

SCS10/230 - SCS20/230

JBL

Service Manual



SPECIFICATIONS: SCS10

Satellite Section

- Frequency Response (-6db): 110 Hz-22 kHz
- Sensitivity (2.83V @ 1m): 86 dB
- Nominal Impedance: 6 Ohms
- Recommended Amplifier Power: 10 - 50 Watts RMS
- Titanium Laminate HF: 12 mm
- Paper Cone Midrange : 75 mm
- Dimensions (H x W x D): 154 x 146 x 93 mm
- Weight: 0.8 kg
- Finish: aluminum

Center Section

- Frequency Response (-6db): 110 Hz-22 kHz
- Sensitivity (2.83V @ 1m): 85 dB
- Nominal Impedance: 4 Ohms
- Recommended Amplifier Power: 10 - 50 Watts RMS
- Titanium Laminate HF: 12 mm
- Paper Cone Midrange : dual 89 mm
- Dimensions (H x W x D): 146 x 233 x 93 mm
- Weight: 1.4 kg
- Finish: aluminum

Subwoofer Section

- Low Frequency Cut-off: 35 Hz
- High Frequency Cut-off: 40 Hz - 160 Hz Variable
- Built-in Power Amplifier (RMS): 100 Watts RMS
- Paper Cone Long Throw Driver : 200 mm
- Dimensions (H x W x D): 450 x 250 x 360 mm
- Weight: 13.6 kg
- Finish: beech

SPECIFICATIONS: SCS20

Satellite Section

- Frequency Response (-6db): 110 Hz-22 kHz
- Sensitivity (2.83V @ 1m): 85 dB
- Nominal Impedance: 4 Ohms
- Recommended Amplifier Power: 10 - 50 Watts RMS
- Titanium Laminate HF: 12 mm
- Paper Cone Midrange : dual 89 mm
- Dimensions (H x W x D): 233 x 146 x 93 mm
- Weight: 1.4 kg
- Finish: aluminum

Center Section

- Frequency Response (-6db): 110 Hz-22 kHz
- Sensitivity (2.83V @ 1m): 85 dB
- Nominal Impedance: 4 Ohms
- Recommended Amplifier Power: 10 - 50 Watts RMS
- Titanium Laminate HF: 12 mm
- Paper Cone Midrange : dual 89 mm
- Dimensions (H x W x D): 146 x 233 x 93 mm
- Weight: 1.4 kg
- Finish: aluminum

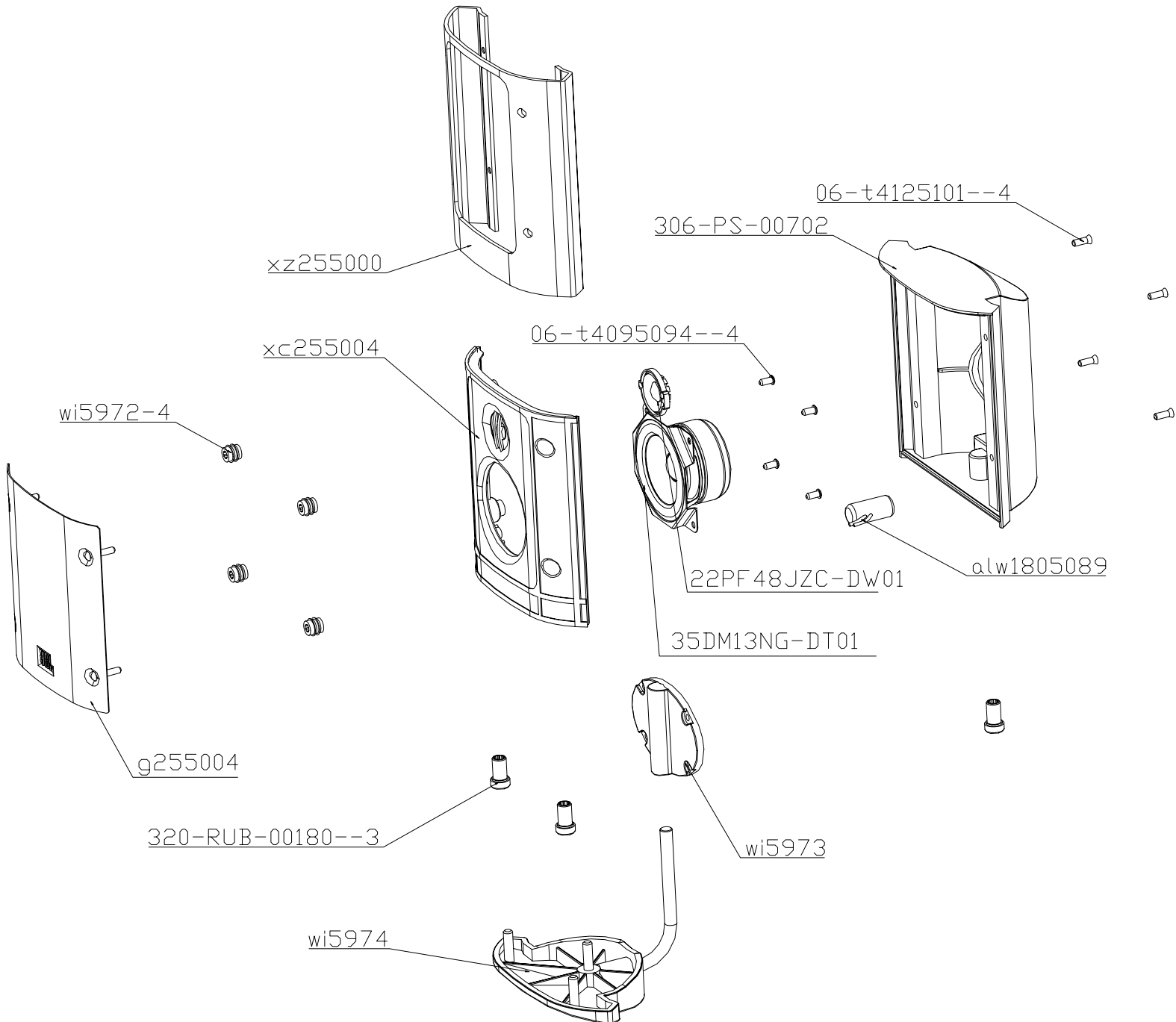
Subwoofer Section

- Low Frequency Cut-off: 35 Hz
- High Frequency Cut-off: 40 Hz - 160 Hz Variable
- Built-in Power Amplifier (RMS): 100 Watts RMS
- Paper Cone Long Throw Driver : 200 mm
- Dimensions (H x W x D): 450 x 250 x 360 mm
- Weight: 13.6 kg
- Finish: beech

