

Service Manual

Model: FAT50

Palmer

REV.1.0

CONTENT

- 1. Specification**
- 2. Schematic Diagram**
- 3. Printed Circuit Board**
- 4. Structural Drawing**
- 5. Parts List**



FAT50 FULL TUBE GUITAR AMPLIFIER

SPECIFICATIONS

Preamp Section

V1, V2: ECC83/ 12AX7A highgrade

V3, V4: ECC83/ 12AX7A selected

Power Amp Section

V5, V6: 5881 (6L6GC) matched set

Output Power: 50 W into 8 or 16 Ohms

Speaker 12" Eminence, Governor, 16 Ohms

General

Mains Voltage: 120 V / 230 V~ +/-10%

Max. Power consumption: 150 W (42 W on Standby)

Dimensions (W x H x D): 580 x 500 x 270 mm



FAT50H FULL TUBE GUITAR AMPLIFIER

SPECIFICATIONS

Preamp Section

V1, V2:	ECC83/ 12AX7A highgrade
---------	-------------------------

V3, V4:	ECC83/ 12AX7A selected
---------	------------------------

Power Amp Section

V5, V6:	5881 (6L6GC) matched set
---------	--------------------------

Output Power:	50 W into 8 or 16 Ohms
---------------	------------------------

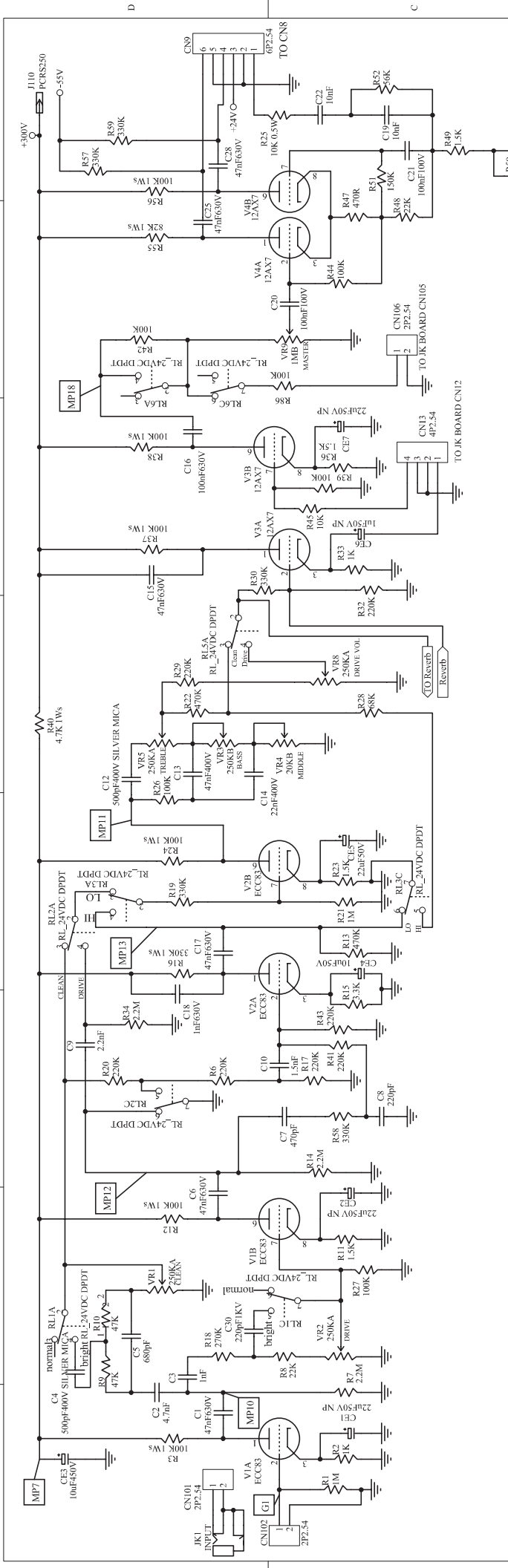
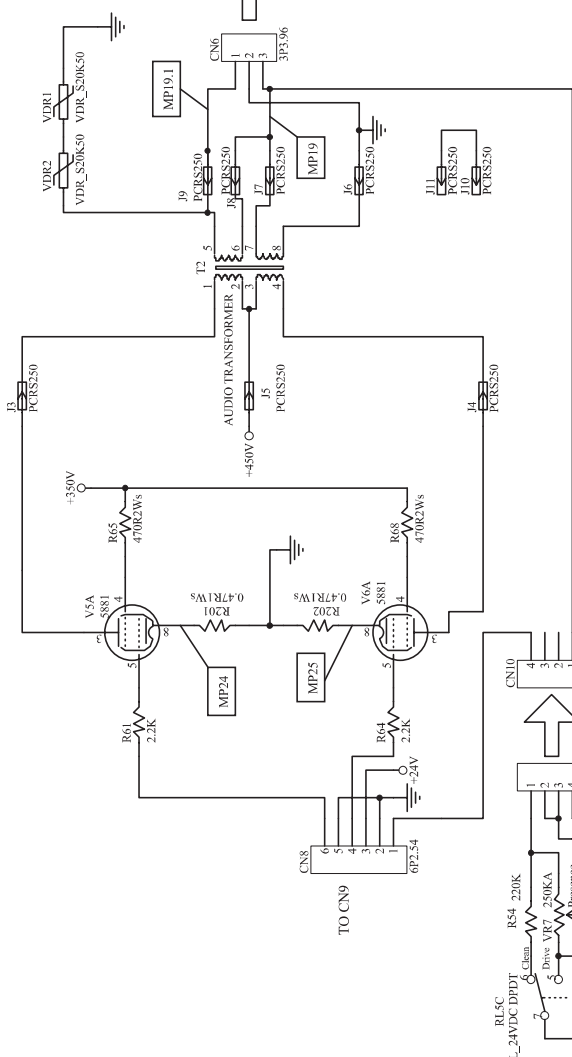
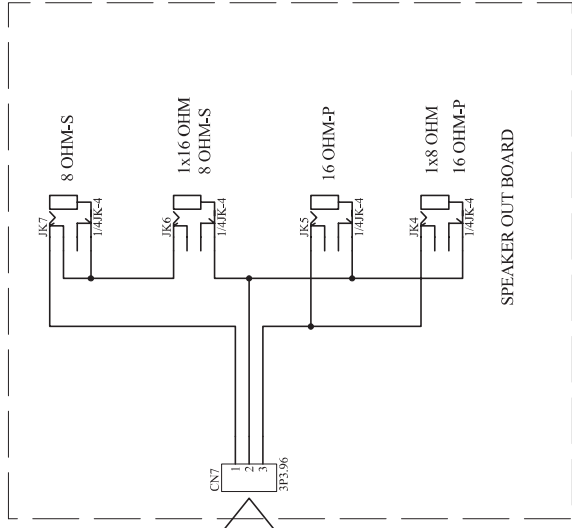
General

Mains Voltage:	120 V / 230 V~ +/-10%
----------------	-----------------------

Max. Power consumption:	150 W (42 W on Standby)
-------------------------	-------------------------

