	1K2
14	18	R190,R191,R192,R193,R194, R195,R197,R198,R350,R351, R352,R353,R354,R355,R356, R357,R358,R360	47R
15	4	R422,R425,R427,R429	68K
16	4	TP8,TP9,TP10,TP11	TP
17	4	TR18,TR19,TR20,TR21	87W-200K
18	8	U43,U44,U45,U46,U65,U66, U67,U68	TL072



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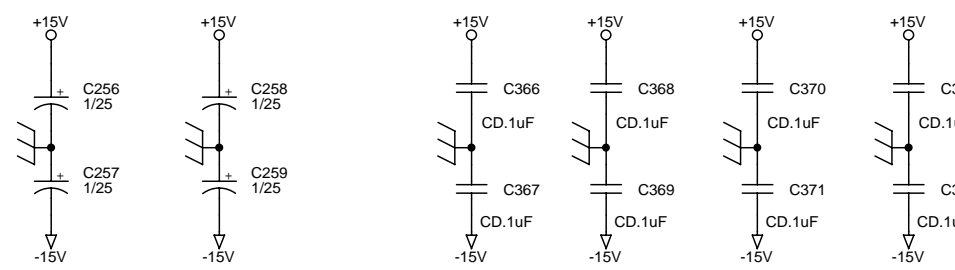
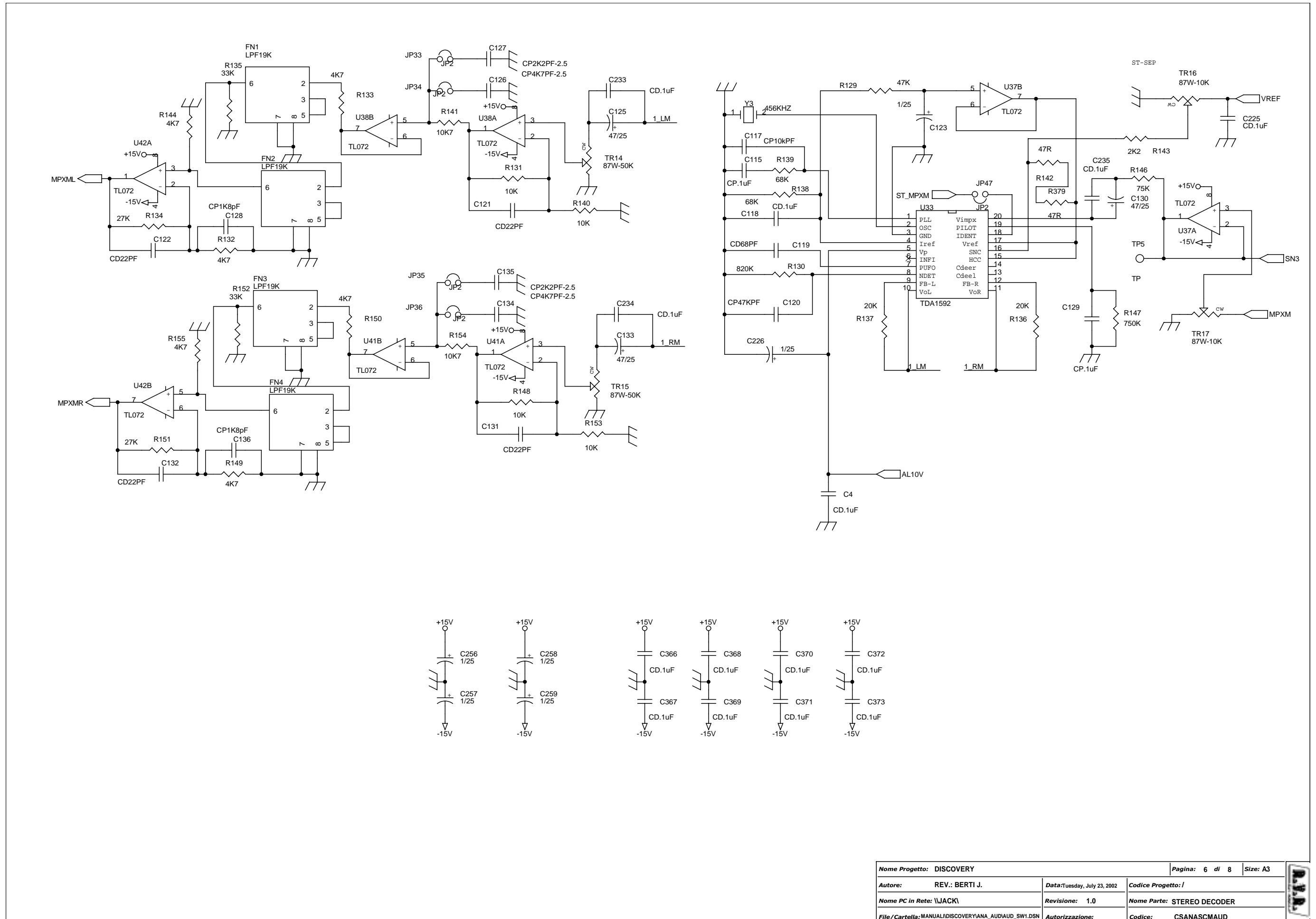
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3	12	C50,C51,C52,C53,C54,C55, C56,C57,C58,C59,C60,C61	CM220PF-COG
4	16	C62,C65,C68,C116,C236, C237,C238,C239,C240,C241, C242,C243,C244,C245,C246, C247	1/25
5	6	C63,C67,C70,C388,C389, C390	47/25
6	9	D117,D118,D119,D120,D121, D122,D123,D124,D125	BAV99B
7	6	JP16,JP17,JP18,JP19,JP20, JP21	JP3
8	3	JP22,JP23,JP24	JP2
9	15	R4,R5,R12,R13,R20,R21, R340,R341,R342,R431,R433, R435,R440,R441,R442	10K
10	6	R6,R9,R14,R17,R22,R25	30K1
11	6	R7,R10,R15,R18,R23,R26	7K5
12	6	R8,R11,R16,R19,R24,R27	2K49
13	9	R28,R34,R40,R46,R52,R58, R128,R381,R382	1K2
14	18	R29,R31,R32,R35,R37,R38, R41,R43,R44,R47,R49,R50, R53,R55,R56,R59,R61,R62	47K
15	6	R30,R36,R42,R48,R54,R60	33K
16	6	R33,R39,R45,R51,R57,R63	16K5
17	3	R64,R65,R66	820K
18	1	R127	237R
19	4	R339,R430,R432,R434	68K
20	3	R366,R367,R368	47R
21	4	TP1,TP2,TP3,TP4	TP
22	3	TR2,TR4,TR5	87W-200K
23	1	TR3	87W-10K
24	9	U2,U3,U4,U5,U6,U7,U8,U9, U10	TL072
25	2	U11,U12	LM393
26	1	U34	LM317V