JBL SCS 10 satellite



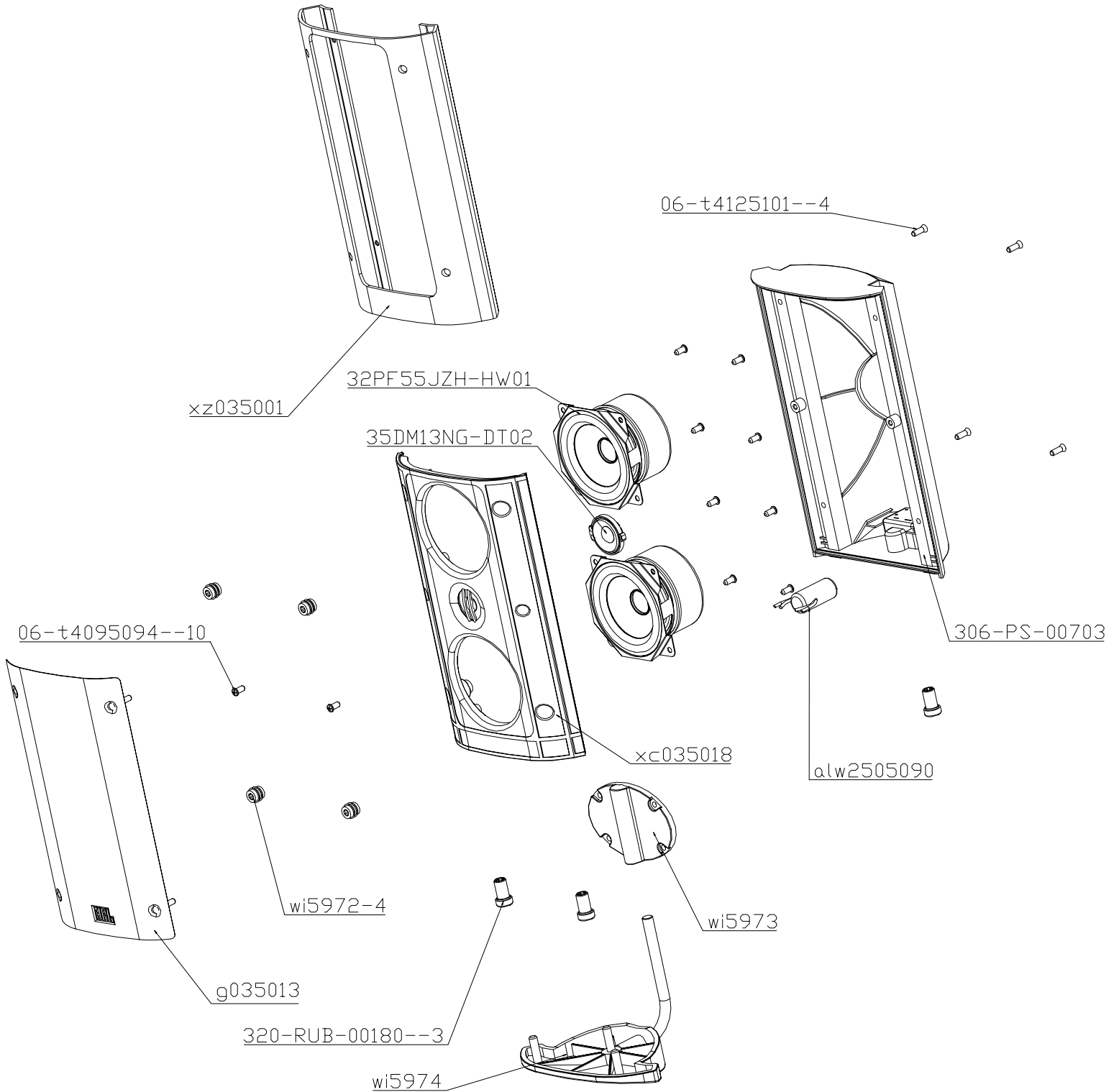
Exploded view



JBL SCS 20 satellite



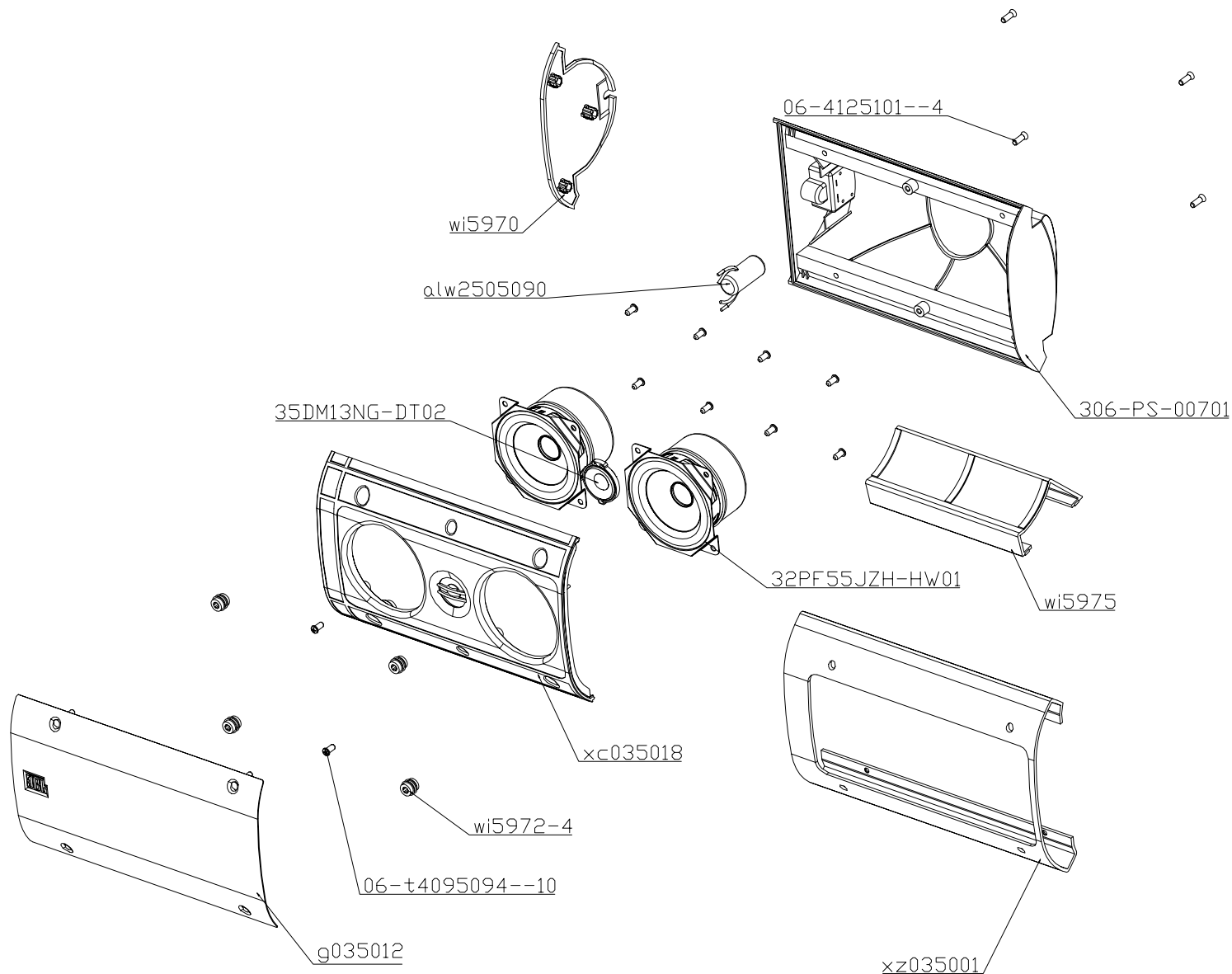
Exploded view



JBL SCS Center



Exploded view

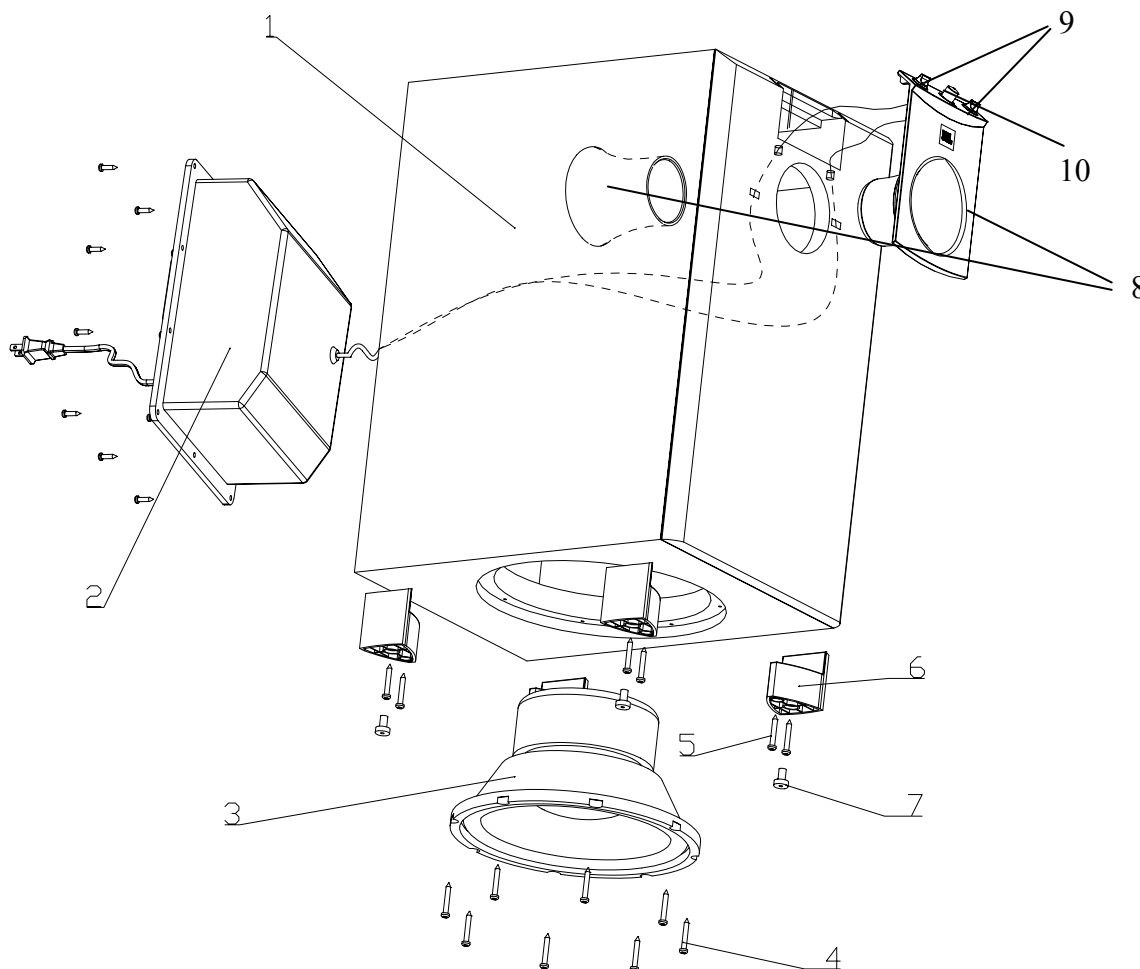


JBL SCS10/20 SUB



Exploded view

N0.	Part number	Description	Quantity
1	not for sale	wooden cabinet	1pc
2	106SCS10E	SCSSUB Amplifier SCS10 and SCS20	1pc
3	20MF10DAG-DW04	JBL 8" woofer 35Φ 4Ω	1pc
4	06-t4205012	screw T4*20 (black chrome)	18pcs
5	06-t35325008	screw T3.5*32	8pcs
6	wi5579-g	plastic foot	4pcs
7	wi5996	rubber cork Black	4pcs
8	700fp138j-1	Port tube &. Front panel	1pc
9	700vk138j-1	Vol and Crossover button	2pc
10	700pb138j-1	Power Button	1pc
	wg5454	Gift Box for SCS10 system	1pc
	Wg5453	Gift Box for SCS20 system	1pc
	wp5364	polyfoam for SCS10 and 20 SUB	1pc