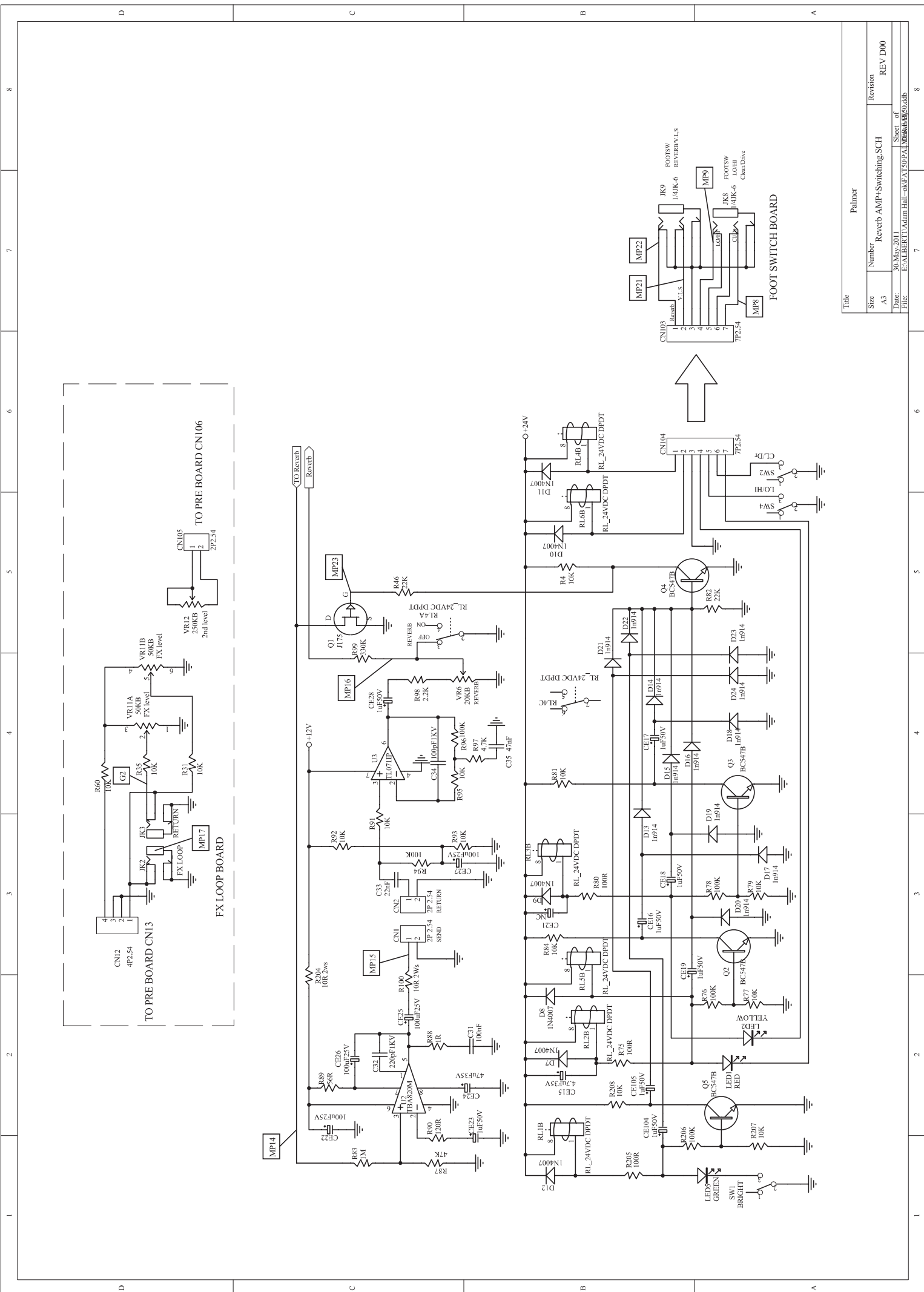
Dimensions (W x H x D):	580 x 270 x 270 mm
-------------------------	--------------------

Title		Palmer	
Size	Number	Revision	Revision
A3		PRE AND POWER AMP.SCH	REV D00
Date:	30-Mar-2011		Sheet of
File:	E:\ALBERT\Adamm Hall\src\A1500\PA\PREANDPWR650.dfb		8