Nome Progetto: DISCOVERY		Pagina: 5 di 8		Size: A3
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## STEREO DECODER Bill Of Materials

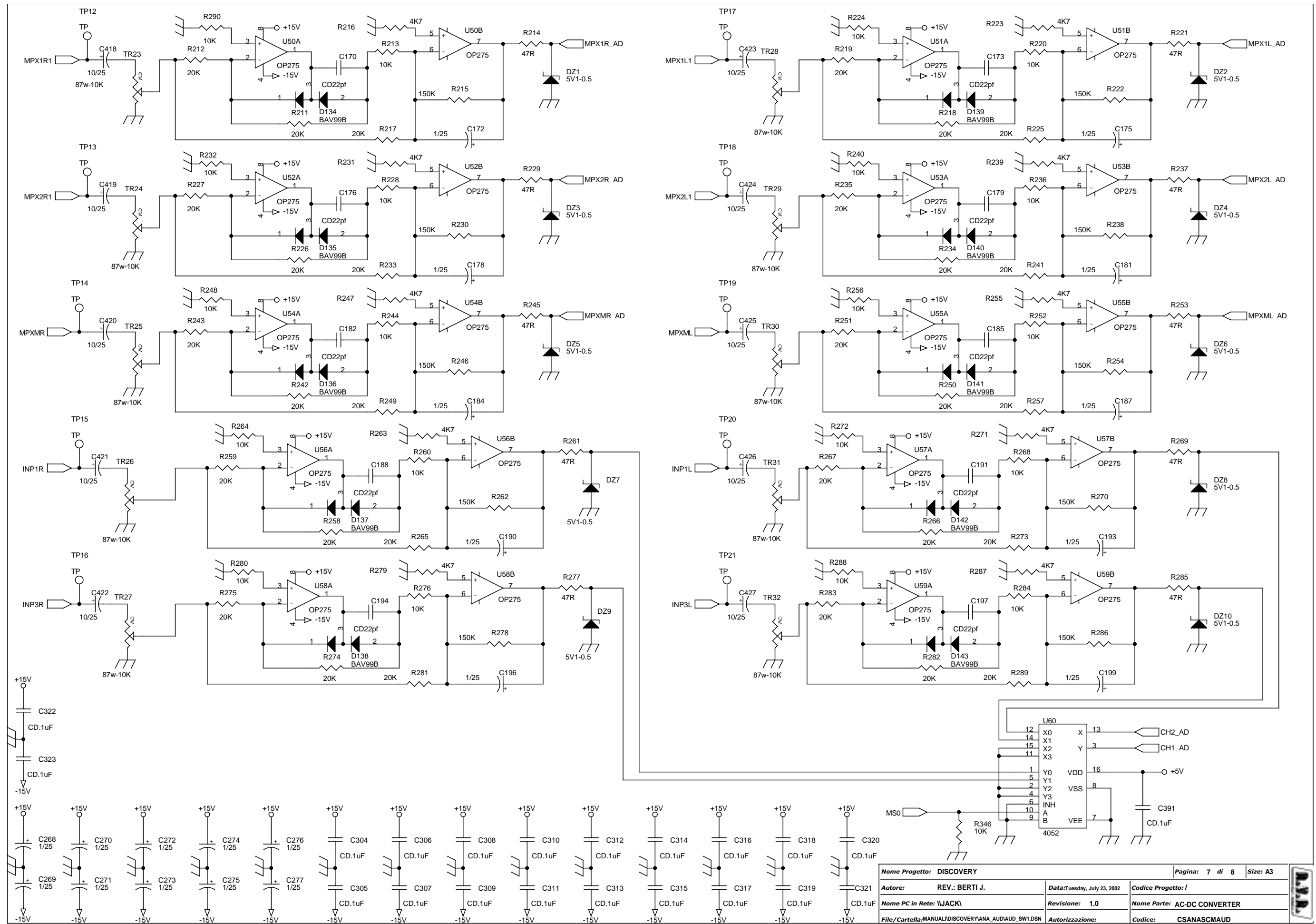
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3	4	C71,C85,C93,C107	CP.1uF	35	2	Y1,Y2	456KHZ
4	13	C72,C79,C94,C101,C223, C248,C249,C250,C251,C252, C253,C254,C255	1/25				
5	2	C73,C95	CP10kPF				
6	2	C75,C97	CD68PF				
7	2	C76,C98	CP47KPF				
8	12	C77,C78,C87,C88,C99,C100, C109,C110,C219,C220,C221, C222	CD22PF				
9	6	C81,C86,C89,C103,C108, C111	47/25				
10	4	C82,C90,C104,C112	CP4K7PF-2.5				
11	4	C83,C91,C105,C113	CP2K2PF-2.5				
12	4	C84,C92,C106,C114	CP1K8pF				
13	1	D97	LM336-5.0V				
14	8	D126,D127,D128,D129,D130, D131,D132,D133	BAV99B				
15	8	FN5,FN6,FN7,FN8,FN9,FN10, FN11,FN12	LPF19K				
16	10	JP25,JP26,JP27,JP28,JP29, JP30,JP31,JP32,JP45,JP46	JP2				
17	2	R69,R99	47K				
18	2	R70,R100	820K				
19	16	R71,R80,R88,R93,R101, R110,R118,R123,R328,R329, R331,R332,R334,R335,R337, R338	10K				
20	12	R72,R73,R84,R89,R90,R95, R102,R103,R114,R119,R120, R122	4K7				
21	4	R74,R91,R104,R121	27K				
22	4	R75,R92,R105,R122	33K				
23	4	R76,R77,R106,R107	20K				
24	4	R78,R79,R108,R109	68K				
25	4	R81,R94,R111,R124	10K7				
26	20	R82,R112,R291,R292,R293, R294,R327,R330,R333,R336, R369,R370,R371,R372,R373, R374,R375,R376,R377,R378	47R				
27	3	R83,R113,R343	2K2				
28	2	R116,R86	75K				
29	2	R117,R87	750K				
30	2	TP6,TP7	TP				
31	4	TR6,TR7,TR10,TR11	87W-50K				