Model name : SCS10/230

N0.	Part number	Description	Quantity
01	SCS10 CA	JBL SAT*4pcs+CEN*1pc	1pc
02	SCS10 SUB	JBL 8"driver+ Amp+cabinet	1pc
03	wg5454	Gift Box	1pc

Part name : SCS10 CA

N0.	Part number	Description	Quantity
1	SCS10 CEN	JBL 3"*2 + TW 4ohm BOX	1pc
2	SCS10 SAT	JBL 3"*2 + TW 4ohm BOX	4pcs
3	ai5285	Owner Manual	1pc
4	sa1063-1	wire ass'y (a12001-1*1pc/bag + plastic bag)	2bags
5	sa15009	wire ass'y (40feet awg#18-30 twin wire)	3bags
6	sa15019	wire ass'y (15feet awg#18-30 twin wire 2pcs/bag)	1bag
7	wb6408	carton for SCS10	1pc
8	wi5970	plastic bottom cover for SCS10 CEN	1pc
9	wi5973	bracket	4pcs
10	wi5974	hook	4pcs
11	wi5975	alu. Center support	1
12	wp5362	EPE	1set
13	wp5363	EPE	1set

Part name : SCS10 CEN

N0.	Part number	Description	Quantity
1	03-5206	plastic bag	1pc
2	06-t4095094	screw T4*9	10pcs
3	06-t4125101	screw T4*12	4pcs
4	32PF55JZH-HW01	JBL 3" 19mm 8ohm	2pcs
5	35DM13NG-DT02	JBL tweeter 13mm 4ohm	1pc
6	alw2505090	wire 250mm long 300uf(capacitor)	1pc
7	g035012	iron grille for SCS10 CEN	1pc
8	s6206	label for SCS10 CEN	1pc
9	sz5936	serial-number label	1pc
10	wi5972	rubber grommet for SCS10 SAT	4pcs
11	320-RUB-00180	rubber cushion for SCS10	3pcs
12	333-EVA-00774	EVA 20*5*1.0t	4pcs
13	xc035018	front of plastic part	1pc
14	306-PS-00701	back of plastic part	1pc
15	xz035001	Aluminun extrusion	1pc

Part name : SCS10 SAT

N0.	Part number	Description	Quantity
1	03-5207	plastic bag for SCS10 SAT	1pc
2	06-t4095094	screw T4*9	4pcs
3	06-t4125101	screw T4*12	4pcs

4	22PF48JZC-DW01	JBL 2 1/2" 19mm 4ohm	1pc
5	35DM13NG-DT01	JBL tweeter 13mm 4ohm	1pc
6	320-RUB-00180	rubber causion	3pcs
7	alw1805089	wire 180mm long with 200uf capacitor	1pc
8	g255004	iron grille for SCS10 SAT	1pc
9	s6204	label for SCS10 SAT	1pc
10	sz5940	serial-number label for SCS10 SAT	1pc
11	wi5972	rubber grommet	4pcs
12	333-EVA-00774	EVA 20*5*1.0t	4pcs
13	xc255004	front of plastic part	1pc
14	306-PS-00702	back of plastic part	1pc
15	xz255000	aluminum extrusion	1pc

Part name :

SCS10 SUB

N0.	Part number	Description	Quantity
1	03-016	Plastic Bag	1pc
2	03-5117	PO bag	1pc
3	06-t35325008	screw T3.5*32	8pcs
4	06-t4205012	screw T4*20 (black chrome)	18pcs
5	106SCS10E	Amplifier	1pc
6	20MF10DAG-DW04	JBL 8" woofer 35Φ 4Ω	1pc
7	sz5934	serial-number label for SCS10 SUB	1pc
8	wi5579-g	plastic foot	4pcs
9	wi5658	non-waven cloth for SCS138	1pc
10	wi5938	PVC hear-shrink tube Φ10*40	1pc
11	wi5939	PVC hear-shrink tube Φ4*15	2pc
12	wi5996	rubber cork Black	4pcs
13	wi6017	EVA 19*10t	1pc
14	wp5364	polyfoam for SCS10 SUB	1pc
15		wooden cabinet	1pc
	700fp138j-1	Port tube &. Front panel	1pc
	700vk138j-1	Vol and Crossover button	2pc
	700pb138j-1	Power Button	1pc

Model name : SCS20/230

N0.	Part number	Description	Quantity
01	SCS20 CA	JBL SAT*4pcs+CEN*1pc	1pc
02	SCS20 SUB	JBL 8"driver+ Amp+cabinet	1pc
03	wg5453	Gift Box	1pc

Model name : SCS20 CA

N0.	Part number	Description	Quantity
1	SCS20 CEN	JBL 3"*2 + TW 4ohm BOX	1pc
2	SCS20 SAT	JBL 3"*2 + TW 4ohm BOX	4pcs
3	ai5285	Owner Manual for SCS10/SCS20	1pc
4	sa1063-1	wire ass'y (a12001-1*1pc/bag + plastic bag)	2bags
5	sa15009	wire ass'y (40feet awg#18-30 twin wire)	3bags
6	sa15019	wire ass'y (15feet awg#18-30 twin wire 2pcs/bag)	1bag
7	wb6409	carton (packing SAT and CEN only)	1pc
8	wi5973	bracket	4pcs
9	wi5974	hook	4pcs
10	wi5975	bottom plastic cover	1pc
11	wp5362	EPE	1set
12	wp5363	EPE	1set

Part name : SCS20 CEN

N0.	Part number	Description	Quantity
1	03-5206	Plastic Bag (for center)	1pc
2	06-t4095094	screw T4*9	10pcs
3	06-t4125101	screw T4*12	4pcs
4	32PF55JZH-HW01	JBL 3" 19mm 8ohm	2pcs
5	35DM13NG-DT02	JBL tweeter 13mm 4ohm	1pc
6	alw2505090	wire 250mm long with 300uf(capacitor)	1pc
7	g035012	iron grille	1pc
8	s6205	label for SCS20 CEN	1pc
9	sz5938	serial-number label	1pc
10	wi5972	rubber grommet	4pcs
11	xc035018	front of plastic part	1pc
12	306-PS-00701	back of plastic part	1pc
13	320-RUB-00180	rubber causion for SAT	3pcs
14	333-EVA-00774	EVA causion	4pcs
15	xz035001	aluminum extrusion	1pc