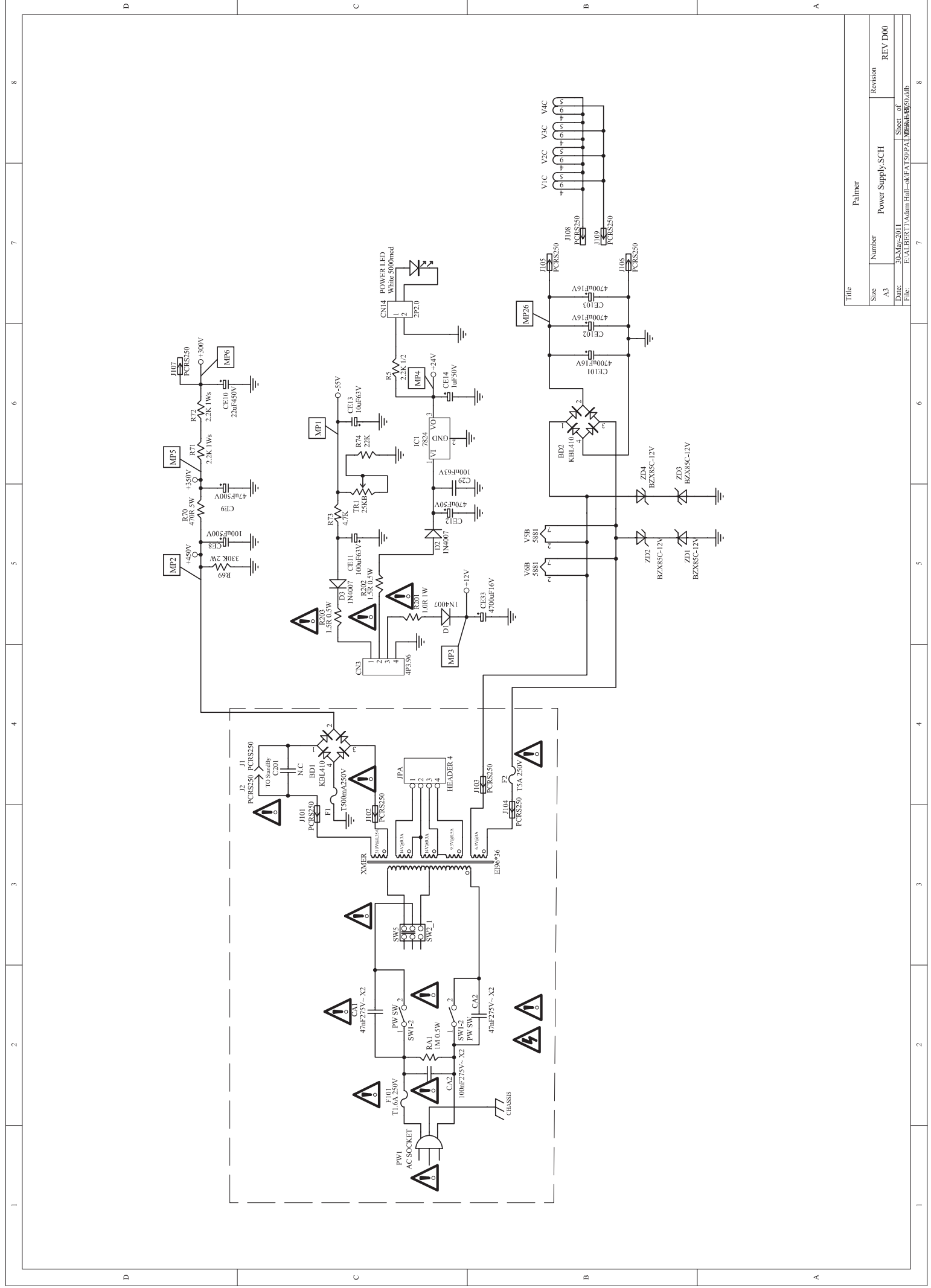


8
7
6
5
4
3
2
1

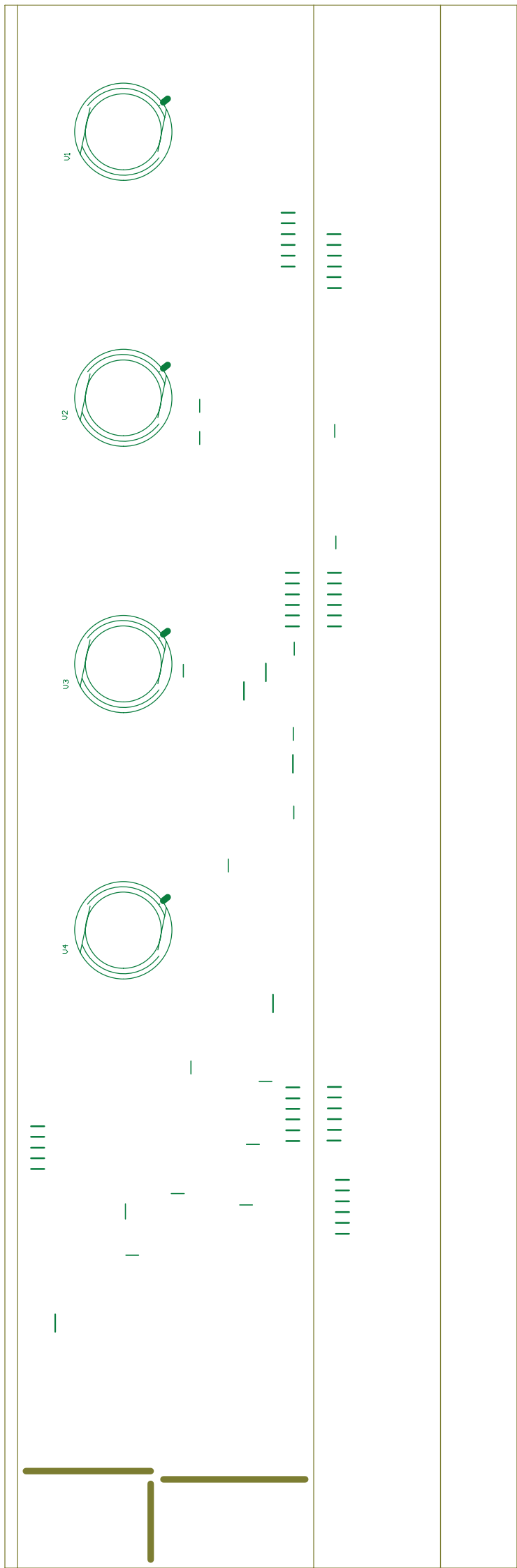
D
C
B
A

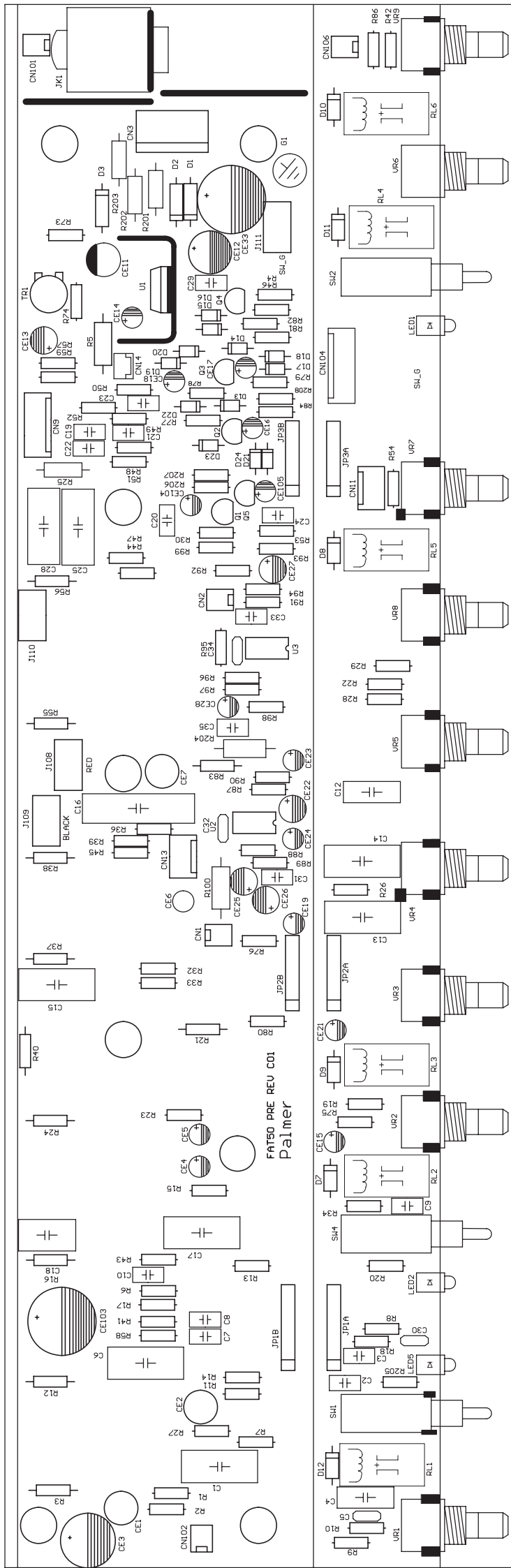


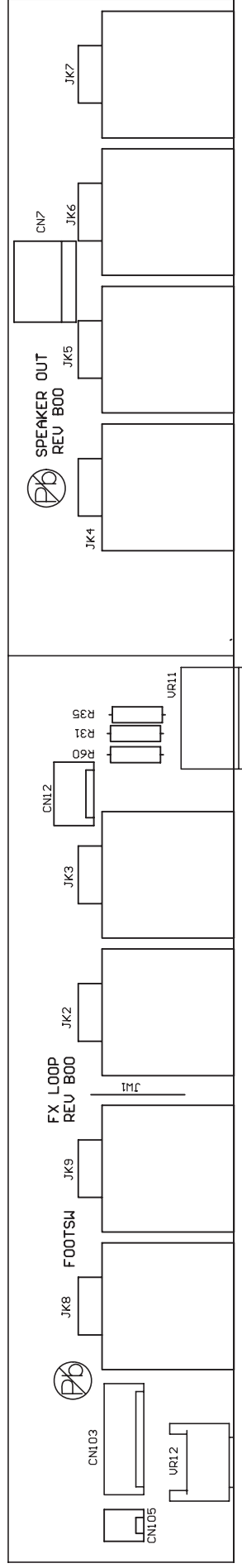
Title		Palmer	
Size	Number	Reverb AMP+Switching-SCH	Revision
A3			REV D00
Date:	30-May-2011		Sheet of
File:	E:\ALBERT\Adam Hall-8\FA150\PA1\MP23\REV D00.dfb		8