Nome Progetto: DISCOVERY		Pagina: 6 di 8		Size: A3
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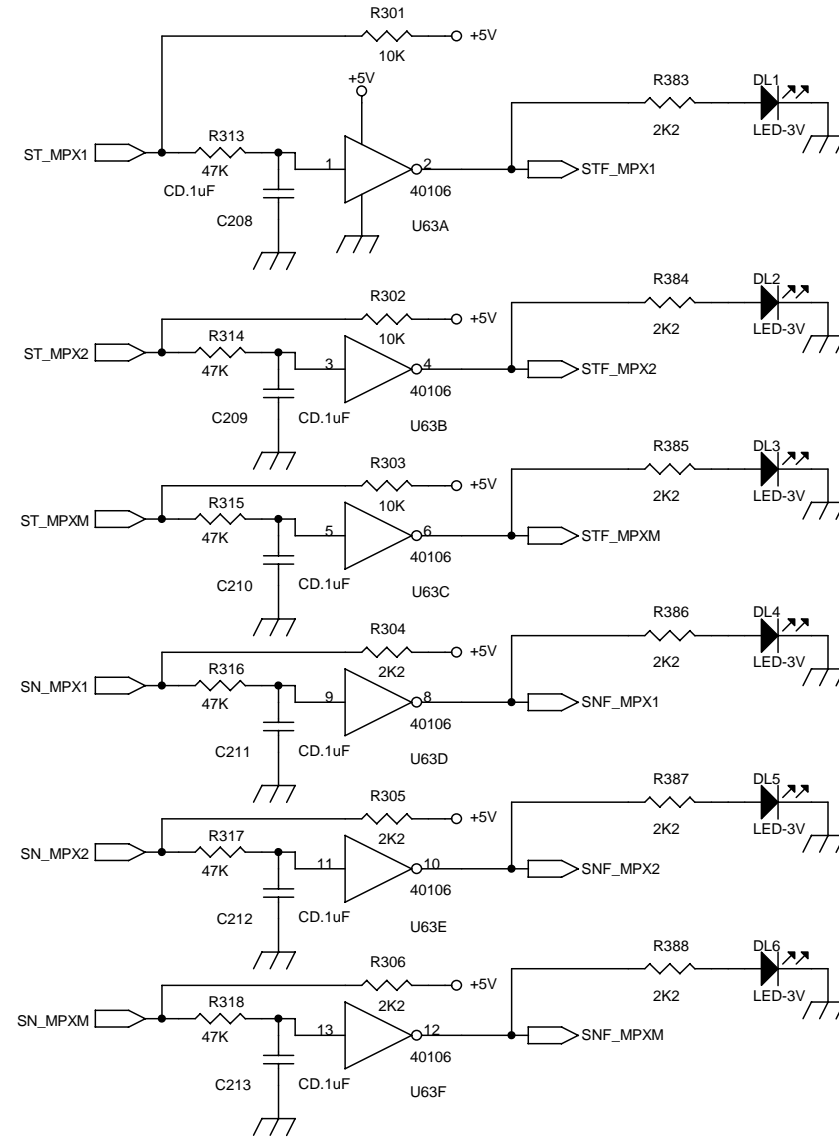
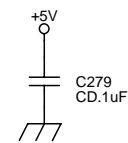
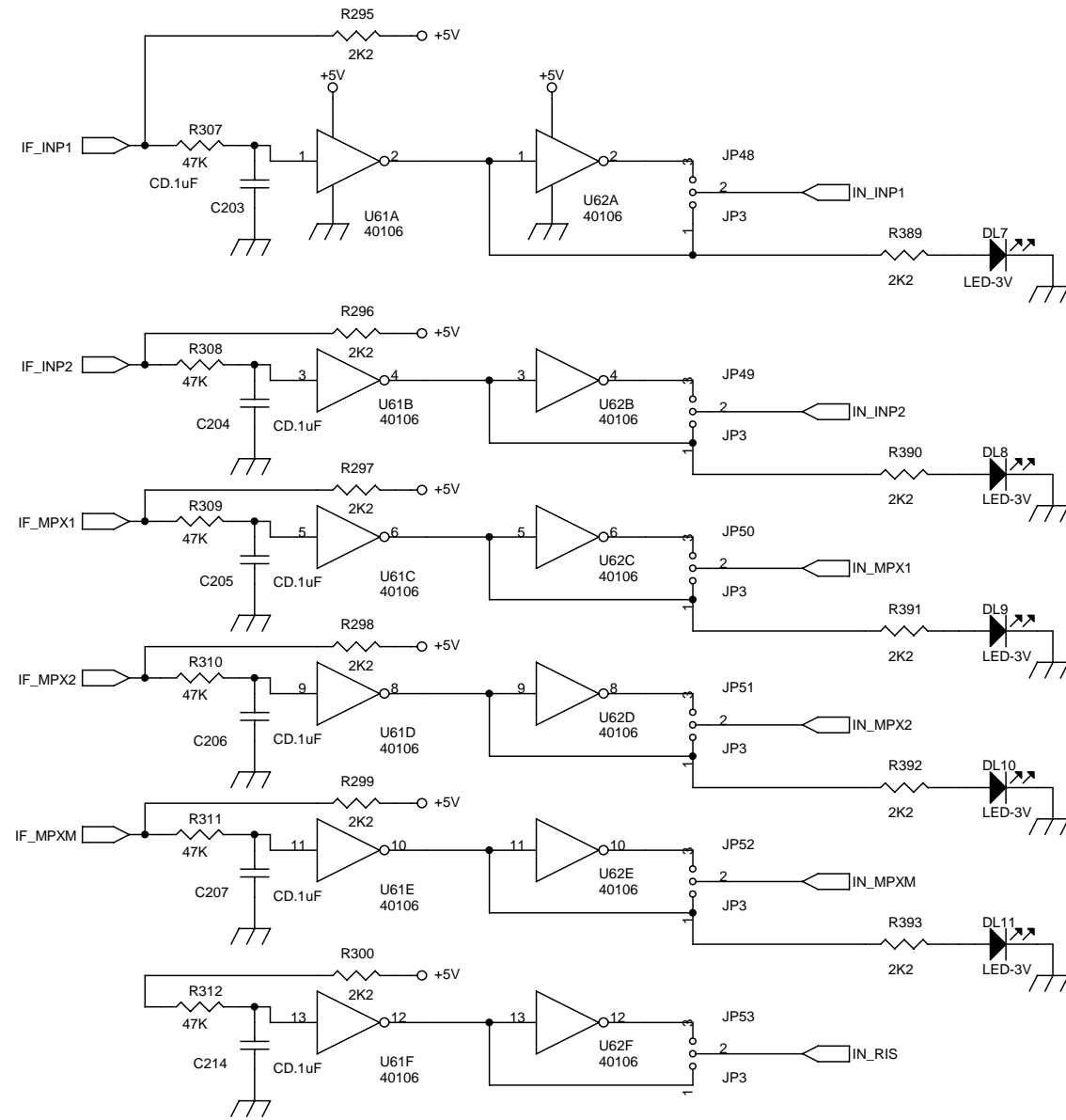
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2	2	C115,C129	CP.1uF
3	1	C117	CP10kPF
4	1	C119	CD68PF
5	1	C120	CP47KPF
6	4	C121,C122,C131,C132	CD22PF
7	6	C123,C226,C256,C257,C258, C259	1/25
8	3	C125,C130,C133	47/25
9	2	C126,C134	CP4K7PF-2.5
10	2	C127,C135	CP2K2PF-2.5
11	2	C128,C136	CP1K8pF
12	4	FN1, FN2, FN3, FN4	LPF19K
13	5	JP33,JP34,JP35,JP36,JP47	JP2
14	1	R129	47K
15	1	R130	820K
16	4	R131,R140,R148,R153	10K
17	6	R132,R133,R144,R149,R150, R155	4K7
18	2	R134,R151	27K
19	2	R135,R152	33K
20	2	R136,R137	20K
21	2	R139,R138	68K
22	2	R141,R154	10K7
23	2	R142,R379	47R
24	1	R143	2K2
25	1	R146	75K
26	1	R147	750K
27	1	TP5	TP
28	2	TR14,TR15	87W-50K
29	2	TR16,TR17	87W-10K
30	1	U33	TDA1592
31	4	U37,U38,U41,U42	TL072
32	1	Y3	456KHZ