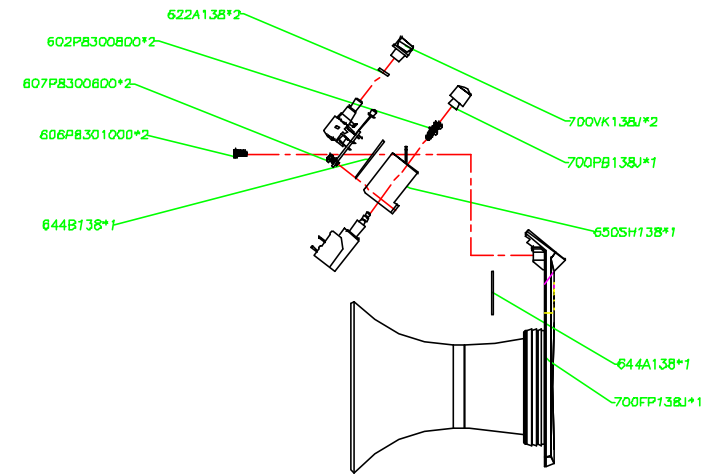
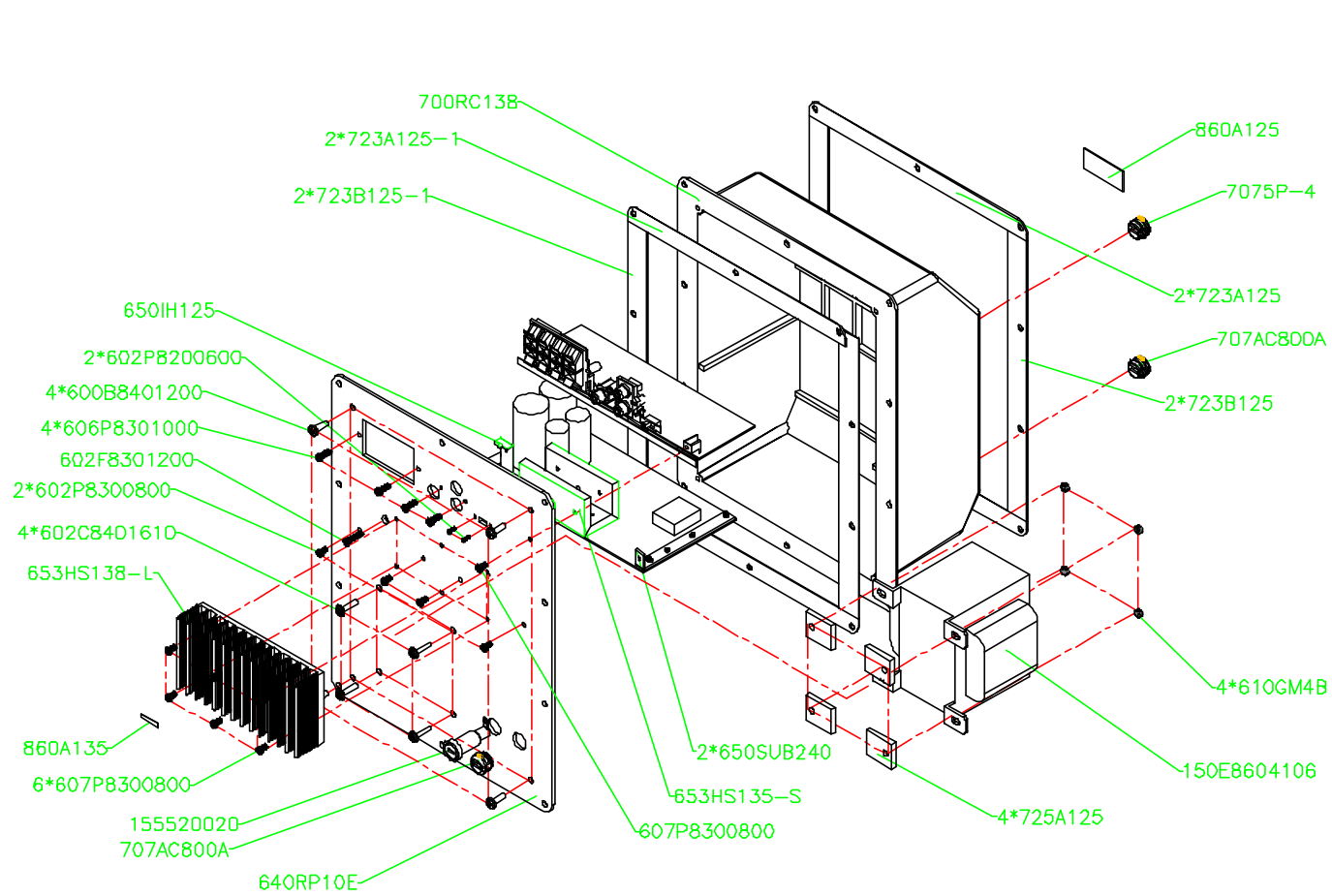
Part name : SCS20 SAT

N0.	Part number	Description	Quantity
1	03-5206	Plastic Bag for CEN	1pc
2	06-t4095094	screw T4*9	10pcs
3	06-t4125101	screw T4*12	4pcs

4	32PF55JZH-HW01	JBL 3" 19mm 8ohm	2pcs
5	35DM13NG-DT02	JBL tweeter 13mm 4ohm	1pc
6	alw2505090	wire 250mm long with 300uf capacitor	1pc
7	g035013	iron gille for SCS20 CEN	1pc
8	s6203	label for SCS20 SAT	1pc
9	333-EVA-00774	EVA 20*5*1.0t	1pc
10	sz5937	serial-number label for SCS20 SAT	1pc
11	wi5972	rubber grommet for SCS10 SAT	4pcs
12	320-RUB-00180	rubber foot for SCS10	3pcs
13	xc035018	front of plastic part for SCS20 CEN	1pc
14	306-PS-00703	back of plastic part	1pc
15	xz035001	aluminum extrusion for SCS20 CEN	1pc

Part name : **SCS20 SUB**

N0.	Part number	Description	Quantity
1	03-016	Plastic Bag	1pc
2	03-5117	PO bag	1pc
3	06-t35325008	screw T3.5*32	8pcs
4	06-t4205012	screw T4*20 (black chrome)	18pcs
5	106SCS10E	Amplifier	1pc
6	20MF10DAG-DW04	JBL 8" woofer 35Φ 4Ω	1pc
7	sz5935	serial-number label	1pc
8	wi5579-g	plastic foot	4pcs
9	wi5658	non-waven cloth for SCS138	1pc
10	wi5938	PVC hear-shrink tube Φ10*40	1pc
11	wi5939	PVC hear-shrink tube Φ4*15	2pc
12	wi5996	rubber cork Black	4pcs
13	wi6017	EVA 19*10t	1pc
14	wp5365	polyfoam for SCS20 SUB	1pc
15		wooden cabinet	1pc



SCS10/230 AND □
 SCS20/230 □
 EXPLODED VIEW

**Part list for
SCSSUB**

	PART NO.	DESCRIPTION	QTY	REFERENCE
1	101OSUB138CE	PCB ASS'Y AMP	1	
2	101ASUB138CE	AI PCB ASS'Y AMP OF SUB138	1	
3	104sub138e00	PCB OF SUB138CE	1	
4	11014122j26	Resistor 1.2K 1/4W ±5% CF	1	R265
5	11014472j26	Resistor 4.7K 1/4W ±5% CF	2	R201,2
6	11014560j26	Resistor 56Ω 1/4W ±5% CF	1	R117
7	11016101j26	Resistor 100Ω 1/6W ±5% CF	4	R120,213,4,5
8	11016102j26	Resistor1K 1/6W ±5% CF	3	R124,66,254
9	11016103j26	Resistor 10K 1/6W ±5% CF	17	R133,4,209,12,6,7,235 ,6,40,60,7,9,4,5,80,1
10	11016104j26	Resistor100K 1/6W ±5% CF	2	R163,4
11	11016105j26	Resistor1M 1/6W ±5% CF	2	R143,259
12	11016123j26	Resistor 12K 1/6W ±5% CF	3	R135,9,65
13	11016124j26	Resistor 120K 1/6W ±5% CF	1	R233
14	11016151j26	Resistor 150Ω 1/6W ±5% CF	1	R253
15	11016152j26	Resistor 1.5K 1/6W ±5% CF	7	R103,23,36,7,41,2,53
16	11016153j26	Resistor15K 1/6W ±5% CF	5	R118,45,52,4,234
17	11016154j26	Resistor 150K 1/6W ±5% CF	2	R131,252
18	11016181j26	Resistor180Ω 1/6W ±5% CF	2	R111,4

19	11016205j26	Resistor2.0M 1/6W ±5% CF	1	R257
20	11016223j26	Resistor22K 1/6W ±5% CF	12	R128,9,55,6,8,60,237 ,8,55,62,76,8
21	11016273j26	Resistor27K 1/6W ±5% CF	1	R284
22	11016332j26	Resistor 3.3K 1/6W ±5% CF	3	R106,7,44
23	11016333j26	Resistor 33K 1/6W ±5% CF	1	R271
24	11016392j26	Resistor 3.9K 1/6W ±5% CF	2	R105,8
25	11016393j26	Resistor39K 1/6W ±5% CF	1	R126
26	11016470j26	Resistor47Ω 1/6W ±5% CF	4	R112,3,5,6
27	11016471j26	Resistor470Ω 1/6W ±5% CF	3	R140,61,2
28	11016472j26	Resistor 4.7K 1/6W ±5% CF	12	R110,25,30,47,50,7,9 ,207,8,58,82,3
29	11016473j26	Resistor47K 1/6W ±5% CF	5	R101,219,49,50,1
30	11016474j26	Resistor 470K 1/6W ±5% CF	2	R266,73
31	11016512j26	Resistor 5.1K 1/6W ±5% CF	2	R210,1
32	11016563j26	Resistor 56K 1/6W ±5% CF	1	R104
33	11016681j26	Resistor680Ω 1/6W ±5% CF	2	R148,51
34	11016682j26	Resistor6.8K 1/6W ±5% CF	1	R109
35	11016751j26	Resistor750Ω 1/6W ±5% CF	2	R277,9
36	11016755j26	Resistor 7.5M 1/6W ±5% CF	1	R272
37	11016913j26	Resistor 91K 1/6W ±5% CF	4	R203,4,5,6
38	116161252f26	Resistor 12.5K 1/6W ±1% MF	1	R268
39	1302b101k503	Disc Capacitor 100P 50V ±10%	3	C139,40,207
40	1302b102k503	Disc Capacitor 1000P 50V ±10%	3	C116,41,203