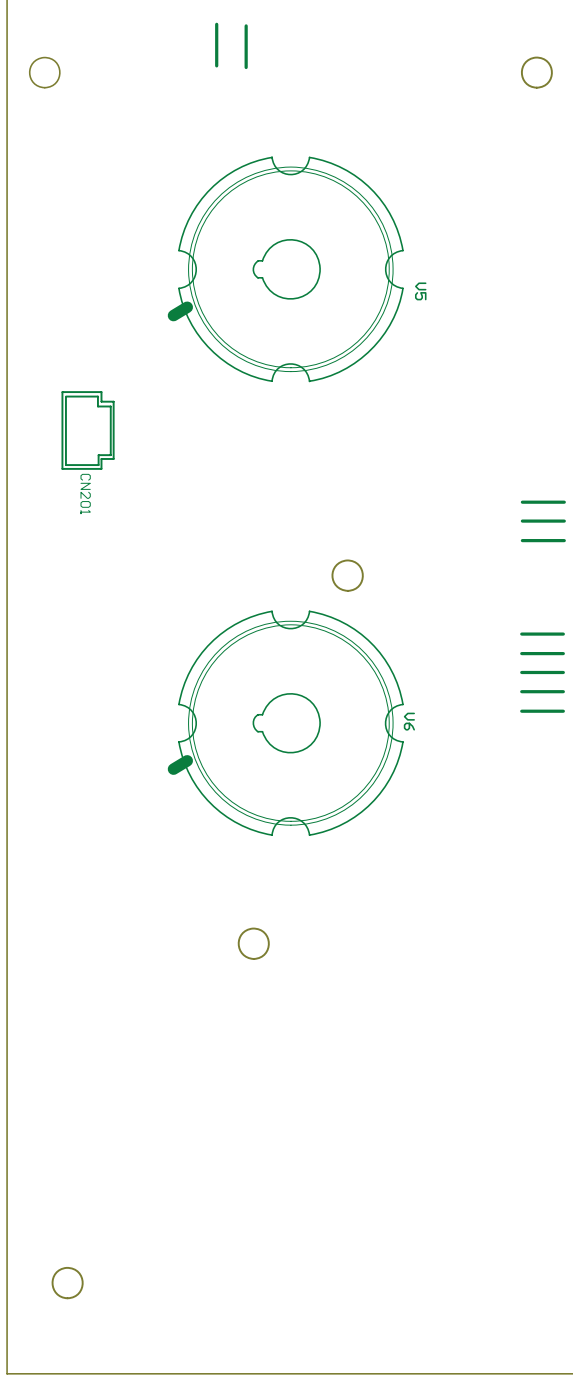


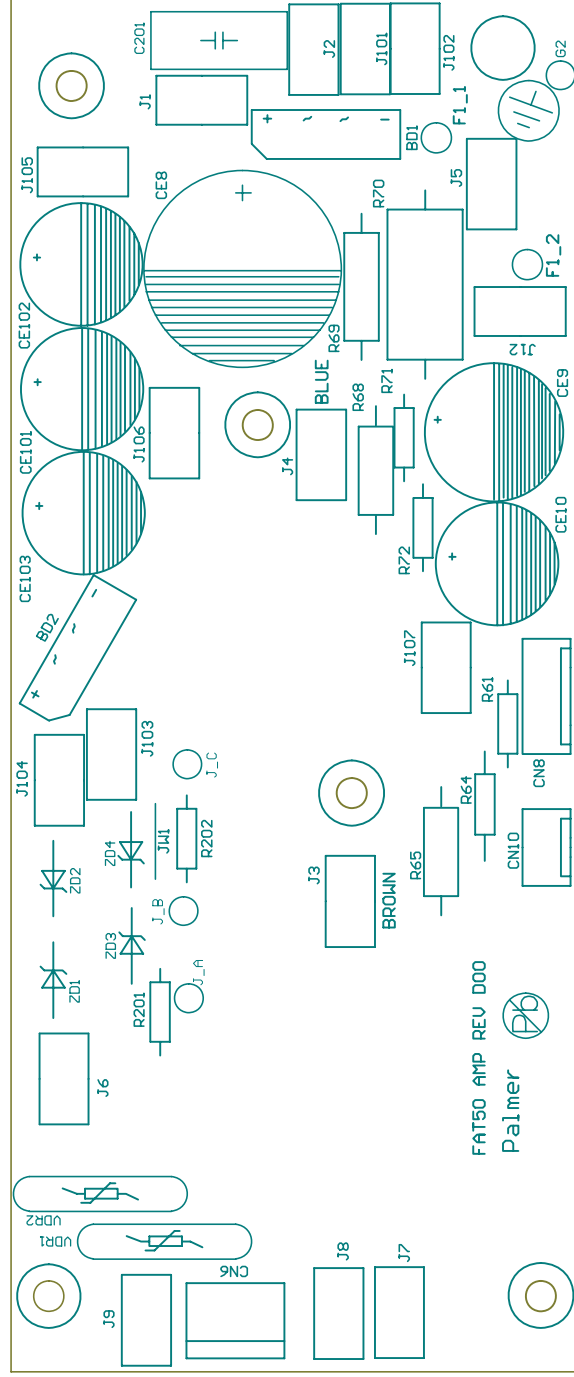
Title		Palmer	
Size	Number	Revision	Revision
A3	Power Supply.SCH		REV D00
Date:	30-May-2011		Sheet of
File:	E:\ALBERT\Adam Hall-k\FA150\PA1\POWER.P95.dfb		8

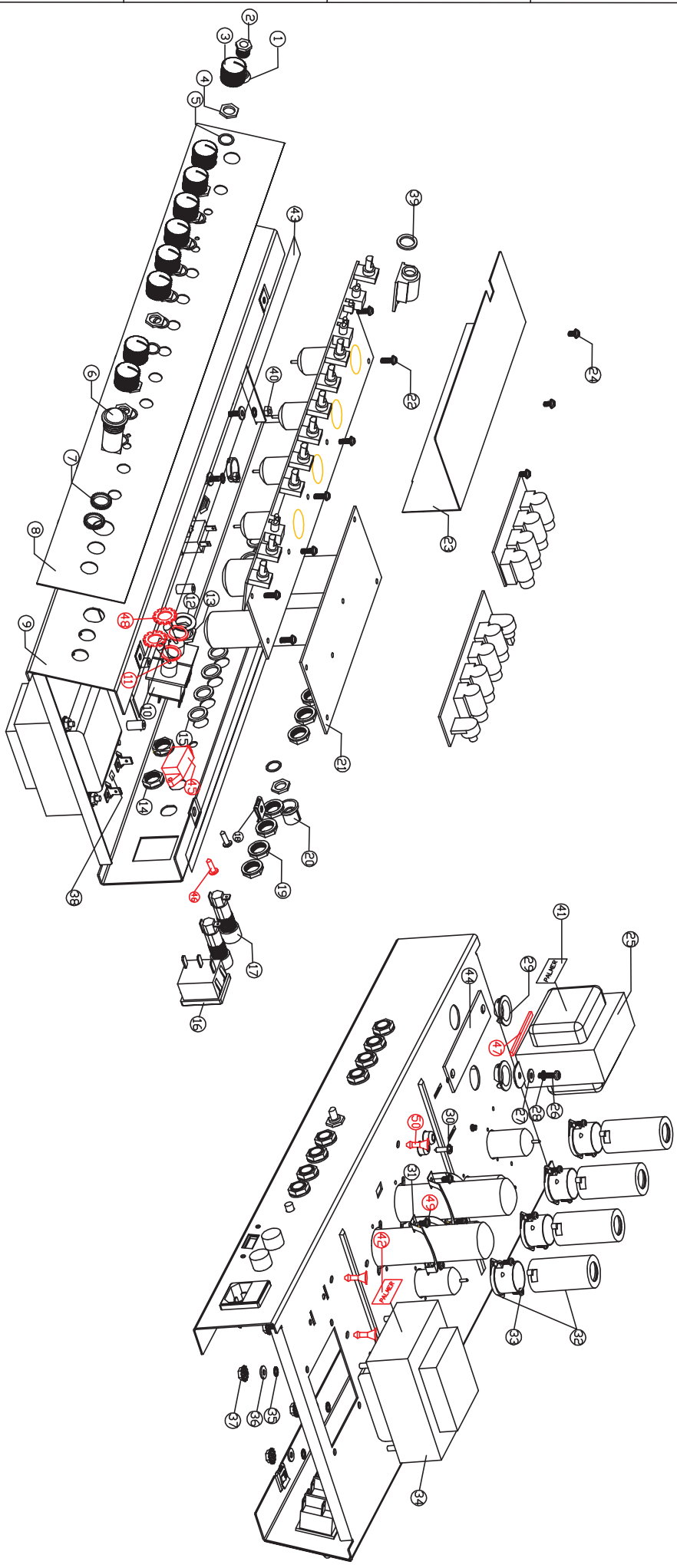
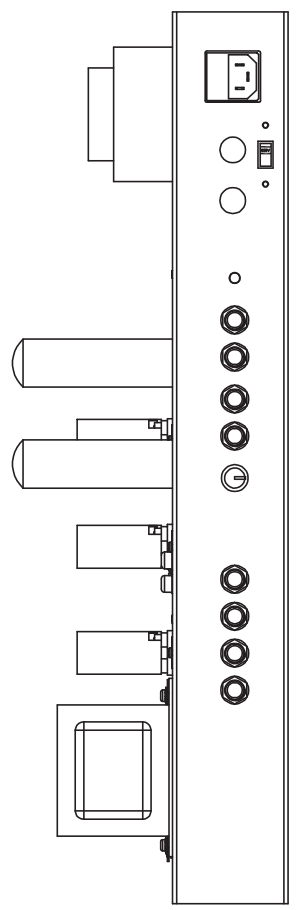