Nome Progetto: DISCOVERY		Pagina: 7 di 8		Size: A3
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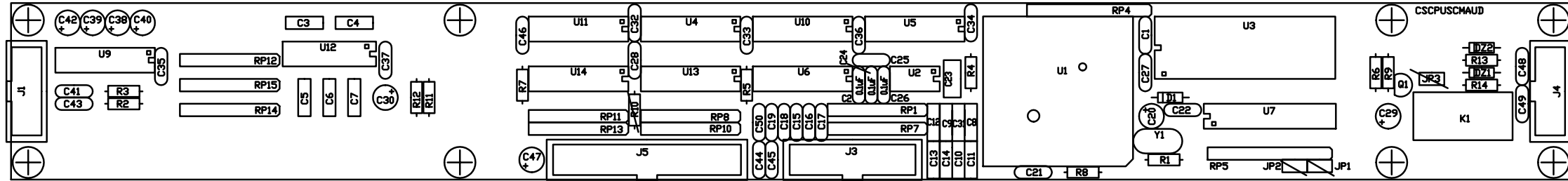
AC-DC CONVERTER Bill Of Materials Page1

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3	21	C304,C305,C306,C307,C308, C309,C310,C311,C312,C313, C314,C315,C316,C317,C318, C319,C320,C321,C322,C323, C391	CD.1uF
4	10	C418,C419,C420,C421,C422, C423,C424,C425,C426,C427	10/25
5	10	DZ1,DZ2,DZ3,DZ4,DZ5,DZ6, DZ7,DZ8,DZ9,DZ10	5V1-0.5
6	10	D134,D135,D136,D137,D138, D139,D140,D141,D142,D143	BAV99B
7	30	R211,R212,R217,R218,R219, R225,R226,R227,R233,R234, R235,R241,R242,R243,R249, R250,R251,R257,R258,R259, R265,R266,R267,R273,R274, R275,R281,R282,R283,R289	20K
8	21	R213,R220,R224,R228,R232, R236,R240,R244,R248,R252, R256,R260,R264,R268,R272, R276,R280,R284,R288,R290, R346	10K
9	10	R214,R221,R229,R237,R245, R253,R261,R269,R277,R285	47R
10	10	R215,R222,R230,R238,R246, R254,R262,R270,R278,R286	150K
11	10	R216,R223,R231,R239,R247, R255,R263,R271,R279,R287	4K7
12	10	TP12,TP13,TP14,TP15,TP16, TP17,TP18,TP19,TP20,TP21	TP
13	10	TR23,TR24,TR25,TR26,TR27, TR28,TR29,TR30,TR31,TR32	87w-10K
14	10	U50,U51,U52,U53,U54,U55, U56,U57,U58,U59	OP275
15	1	U60	4052