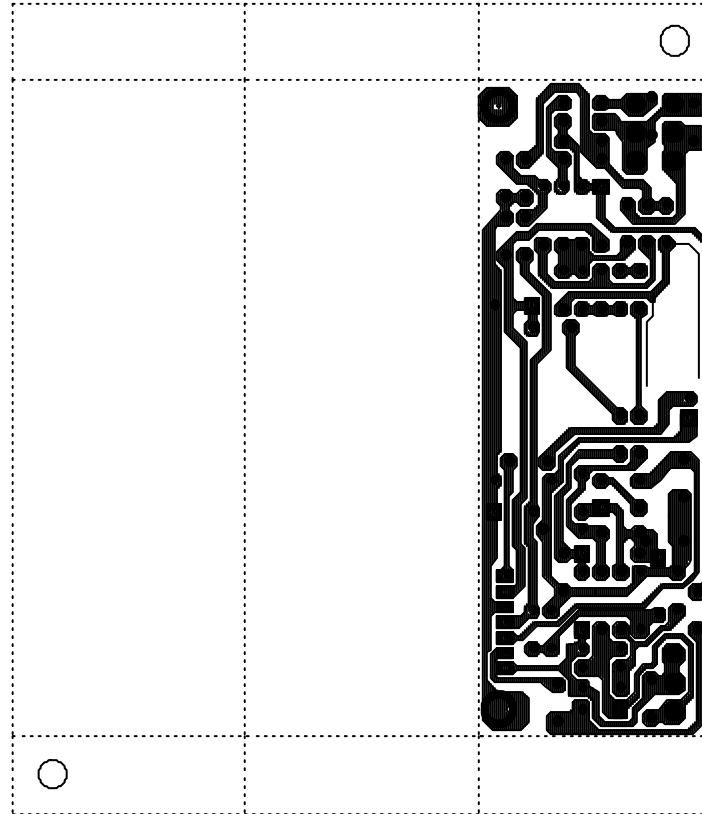
41	1302b221k503	Disc Capacitor 220P 50V ±10%	6	C204,5,10,1,2,30
42	1302b681k503	Disc Capacitor 680P 50V ±10%	1	C208
43	1302f104z503	Disc Capacitor 0.1U 50V +80/-20%	15	C108,13,5,9,37,8,226 ,7,32,5,6,41,2,7,8
44	1303f473m503	Disc Capacitor 0.047U 50V ±20%	2	C106,209
45	130sl470k503	Disc Capacitor 47P 50V +350/-1000 ±10%	1	C229
46	132103j503	Mylar Capacitor 0.01U 50V ±5%	4	C223,4,44,5
47	132104j503	Mylar Capacitor 0.1U 50V ±5%	3	C107,221,2
48	132223ja03	Mylar Capacitor 0.022uF 100V ±5%	8	C123,4,5,6,7,8,31,2
49	1353105m50	Electrolytic Cap. 1U 50V ±20%	3	C105,12,228
50	1353106m50	Electrolytic Cap. 10U 50V ±20%	4	C201,2,6,31
51	1353107m16	Electrolytic Cap. 100uF 16V ±20%	7	C109,10,17,20,234 ,49,50
52	1353107m50	Electrolytic Cap. 100U 50V ±20%	1	C136
53	1353226m50	Electrolytic Cap. 22U 50V ±20%	5	C114,8,225,43,53
54	1353227m10	Electrolytic Cap. 220U 10V ±20%	2	C129,30
55	1353227m16	Electrolytic Cap. 220U 16V ±20%	1	C111
56	1353336m16	Electrolytic Cap. 33U 16V ±20%	1	C233
57	1353476m25	Electrolytic Cap. 47U 25V ±20%	2	C103,246
58	192027c1815gr	Transistor 2SC1815GR	11	Q102,11,2,3,8,23 ,6,201,2,6,7
59	192027c2235y	Transistor 2SC2235Y	1	Q121
60	192028a1015gr	Transistor 2SA1015GR	3	Q114,6,27
61	192028a965y	Transistor 2SA965Y	1	Q125
62	1921672n5551	Transistor 2N5551	2	Q103,9

63	1921682n5401	Transistor 2N5401 AI-PNP	2	Q104,10
64	197131n4148	Diode 1N4148	20	D101,3,5,8,13,4,6,201 ,2,6,7,8,10,1,2,3,4,5,8,9
65	19915000335	Zener Diode 3.3V 1/2W	2	D102,205
66	19915000625	Zener Diode 6.2V 1/2W	2	D106,7
67	19915001605	Zener Diode 16V 1/2W	1	D109
68	11010821jk1	Resistor 820Ω 1W ±5%	1	R132
69	110122r2j15	Resistor 2.2Ω 1/2W ±5%	1	R127
70	11016472j26	Resistor 4.7K 1/6W ±5% CF	1	R157
71	113500r1j10	Cement Resistor 0.1Ω 5W	2	R121,2
72	11403302m0	Semi-fixed Resistor 3K 0.3W ±20%	1	R138
73	1353107m50	Electrolytic Cap. 100U 50V ±20%	1	C135
74	1354478m35	Electrolytic Cap. 4700U 35V ±20%	2	C121,2
75	1354478m50	Electrolytic Cap. 4700U 50V ±20%	2	C133,4
76	171udhss124d	Relay 5A 24V UDH-SS124D	1	RY101
77	1740rcb202v	RCA JACK RCB-202V	1	JK202
78	1740rcb242v1	JACK RCA RCB-242V-1	1	JK203
79	1742rsp108v	8 PIN SPK JACK RSP-108V	1	JK201
80	180tms7210v	SWITCH SLIDE 6PIN MS7210V	1	SW201
81	19006m4558d	I.C. OPA 4558D	4	U101,201,2,4
82	19016tl074cn	I.C. TL074CN ST	1	U205
83	192021c1815gr	Transistor 2SC1815GR	2	Q101,15
84	192021tip35c	Transistor TIP35C	1	Q107
85	192022tip36c	Transistor TIP36C	1	Q108

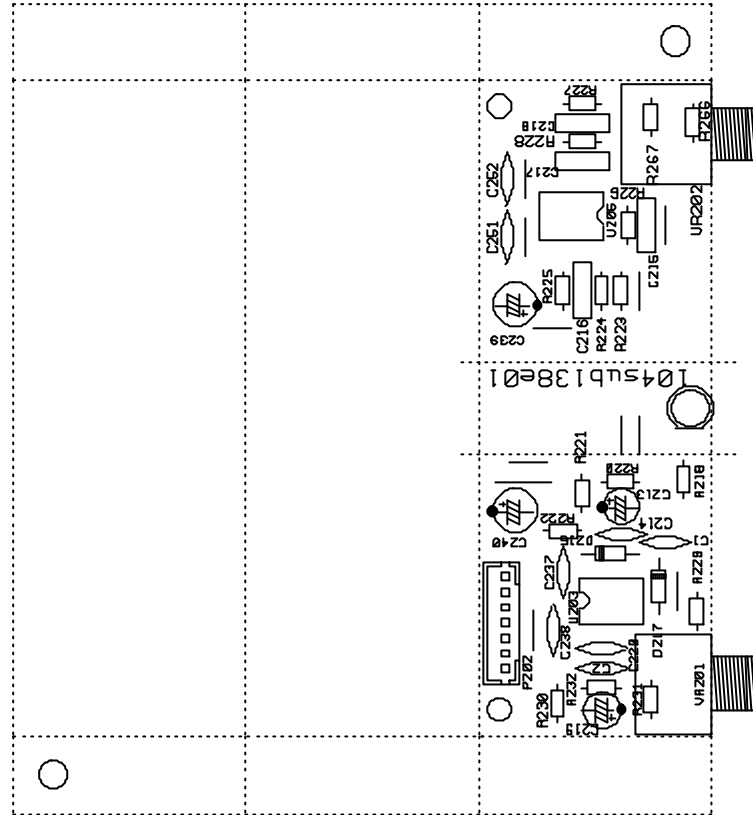
86	192028a1015gr	Transistor 2SA1015GR	1	Q122
87	192161tip41c	Transistor TIP41C NPN SGS	1	Q001
88	192162tip42c	Transistor TIP42C PNP SGS	1	Q120
89	192201d882y	Transistor KSD882Y	1	Q117
90	192202b772y	Transistor KSB772Y	1	Q119
91	192991d669a	Transistor HSD669A	1	Q106
92	192992b649a	Transistor HSB649A	1	Q105
93	19700kbl405	Diode 4A 500V KBL405	2	D110,5
94	197101n4002	Diode 1N4002	1	D104
95	197101n5402	Diode 1N5402	2	D111,2
96	101OSUB138E01	PCB AMP ASS'Y	1	
97	101ASUB138E01	AI PCB ASS'Y	1	
98	104sub138e01	PCB	1	
99	11016102j26	Resistor1K 1/6W ±5% CF	2	R226,7
100	11016103j26	Resistor 10K 1/6W ±5% CF	9	R218,20,1,2,25,8,9,30,2
101	11016104j26	Resistor100K 1/6W ±5% CF	1	R231
102	11016222j26	Resistor2.2K 1/6W ±5% CF	2	R266,7
103	11016273j26	Resistor27K 1/6W ±5% CF	1	R223
104	11016513j26	Resistor 51K 1/6W ±5% CF	1	R224
105	1302b101k503	Disc Capacitor 100P 50V ±10%	2	C214,20
106	1302b102k503	Disc Capacitor 1000P 50V ±10%	2	C1,2
107	1302f104z503	Disc Capacitor 0.1U 50V +80/-20%	4	C237,8,51,2
108	132223ja03	Mylar Capacitor 0.022uF 100V ±5%	1	C215