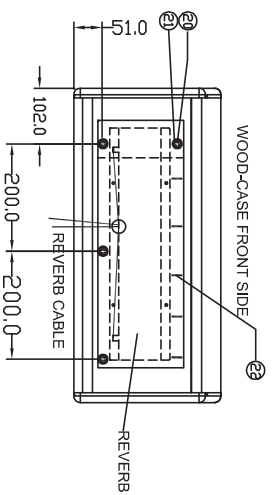
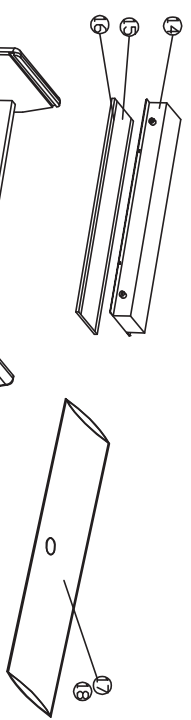
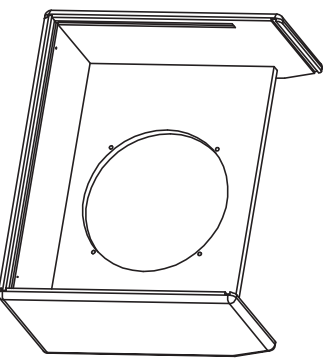
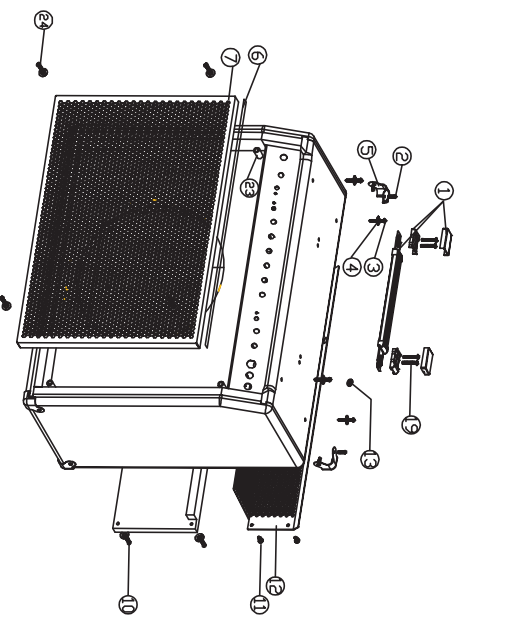




REVISION	DATE	DESIGNER	G. D.	APPROVED	TITLE: CHASSIS ASSEMBLY	PART NO.:
DESCRIPTION	FINAL DATE	CHECKER			PROJECT: FA150	DRAWING NO.:
DATE	ZONE	UNIT: mm	SCALE: 1:1			REV.:

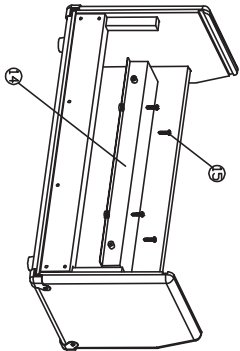
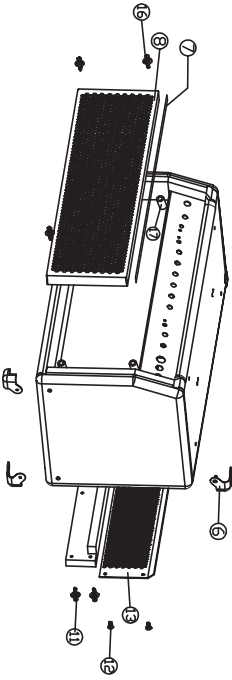
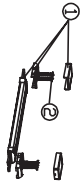
ITEM NO	WI PART NO	DESCRIPTION	Q'TY	REMARK	ITEM NO	WI PART NO	DESCRIPTION	Q'TY	REMARK
1		JACK WASHER	1		1		JACK WASHER	1	
2		JACK NUT	1		2		JACK NUT	1	
3		R/ANOD D18.5*H18	9		3		R/ANOD D18.5*H18	9	
4		M9.0 NUT	10		4		M9.0 NUT	10	
5		D9.*D12 WASHER	10		5		D9.*D12 WASHER	10	
6		POWER LAMP YELLOW D19 R9-71NYELLOW	1		6		POWER LAMP YELLOW D19 R9-71NYELLOW	1	
7		M12 TOOTH NUT	2		7		M12 TOOTH NUT	2	
8		FRONT PANEL 529*70.2*10.8	1		8		FRONT PANEL 529*70.2*10.8	1	
9		CHASSIS PALMER FA150 530*224*68.5 SEC1 T=1.2MM	1		9		CHASSIS PALMER FA150 530*224*68.5 SEC1 T=1.2MM	1	
10		POWER SW 204/27TV IHP 250V ARCOLLECTRIC C39505BAAA	2		10		POWER SW 204/27TV IHP 250V ARCOLLECTRIC C39505BAAA	2	
11		PLATE WASHER D12.5*0D21.5*11.5MM	2		11		PLATE WASHER D12.5*0D21.5*11.5MM	2	
12		SPRING WASHER D16*D19*11.0 NI	1		12		SPRING WASHER D16*D19*11.0 NI	1	
13		M16 HEX NUT	1		13		M16 HEX NUT	1	
14		M12 PLASTIC NUT	2		14		M12 PLASTIC NUT	2	
15		RIBBER WASHER D12*D15*11.5	8		15		RIBBER WASHER D12*D15*11.5	8	
16		AC SOCKET INLET WITH 5*20 RUSE RONG BENG R2004-4.8	1		16		AC SOCKET INLET WITH 5*20 RUSE RONG BENG R2004-4.8	1	
17		FUSE HOLDER 5*20 LITTER RUSE:03455188L	2		17		FUSE HOLDER 5*20 LITTER RUSE:03455188L	2	
18		CLIP BX25	4		18		CLIP BX25	4	
19		M12 PLASTIC NUT	8		19		M12 PLASTIC NUT	8	
20		R/ANOD D16-H14.8 HS KS-1003	1		20		R/ANOD D16-H14.8 HS KS-1003	1	
21		FA150 AMPLIFIER PCB	1		21		FA150 AMPLIFIER PCB	1	
22		SCREW P#6-32*10ANZMTW	7		22		SCREW P#6-32*10ANZMTW	7	
23		SHIELD PLATE SECC T=0.8MM 216.5*75*48.4	1		23		SHIELD PLATE SECC T=0.8MM 216.5*75*48.4	1	
24		SCR PAN HEAD#6-32*6TF WITH TOOTH WASH	3		24		SCR PAN HEAD#6-32*6TF WITH TOOTH WASH	3	
25		FA150 OUTPUT XMR 50M@80HM E176	1		25		FA150 OUTPUT XMR 50M@80HM E176	1	
26		SCREW PH#6-32*14 NI	2		26		SCREW PH#6-32*14 NI	2	
27		PLATE WASHER 10*4.2*1 NI	4		27		PLATE WASHER 10*4.2*1 NI	4	
28		TOOTH WASHER D4.4*D7.9*10.5 ZN	4		28		TOOTH WASHER D4.4*D7.9*10.5 ZN	4	
29		SMAD RUSHING KANG YANG P/N NB-19A	2		29		SMAD RUSHING KANG YANG P/N NB-19A	2	
30		T/P PAN HEADER SCR M3*10 BLACK	1		30		T/P PAN HEADER SCR M3*10 BLACK	1	
31		TUBE RETAINER#1 BELTON	2		31		TUBE RETAINER#1 BELTON	2	
32		TUBE SHIELD FOR 9 PIN TUBE H=46MM 96-46 BROTHER&FRIEND	4		32		TUBE SHIELD FOR 9 PIN TUBE H=46MM 96-46 BROTHER&FRIEND	4	
33		SCREW PH#4-40*6 NI	8		33		SCREW PH#4-40*6 NI	8	
34	070-030FT-50	FA150 XMR 120V/230VAC E196	1		34	070-030FT-50	FA150 XMR 120V/230VAC E196	1	
35	600-10540-51	TOOTH WASHER D5.4*D9.9*10.5 ZN	4		35	600-10540-51	TOOTH WASHER D5.4*D9.9*10.5 ZN	4	
36	600-10460-50	PLATE WASHER D12*D4.6*11	4		36	600-10460-50	PLATE WASHER D12*D4.6*11	4	
37	610-10404-01	NUT 4.0*8*4 M/NUT #8-32TZN	4		37	610-10404-01	NUT 4.0*8*4 M/NUT #8-32TZN	4	
38	573-10002-00	GND LABEL 19*19MM	1		38	573-10002-00	GND LABEL 19*19MM	1	
39	314-01110-00	NYLON WASHER D11*D16*13.2	1		39	314-01110-00	NYLON WASHER D11*D16*13.2	1	
40	610-10356-00	HEX NUT 9#-32T NI	2		40	610-10356-00	HEX NUT 9#-32T NI	2	
41	573-SF AT5-00	PALMER 1060 LABEL 40*20MM OUTPUT TRANSDUCER	1		41	573-SF AT5-00	PALMER 1060 LABEL 40*20MM OUTPUT TRANSDUCER	1	
42	573-SF AT5-02	PALMER 1060 LABEL 40*20MM POWER TRANSDUCER	1		42	573-SF AT5-02	PALMER 1060 LABEL 40*20MM POWER TRANSDUCER	1	
43	566-0005F-50	EVA SIZE: 528*18*10.5MM BLACK	2		43	566-0005F-50	EVA SIZE: 528*18*10.5MM BLACK	2	
44	566-0002F-50	EVA FOAM SIZE: 106*24*12.0MM 94V0	1		44	566-0002F-50	EVA FOAM SIZE: 106*24*12.0MM 94V0	1	
45	210-02005-00	SWITCHACTISV CHANGE AC230V 121-22AI R00A-0HKG-003	1		45	210-02005-00	SWITCHACTISV CHANGE AC230V 121-22AI R00A-0HKG-003	1	
46	590-43010-21	M/E PAN HEAD SCR WITH FLAT AND SPRING WASHER M3*10 BLACK	2		46	590-43010-21	M/E PAN HEAD SCR WITH FLAT AND SPRING WASHER M3*10 BLACK	2	
47	566-0011F-50	EPDM FOAM SIZE: 175*W5&1735MM	2		47	566-0011F-50	EPDM FOAM SIZE: 175*W5&1735MM	2	
48	600-11251-00	EXTERNAL TOOTH WASHER D12.5*21*11.0 NI	2		48	600-11251-00	EXTERNAL TOOTH WASHER D12.5*21*11.0 NI	2	
49	591-23008-10	T/P PAN HEAD SCREW M3.0*8 NI	4		49	591-23008-10	T/P PAN HEAD SCREW M3.0*8 NI	4	
50	615-41120-02	SPACE SUPPORT KANG YANG P/N RRS-12	6		50	615-41120-02	SPACE SUPPORT KANG YANG P/N RRS-12	6	

REVISION	DESCRIPTION	DATE	ZONE	DATE	FINAL DATE	SCALE: 1:1	DESIGNER	G. D.	APPROVED	TITLE: CHASSIS ASSEMBLY	PART NO.	REV.
							CHECKER			PROJECT: FA150	DRAWING NO.	

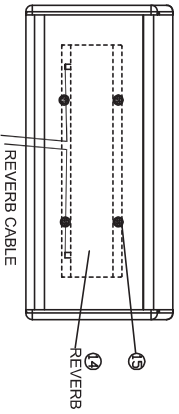


ITEM NO	PART NO	DESCRIPTION	Q'TY	REMARK
1	524-3FT50-00	HANDLE PENNCELCON H1105	1SET	
2	591-63516-19	SCREW T4.5*16*9 NI	12	
3	591-74035-79	SCREW 044*35*9 BLK	4	
4	6122060050	DISH WASHER $\phi 16^{\circ}\phi 6^{\circ}\phi 9.5T$ BLK	14	
5	81212T1910	CORNER : T19-10 NI	6	
6	566-0001F-50	EVA SIZE 505*10*1MM	1	
7	528-11FT5-00	SPRINKER GRILL, SIZE:307.5*344.5*24.5MM	1	
8	5252130250	FEET $\phi 30^{\circ}\phi 25^{\circ}16.8T$ RUBBER	4	
9	591-64022-79	SCREW T44*22*9 BLK	4	
10	591-74030-79	SCREW 044*30*9 BLK	6	
11	592-54014-79	WOOD SCREW B44*14*9 BLK	4	
12	528-12FT5-00	BAR GRILL, SIZE:337*102*122 SRC T-AL 2MM	1	
13	543-21FT5-00	HOLE PLUG KANG YANG CR-3A	1	
14	355-0FT50-00	REVERB ACOUSTIC BELTON 9AB21AB	1	
15	562-13FT5-00	PAPER PLATE SIZE: 425*105 T-6MM B-B	1	
16	8303005000	DOUBLE TAPE 1/2"(40V)	0.024	
17	568-21FT5-00	AIR BAG: SIZE:500*180(OPEN)	1	
18	568-21FT5-01	PRER BAG #41) SIZE 550*200	1	
19	590-74025-19	SCREW C14*25*9 NI	4	
20	592-64016-20	WOOD SCR.TRUSS HEAD M4*16 BLK	4	
21	600-20401-00	PLATE WASHER D4.2*D12*11 BLACK	4	
22	82928T1008	PEG 1008# 5000PCS/BOX BLK	5	
23	615-43205-00	PLASTIC PIPE DG.5.0D11*120.5MM	4	
24	591-74038-78	SCREW 044*38*8 BLK	4	

REVISION	DESCRIPTION	DATE	ZONE	DATE	FINAL DATE	SCALE: 1:1	2D FILE	3D FILE	DESIGNER	CHECKER	APPROVED	TITLE: WOOD CAB ASSY PART NO:	PROJECT: FA150	DRAWING NO:	Page 1 of 2