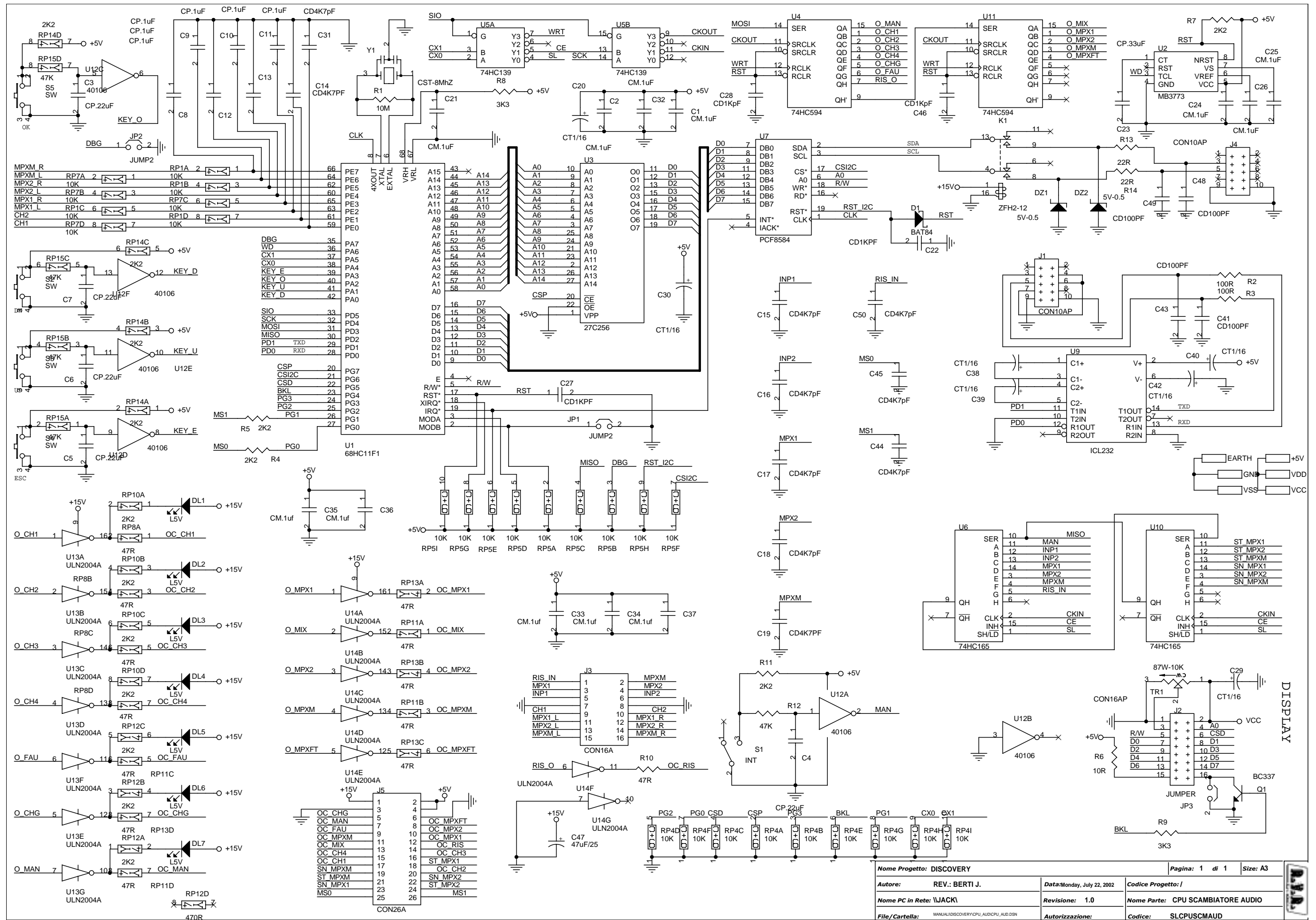
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Item	Q.ty	Reference	Part
1	13	C203,C204,C205,C206,C207, C208,C209,C210,C211,C212, C213,C214,C279	CD.1uF
2	11	DL1,DL2,DL3,DL4,DL5,DL6, DL7,DL8,DL9,DL10,DL11	LED-3V
3	6	JP48,JP49,JP50,JP51,JP52, JP53	JP3
4	20	R295,R296,R297,R298,R299, R300,R304,R305,R306,R383, R384,R385,R386,R387,R388, R389,R390,R391,R392,R393	2K2
5	3	R301,R302,R303	10K
6	12	R307,R308,R309,R310,R311, R312,R313,R314,R315,R316, R317,R318	47K
7	3	U61,U62,U63	40106



Nome Progetto: DISCOVERY		Pagina: 1 di 1		Size: A3
Autore: REV: BERTI J.	Data: 22/07/02	Codice Progetto: /		
Nome PC in Rete: \\JACK\	Revisione: 1.0	Nome Parte: LAYOUT CPU SCAMBIATORE AUDIO		
File/Cartella: MANUAL\DISCOVERY\CPU_AUD\CPU_AUD.DWG	Autorizzazione:	Codice: CSCPUSCHAUD		
Scala: /	Materiale: /	Trattamento: /	Profilo: /	