109	132473ja03	Mylar Capacitor 0.047uF 100V ±5%	1	C216
110	1353106m50	Electrolytic Cap. 10U 50V ±20%	2	C213,9
111	1353107m16	Electrolytic Cap. 100uF 16V ±20%	2	C239,40
112	197131n4148	Diode 1N4148	2	D216,7
113	115h203b206	Variable Resistor B20K H:12.5mm	1	VR202
114	115h503a105	Variable Resistor A50K H:12.5mm	1	VR201
115	129a105j633	Metallize Cap. 1uF 63V ±5%	1	C218
116	129a474j633	Metallize Cap. 0.47U 63V ±5%	1	C217
117	19006m4558d	I.C. OPA 4558D	2	U203,6
118	19510204hgw	LED 204HW	1	LED1
119	1302g472md00	Disc Capacitor 4700P 400V ±20%	1	
120	150e8604106	Power Transformer EI-86 230V/50Hz	1	
121	152v60202601	Line Cord SP-021B 6FT VDE	1	
122	154v12506t0	FUSE TSD 1.25A 250V VDE	1	
123	155520020	Fuse holder R3-11	1	
124	180psddd1	Switch SDDL1-A1-D-1	1	

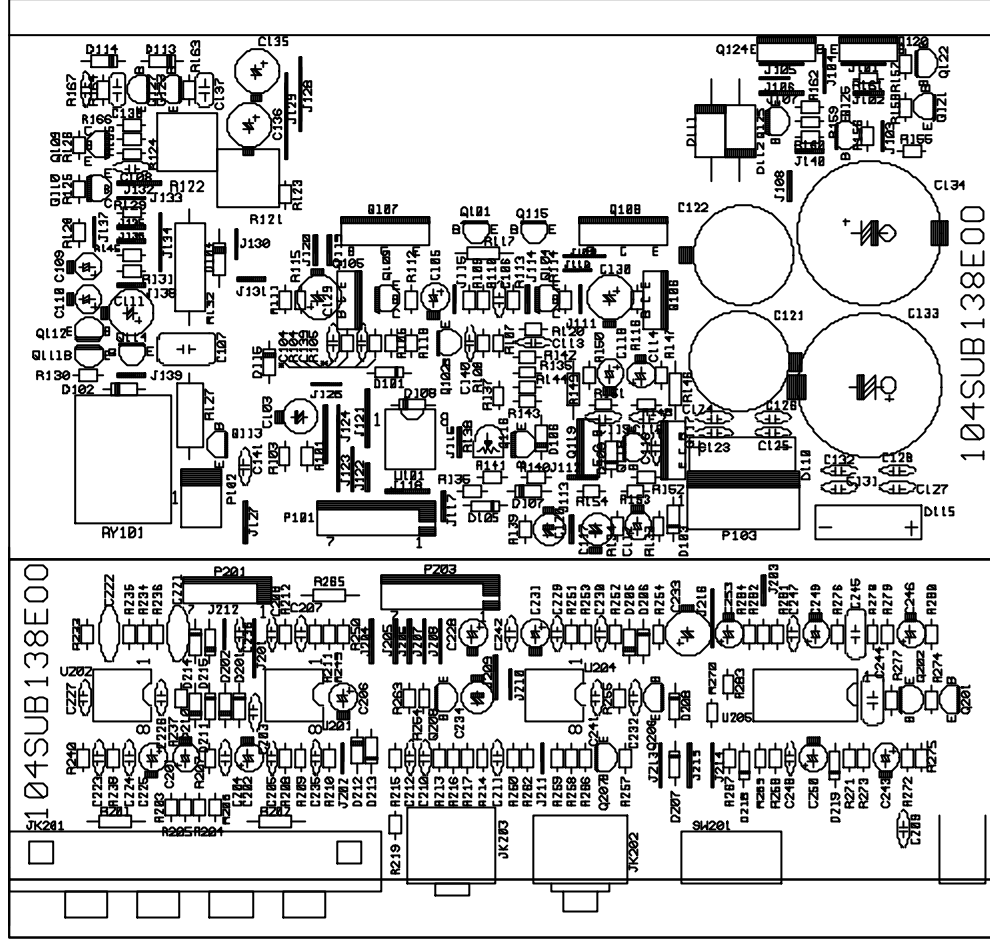
SCS10/230 and SCS20/230 □
CONTROL PBC LAYOUT - BOTTOM SIDE



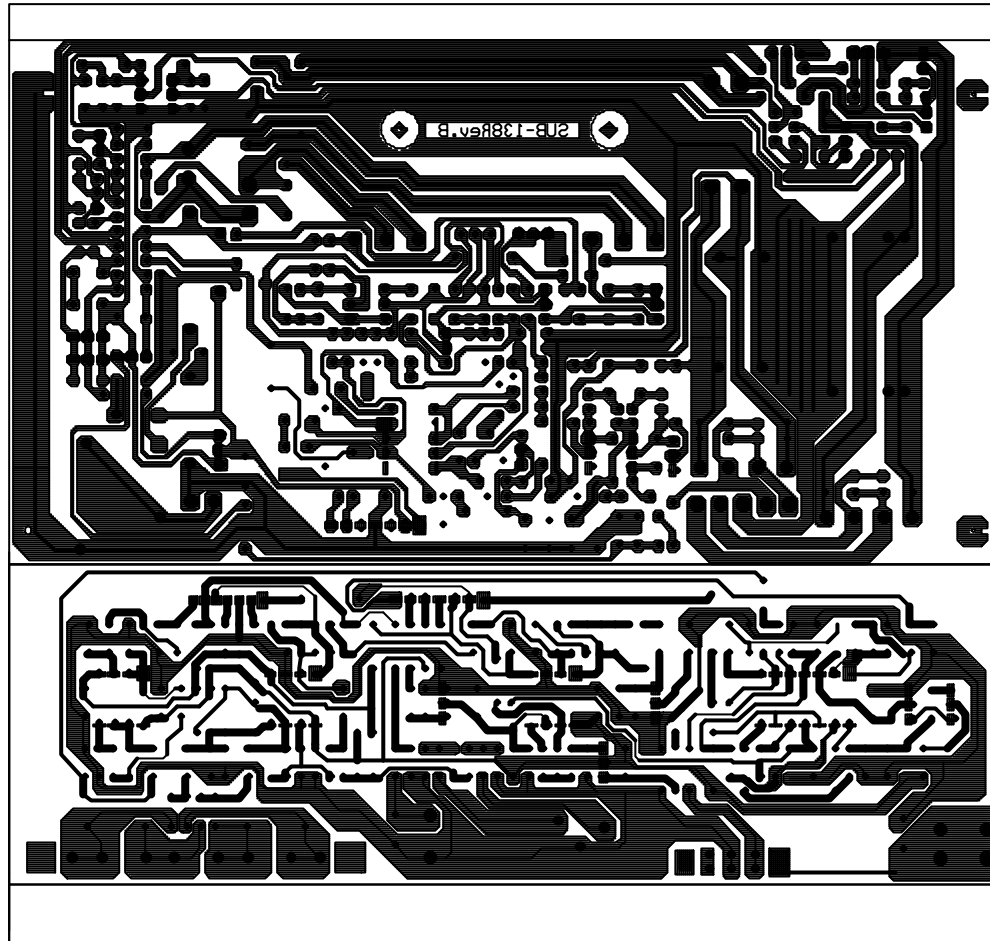
SCS10/230 and SCS20/230 □ CONTROL PCB LAYOUT - COMPONENT SIDE