WOOD CASE FRONT SIDE



ITEM NO	PART NO	DESCRIPTION	Q'TY	REMARK
1	524-3FT50-00	HANDLE PENNCELCOM H1195	4	
2	590-74025-19	SCREEN C04*23*9 NI	4	
3	591-74035-79	SCREEN 0A4*35*9 BLK	4	
4	6122060050	DISH WASH ϕ 16* ϕ 6.5T BLK	14	
5	591-53516-19	SCREEN T43.5*16*9 NI	12	
6	81212TY910	CORNER:TY19-10 NI	6	
7	566-0001F-50	HVA SIZE 505*10*11MM	1	
8	528-11FT5-1H0	FRONT GRILL SIZE:397.5*144.5*21.5MM	1	
9	5252130250	FEET ϕ 30* ϕ 25*16.8T RUBBER	4	
10	591-64022-79	SCREEN T44*22*9 BLK	4	
11	591-74030-79	SCREEN 0A4*30*9 BLK	6	
12	592-54014-79	WOOD SCREEN BA4*14*9 BLK	4	
13	528-12FT5-H0	REAR GRILL SIZE:397.102.2.80CC T-1.2MM	1	
14	355-0FT50-00	REVERB ACOUSTIC BRITON 9A2E2AB	1	
15	592-54020-79	WOOD SCREEN BA4*20*9 BLK	4	
16	591-74038-78	SCREEN 0A4*38*8 BLK	4	
17	615-43205-00	PLASTIC PIPE BLACK SIZE: D6.5*DI1*H20.3MM	4	

REVISION	DESCRIPTION	DATE	ZONE	DATE	FINAL DATE	SCALE: 1:1	2D FILE	3D FILE	DESIGNER	C.G. ID	APPROVED	PROJECT: FAT50H	DRAWING NO.	REV.

Parts List

	Part no.	Specification	Q'ty	Ref. Designator
1	FAT50BS001	Palmer FAT50	1PC	
2	004-01052-00-CS	Resistor 1M0.5W 10% Horizontal UL STATIC DISCHARGE	1PC	
2	058-10480-10	CAP 100nF275V K X2 RADIAL P=15	1PC	
2	058-47380-10	CAP 47nF275V K X2 RADIAL P=10	2PCS	
2	070-060FT-50	FAT50 OUTPUT XMER 50W@8 Ω EI76	1PC	
2	100-00502-00	Extra Bright LED WHITE 5000mcd 5MM	1PC	POWER LED
2	210-02005-00	SWITCH:AC115V CHANGE AC230V L21-22A1 RODA-QHKG-003	1PC	
2	210-05006-00	4P DFSP SW 20A/277V 1HP 250V C3950BBAAA SCI-R13-428	1PC	POWER SW
2	210-05007-00	2P SPST SW 20A/277V 1HP 250V SCI-R13-427A1-01	1PC	STANDBY SW
2	211-00030-00	RCA JACK: RCA-206A_ZHENGWEI	1PC	
2	211-12030-01	AC SOCKET INLET WITH 5*20 FUSE RF2004-4.8	1PC	
2	212-10020-00	2P/WAFER 24AWG Gray 220MM P=2.54 UL1533	1PC	CN105 TO CN106
2	212-10020-01	2P/WAFER 24AWG Gray 190MM P=2.54 2P*1	2PCS	REVERB
2	212-10020-02	2P/WAFER 1007#26 BLK/RED 180MM P=2.0 2P	1PC	POWER LED
2	212-10020-03	2P/WAFER 24AWG Gray 100MM P=2.54 UL1533	1PC	CN101 TO CN102
2	212-10030-01	3P/WAFER UL1007 18AWG 150MM P=3.96 RED/BLUE/BLACK	1PC	CN6 TO CN7
2	212-10040-13	4P/WAFER 24AWG Gray 200MM P=2.54 UL1533	2PCS	CN10 TO CN11, CN12 TO CN13
2	212-10060-12	6P/WAFER UL1007 22AWG 80MM P=2.54	1PC	CN8 TO CN9
2	212-10070-09	7P/WAFER 1007 22AWG BLUE 220MM P=2.54	1PC	CN103 TO CN104
2	262-12000-02	POWER LAMP YELLOW D19MM R9-71N-YELLOW	1PC	
2	280-20050-00	GLASS FUSE:T500mA/250V 5*20MM 5T	1PC	F1
2	280-20500-01	FUSE T5A/250V 5*20 IEC127 SL M215005 LITTELFUSE	1PC	F2
2	284-05020-01	fuse holder 5*20 littelfuse 03455LF8L	2PCS	
2	314-01110-00	NYLON WASHER D11*Ø16*H3.2	1PC	
2	321-10000-00	CABLE TIE 100MM	6PCS	
2	322-01501-03	tube pvc D=1.5MM	60MM	FOR CAP (10MM*6)
2	322-05001-01	Tubing srk D=5MM black	30MM	FOR LED (15MM*2)
2	322-10001-01	Tubing srk D=10MM black	80MM	FOR POWER SW(20*4)
2	322-18000-11	Tubing srk φ 18 black	20MM	for X2 0.1uF CAP
2	322-25030-01	Tubing srk D=25MM black	30MM	
2	322-35001-01	Tubing srk D=35MM black	50MM	FOR POWER SW 1*50MM
2	375-00601-00	650MM RED/WHITE FEMALE RCA JACK D183-002S	1PC	
2	379-10260-00	MULTI WIRE 20#1672 BROWN 260MM STRIP WIRE	1PC	
2	380-10120-01	TER WIRE 1015 20AWG 100MM YEL 250*0.8 2PCS	1PC	J107 TO J110(300V)

	Part no.	Specification	Q'ty	Ref. Designator
2	380-20120-10	TER WIRE 1672 20# 200MM BROWN 187*0.8	1PC	PW-SW TO AC SOCKET-L
2	380-20120-11	TER WIRE 1672 20# 200MM BLUE 187*0.8	1PC	PW-SW TO AC SOCKET-N
2	380-20120-12	TER WIRE 1015 20AWG 200MM RED 250*0.8 2PCS	2PCS	STANDBY TO J1, J2
2	380-25118-04	TER WIRE 1007 18AWG 250MM RED 250*0.8 2PCS	1PC	6.3V+(J105 TO J108)
2	380-25118-05	TER WIRE 1007 18AWG 250MM BLK 250*0.8 2PCS	2PCS	6.3V-(J106 TO J109), J103 TO FUSE HOLDER
2	380-80020-00	TER WIRE 1015#20 YEL/GRN 80MM 187*0.8 + 250*0.8	1PC	
2	510-12FT5-00	FRONT PANEL 529*70.2*T0.8	1PC	
2	540-12FT5-01	R/KNOB D16*H14.8 KS-1003	1PC	
2	540-32FT5-00	R/KNOB D18.5*H18	9PCS	
2	543-11005-00	SNAP BUSHING K. Y. NB-19A	2PCS	
2	550-210FT-51	CHASSIS FAT50 530*224*68.5MM SECC T=1.2MM	1PC	
2	551-610D4-01	TUBE RETAINER BELTON TUBE RETAINER#1	2PCS	
2	551-6200V-50	TUBE SHIELD: FOR 9-PIN TUBE H=46MM 9G-46	4PCS	
2	553-210FT-50	SHIELD PLATE SECC T=0.8MM 216.5*75*48.8	1PC	
2	566-0005F-50	EVA BLACK SIZE:528*18*T0.5MM	2PCS	
2	566-0006F-50	EVA BLACK SIZE:106*18*T2.0MM	1PC	
2	566-0007F-50	EVA SIZE:30*15*20Tmm	2PCS	
2	566-0011F-50	EPDM FOAM SIZE:L75*W5*T3.5MM	2PCS	
2	573-10002-00	GND LABEL 19*19MM	1PC	
2	573-5FAT5-00	PALMER LOGO LABEL 40*20 OUTPUT TRANSFORMER	1PC	
2	573-5FAT5-02	PALMER LOGO LABEL 40*20 120V/230V POWER TRANSFORMER	1PC	
2	590-43010-21	M/E PAN HEAD SCR WITH FLAT AND SPRING WASHER M3*10 BLACK	2PCS	
2	591-23008-10	T/P PAN HEAD SCREW M3.0*8 NI PB 3*8	4PCS	
2	591-43010-20	T/P PAN HEAD. SCR M3*10 BLACK	1PC	
2	593-23006-10	Screw PM#4-40*6NI	8PCS	
2	593-23506-20	Screw PAN HEAD #6-32T*6TF BLACK P6#32T*6AWETOZB	3PCS	
2	593-23510-00	Screw P6 # -32T*10 AWZWTW	7PCS	
2	593-23514-10	Screw PM#6-32*14 NI	2PCS	
2	600-10421-00	Plate washer 10*4.2*1 PW4.2*10*1ZW	4PCS	
2	600-10440-51	tooth washer D4.4*H7.9*T0.5	4PCS	
2	600-10460-50	Plate washer 12*4.6*1 PW4.6*12	4PCS	
2	600-10540-51	tooth washer D5.4*H9.9*T0.5	4PCS	
2	600-11251-00	EXTERNAL TOOTH WASHER D12.5*H21*T1.0 NI	2PCS	FOR STANDBY AND POWER SWITCH
2	610-10356-00	HEX NUT 6#-32T NI	2PCS	
2	610-10404-03	HEX NUT 8#-32 NI	4PCS	
2	610-11253-00	PLATE WASHER ID12.5*OD21.5 T1.0 NI	2PCS	
2	615-41120-02	SPACE SUPPORT K. Y. RBS-12	6PCS	
2	634-11001-00	CLIP	4PCS	