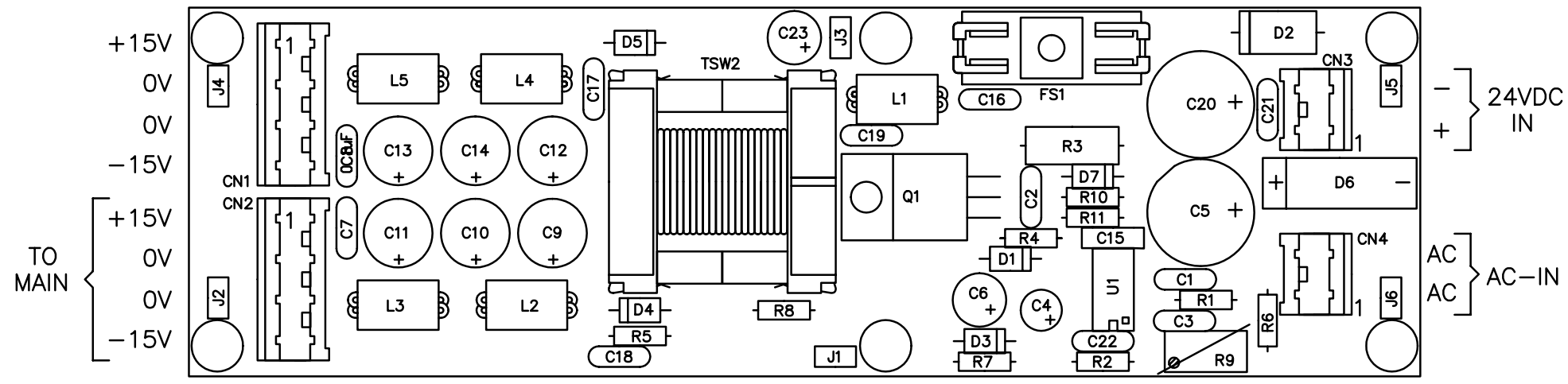


Nome Progetto: DISCOVERY		Pagina: 1 di 1		Size: A3
Autore: REV. BERTI J.	Data: Monday, July 22, 2002	Codice Progetto: /		
Nome PC in Rete: \JACK\	Revisione: 1.0	Nome Parte: CPU SCAMBIATORE AUDIO		
File/ Cartella: MANUA\DISCOVERY\CPU_AUD\CPU_AUD.DSN	Autorizzazione:	Codice: SLCPUSCMAUD		

SLCPUSCMAUD Bill Of Materials Page1

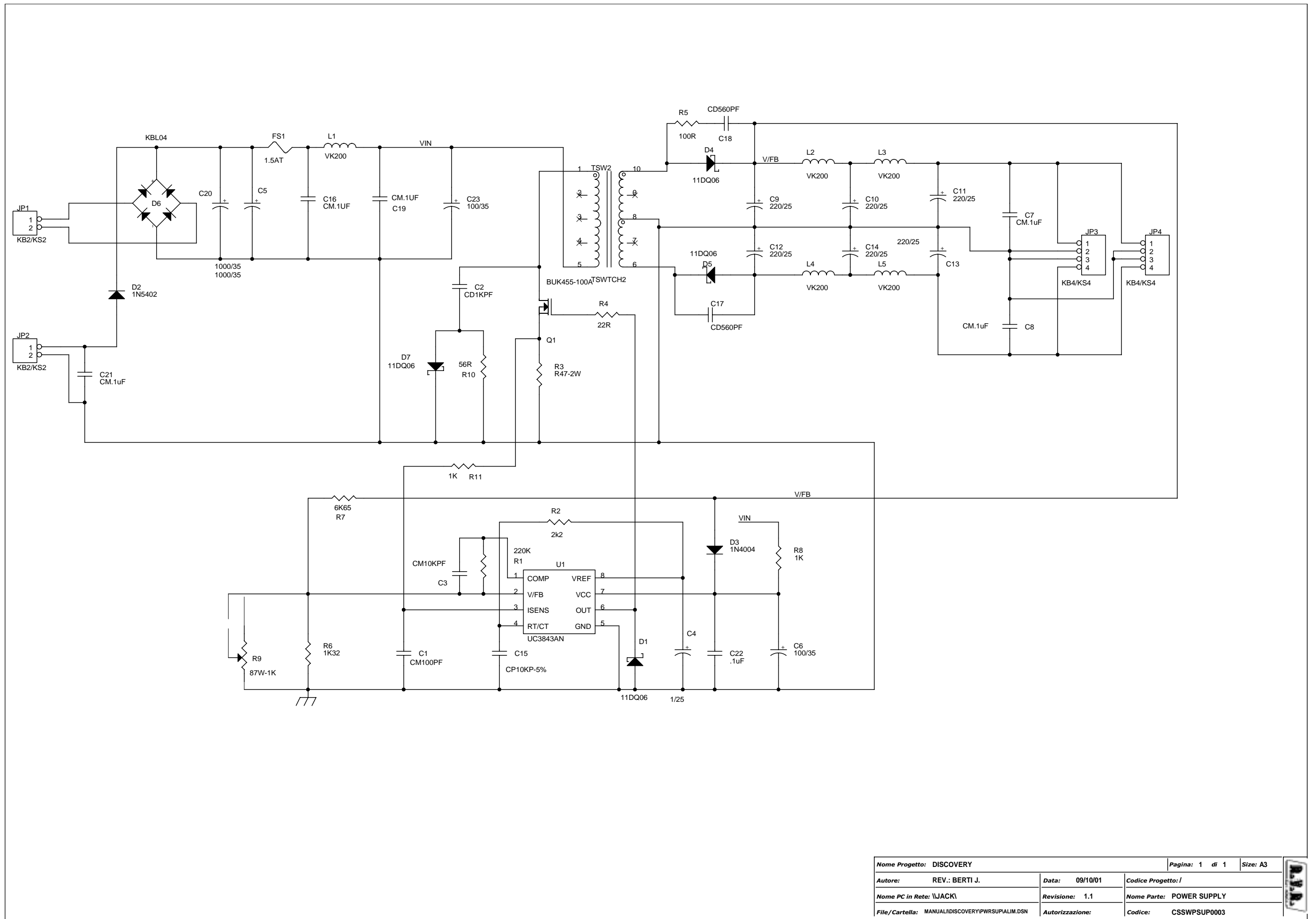
Item	Q. ty	Reference	Part
1	12	C1,C2,C21,C24,C25,C26,C32,C33,C34,C35,C36,C37	CM.1uF
2	5	C3,C4,C5,C6,C7	CP.22uF
3	6	C8,C9,C10,C11,C12,C13	CP.1uF
4	10	C14,C15,C16,C17,C18,C19,C31,C44,C45,C50	CD4K7PF
5	7	C20,C29,C30,C38,C39,C40,C42	CT1/16
6	4	C22,C27,C28,C46	CD1KpF
7	1	C23	CP.33uF
8	4	C41,C43,C48,C49	CD100PF
9	1	C47	47uF/25
10	7	DL1,DL2,DL3,DL4,DL5,DL6,DL7	L5V
11	2	DZ2,DZ1	5V-0.5
12	1	D1	BAT84
13	2	JP2,JP1	JUMP2
14	1	JP3	JUMPER
15	2	J1,J4	CON10AP
16	1	J2	CON16AP
17	1	J3	CON16A
18	1	J5	CON26A
19	1	K1	ZFH2-12
20	1	Q1	BC337
21	4	RP1,RP4,RP5,RP7	10K
22	4	RP8,R10,RP11,RP13	47R
23	7	R4,R5,R7,RP10,R11,RP12,RP14	2K2
24	1	RP12	470R
25	2	R12,RP15	47K
26	1	R1	10M
27	2	R3,R2	100R
28	1	R6	10R
29	2	R9,R8	3K3
30	2	R14,R13	22R
31	1	S1	INT
32	4	S2,S3,S4,S5	SW
33	1	TR1	87W-10K
34	1	U1	68HC11F1
35	1	U2	MB3773
36	1	U3	27C256
37	2	U11,U4	74HC594
38	1	U5	74HC139
39	2	U6,U10	74HC165
40	1	U7	PCF8584
41	1	U9	ICL232
42	1	U12	40106
43	2	U13,U14	ULN2004A
44	1	Y1	CST-8MhZ