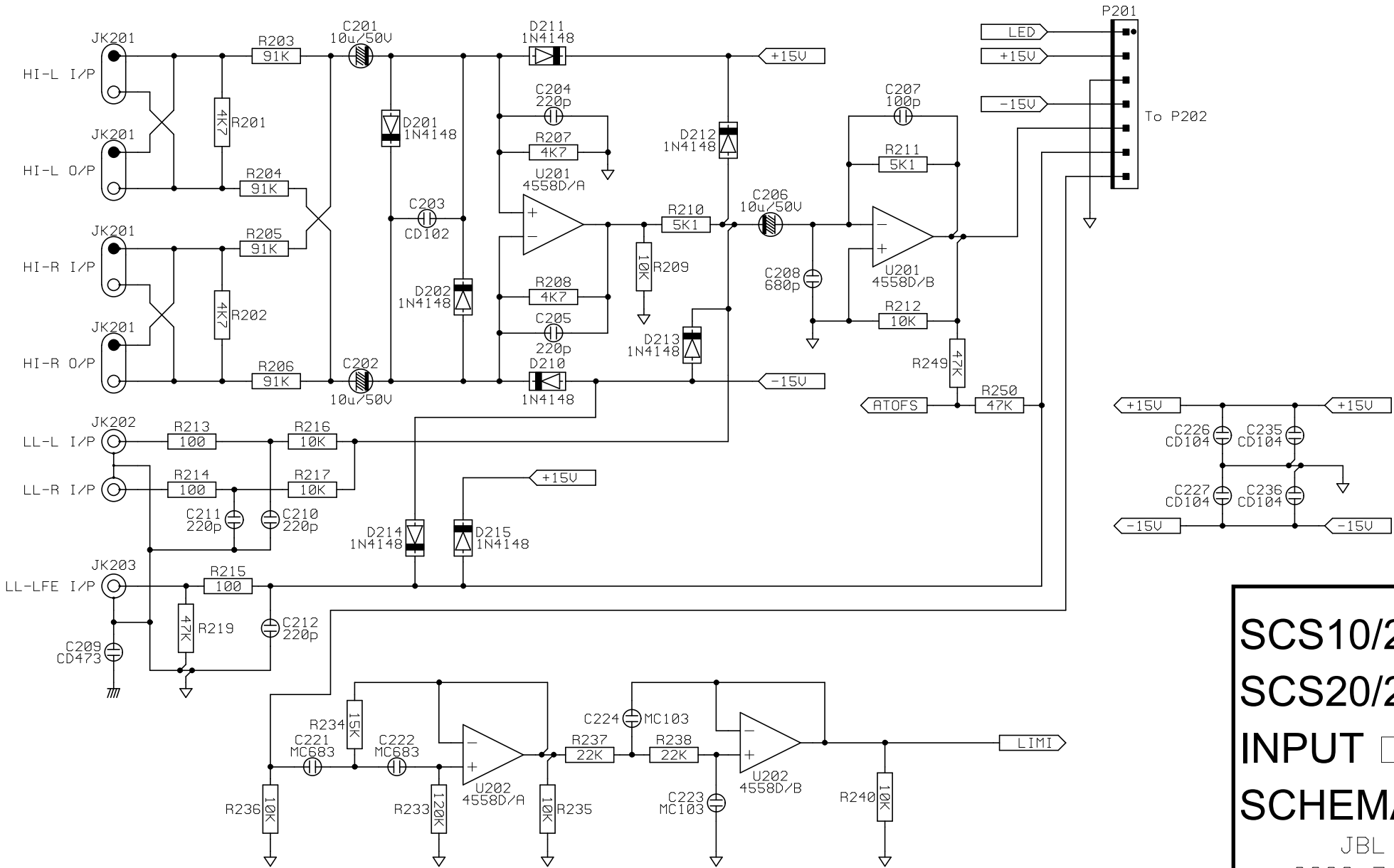


SCS10/230 AND SCS20/230 POWER AND PRE AMP PCB LAYOUT - COMPONENT SIDE

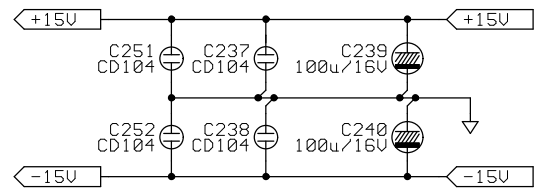
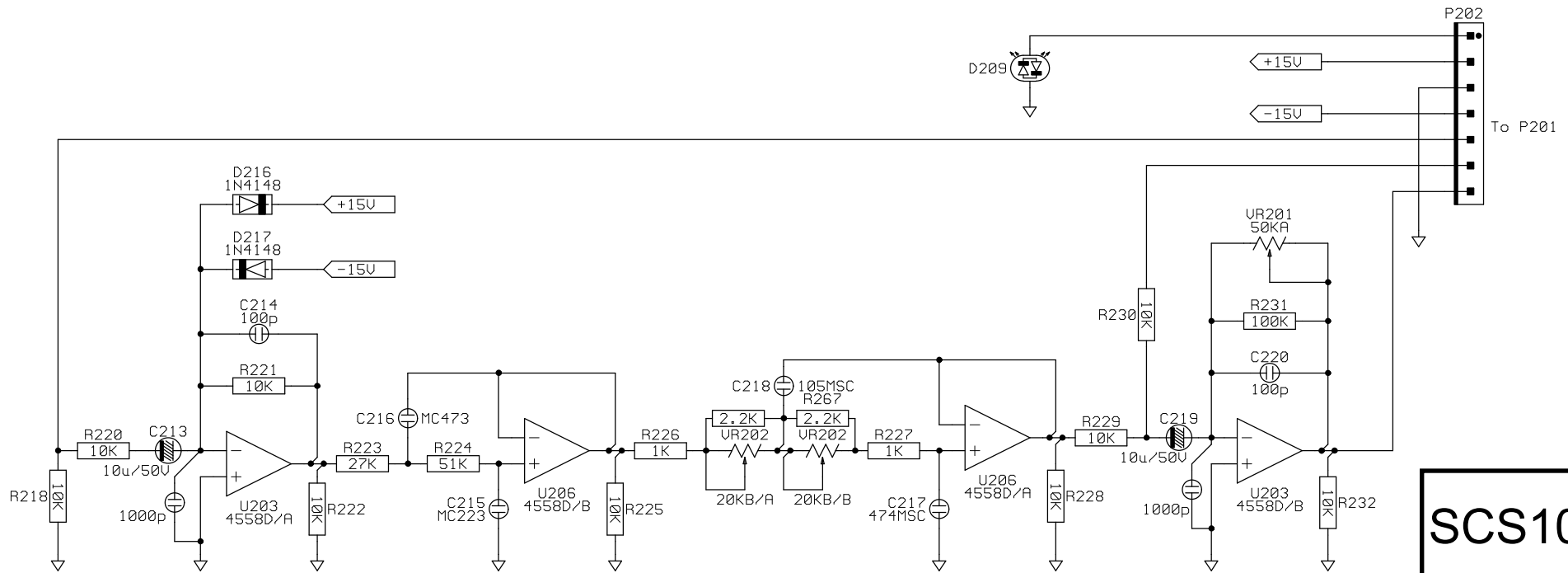


SCS10/230 AND SCS20/230 □
POWER AND PRE AMP PCB LAYOUT - BOTTUM SIDE





SCS10/230 -
 SCS20/230
 INPUT
SCHEMATIC
 JBL
 2002.7.18



SCS10/230-

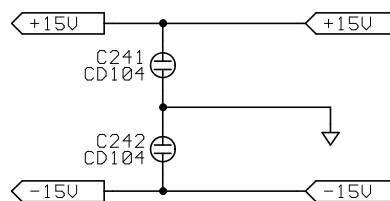
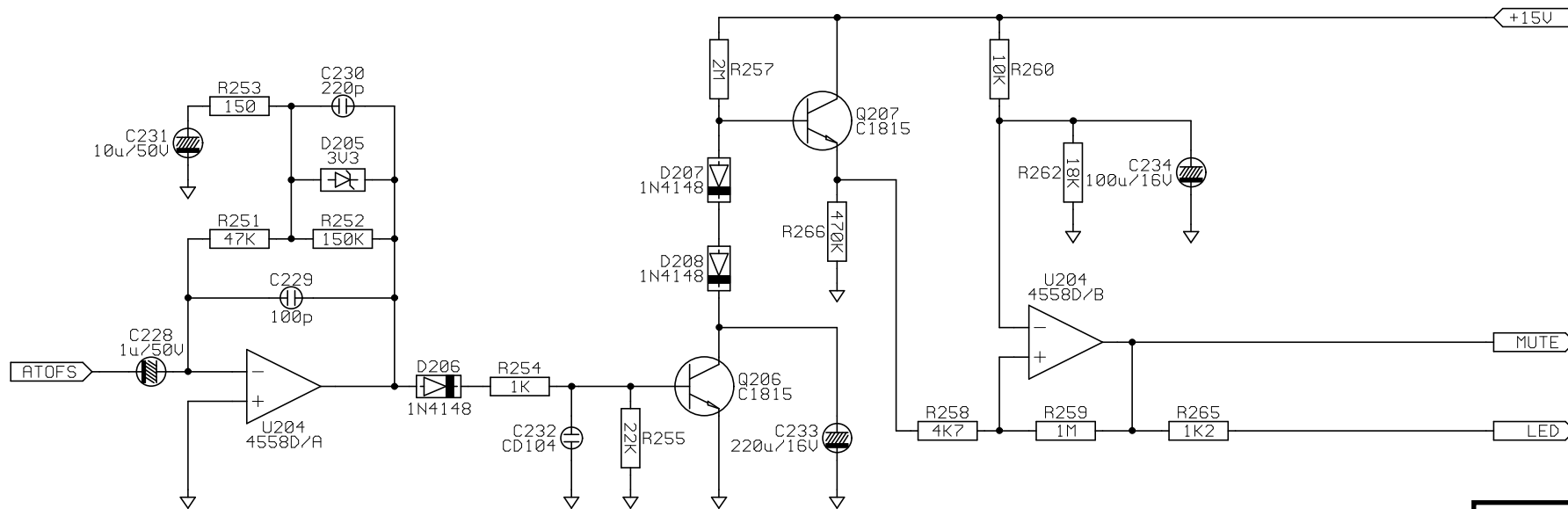
SCS20/230