Nome Progetto: DISCOVERY		Pagina: 1 di 1		Size: A4
Autore: REV.: BERTI J.	Data: 11/07/01	Codice Progetto: /		
Nome PC in Rete: \\JACK\	Revisione: 1.0	Nome Parte: POWER SUPPLY COMPONENT LAYOUT		
File/Cartella: MANUAL\DISCOVERY\PWRSUP\ALIM.DWG	Autorizzazione:	Codice: CSSWPSUP0003		
Scala: /	Materiale: /	Trattamento: /	Profilo: /	





Nome Progetto: DISCOVERY		Pagina: 1 di 1		Size: A3
Autore: REV.: BERTI J.	Data: 09/10/01	Codice Progetto: /		
Nome PC in Rete: \\JACK\	Revisione: 1.1	Nome Parte: POWER SUPPLY		
File/Cartella: MANUAL\DISCOVERY\PWRSUPALIM.DSN	Autorizzazione:	Codice: CSSWPSUP0003		

SLSWPSUP003 Bill Of Materials Page1

Item	Quantity	Reference	Part
1	1	C1	CM100PF
2	1	C2	CD1KPF
3	1	C3	CM10KPF
4	1	C4	1/25
5	2	C5,C20	1000/35
6	2	C6,C23	100/35
7	5	C7,C8,C16,C19,C21	CM.1uF
8	6	C9,C10,C11,C12,C13,C14	220/25
9	1	C15	CP10KP-5%
10	2	C17,C18	CD560PF
11	1	C22	.1uF
12	4	D1,D4,D5,D7	11DQ06
13	1	D2	1N5402
14	1	D3	1N4004
15	1	D6	KBL04
16	1	FS1	1.5AT
17	2	JP1,JP2	KB2/KS2
18	2	JP3,JP4	KB4/KS4
19	5	L1,L2,L3,L4,L5	VK200
20	1	Q1	BUK455-100A
21	1	R1	220K
22	1	R2	2K2
23	1	R3	R47-2W
24	1	R4	22R
25	1	R5	100R
26	1	R6	1K32
27	1	R7	6K65
28	1	R9	87W-1K
29	1	R10	56R
30	1	R8, R11	1K
31	1	TSW2	TSWTCH2
32	1	U1	UC3843AN