CONTROL

PCB

SCHEMATIC

JBL
2002.7.18



SCS10/230 -

SCS20/230

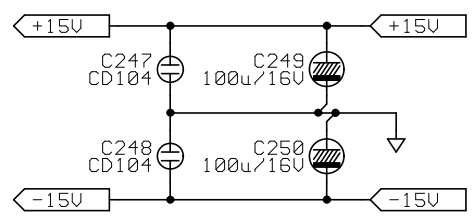
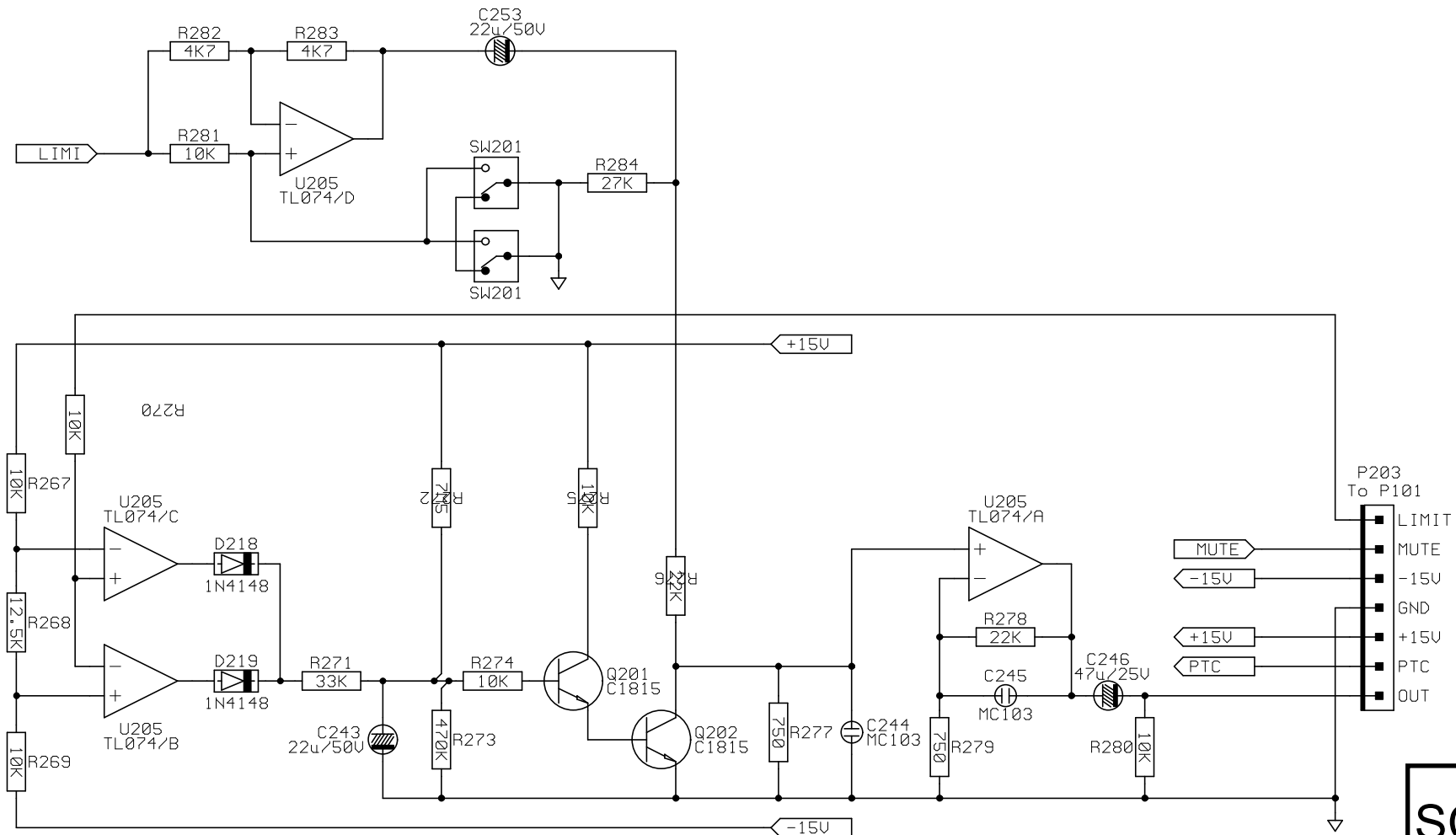
AUTO

ON/OFF

SCHEMATIC

JBL

2002.7.18



SCS10/230 -

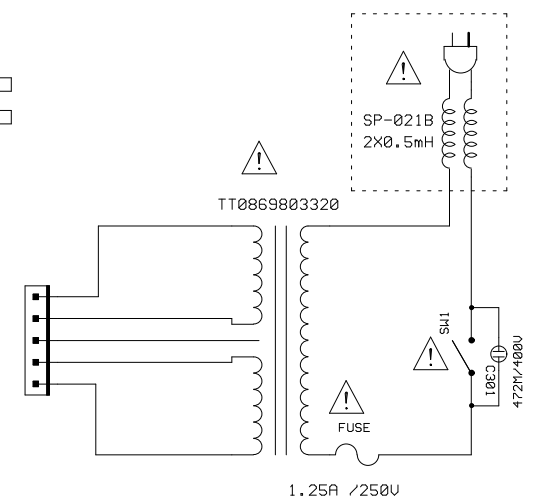
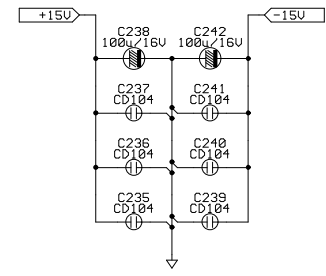
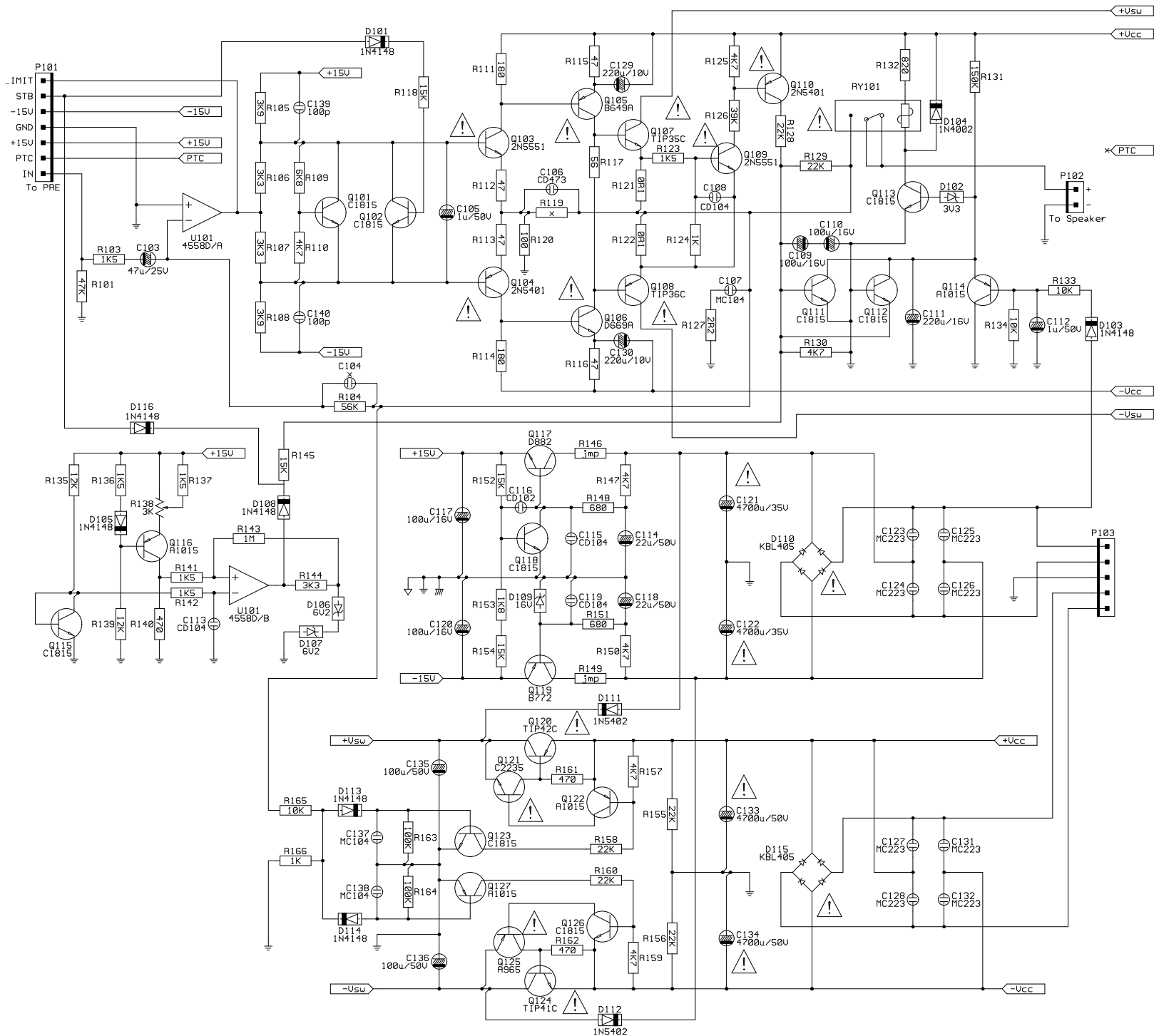
SCS20/230

LIMITER

SCHEMATIC

JBL

2002.7.18



SCS10/230 -

SCS20/230

POWER SUPPLY

POWER AMP

SCHEMATIC

JUL-18-2002