	Part no.	Specification	Q'ty	Ref. Designator
2	FAT50C001	FAT50 PRE BOARD PCBA	1PC	
3	MIFAT50C001	FAT50 PRE BOARD MI	1PC	
4	005-01004-13	MOF.RES 10 Ω 2WS 5% BREDE HORT	2PCS	R100, 204
4	005-01073-10	MOF.RES 1 Ω 1W 5% BREDE HORIZ	1PC	R201
4	005-01572-10	MOF.RES 1.5 Ω 1/2W J BREDE HOR	2PCS	R202, 203
4	020-02532-00	SF/VR:B25K 5*10MM PT-105S	1PC	TR1
4	022-01052-07	ROT/VR 11MM 1MB +-20% L15F7	1PC	VR9
		IDL R11130N-15FA-1MB		
		ALPHA RV110F-20E1-15A-1MB		
4	022-02032-06	ROT/VR 11MM 20KB +-20% L15F7	2PCS	VR4, 6
		IDL R11130N-15FA-20KB		
		ALPHA RV110F-20E1-15A-20KB		
4	022-02542-12	ROT/VR 11MM 250KA +-20% L15F7	5PCS	VR1, 2, 5, 7, 8
		IDL R11130N-15FA-250KA		
		ALPHA RV110F-20E1-15A-250KA		
4	022-02542-13	ROT/VR 11MM 250KB +-20% L15F7	1PC	VR3
		IDL R11130N-15FA-250KB		
		ALPHA RV110F-20E1-15A-250KB		
4	030-47540-20	E/C 4.7uF50V 5*11 M P=2.0 85 °C VERTICAL BULK JAMICON	1PC	CE15
4	032-10540-20	E/C NP 1uF50V 5*11 M 85 °C P=2MM VERTICAL BULK	1PC	CE6
4	032-22640-20	E/C NP 22uF/50V 8*12 M P=3.5	3PCS	CE1, 2, 7
4	034-10540-20	E/C 1uF 50V M 105 °C P=2.0 5*11 VERTICAL BULK	9PCS	CE14, 16-19, 23, 28, CE104, 105
4	034-10650-20	E/C 10uF63V M 105 °C 6.3*12MM P=2.5 VERTICAL BULK	2PCS	CE4, 13
4	034-10680-20	E/C 10uF 450V M 105 °C P=5MM 12.5*21 TKR100M2W121M_JAMICON	1PC	CE3
4	034-10720-20	E/C 100uF/25V 6.5*11 M 105 °C P=2.5MM TKR101M1EE11M_JAMICON	4PCS	CE22, 25-27
4	034-10750-20	E/C 100uF63V M 105 °C 8*12MM P=3.0 VERTICAL BULK	1PC	CE11
4	034-22640-20	E/C 22uF/50V 6.5*11 M 105 °C P=2.5MM VERTICAL BULK	1PC	CE5
4	034-47640-20	E/C 47uF35V M 105 °C 5*11 P=2.0 VERTICAL BULK	1PC	CE24
4	034-47740-20	E/C 470uF50V M 105 °C 10*20MM P=5.0 VERTICAL BULK	1PC	CE12
4	034-47820-20	E/C 4700uF25V M 105 °C 16*32MM P=7.5MM	1PC	CE33
4	042-101C1-10	C/C 100PF1KV K P=5MM Y5P DISC CC-101K-1KV-P5-Y5P	1PC	C34
4	042-221C1-10	CAP CER DISC 220PF 1KV 10% CC4 Y5F P=5MM	3PCS	C8, 30, 32
4	042-471C1-10	CER CAP DISK 470pF1KV K P=5MM	1PC	C7
4	042-681C1-10	CER CAP DISK 680pF1KV K P=5MM	1PC	C5
4	048-102A0-10	FKP/C 1.0nF400V K P=5MM BOX POLYPROPYLENE WIMA FKP2	1PC	C3
4	048-102D0-10	MKP/C 1nF630V K P=7.5MM BOX POLYPROPYLENE WIMA MKP10	1PC	C18
4	048-104D0-13	MKP/C 100nF600V K P=22.5MM BOX POLYPROPYLENE SP 715P10496LD3	1PC	C16
4	048-152A0-10	FKP/C 1.5nF400V K P=5MM BOX POLYPROPYLENE WIMA FKP2	1PC	C10
4	048-223D0-13	MKP/C 22nF600V K P=15MM BOX POLYPROPYLENE SP 715P22396KD3	1PC	C14
4	048-472A0-13	FKP/C 4.7nF400V K P=5MM BOX POLYPROPYLENE SP 715P47294JD3	1PC	C2
		TAD V-MC4 4.7nF630V		
4	048-473A0-10	MKP/C 47nF400V K P=15MM BOX POLYPROPYLENE WIMA MKP10	4PCS	C6, 13, 15, 17
4	048-473A0-13	MKP/C 47nF400V K P=15MM BOX POLYPROPYLENE SP 715P47394LD3	3PCS	C1, 25, 28

	Part no.	Specification	Q'ty	Ref. Designator
4	050-10370-00	M. F. C CL21X 0. 01uF 100V J P=5MM MER-X 103J 100V	2PCS	C19, 22
4	050-10451-13	FILM CAP CL21 0. 1uF 63V ± 10% P=5 JINGHAO OCL21X-R1J104KF050	5PCS	C20, 21, 23, 29, 31
4	050-22270-00	M. F. C CL21X 0. 0022uF 100V J P=5MM MER-X 222J 100V	1PC	C9
4	050-22351-10	M. F. C CL21X 0. 022uF63V J P=5MM	1PC	C33
4	050-47351-10	M. F. C CL21X 0. 047uF63V J P=5MM	1PC	C35
4	052-50190-10	CAP Silver Mica 500pF500V 10% Sprague OR Aerovox	2PCS	C4, 12
4	076-24010-00	RELAY 24VDC 1A DPDT 20*10*11.6 SANYOU DSY2Y-S-224L 24VDC	6PCS	RL1-6
4	100-02321-00	LED-3MM RED Φ 3QSRD4	1PC	LED1
4	100-04341-01	LED-3MM YELLOW/HIGH Φ 3QUYD4	1PC	LED2
4	100-05351-02	LED-3MM GREEN/HIGH Φ 3QGD4-02	1PC	LED5
4	120-C5471-00	TRANSISTOR BC547B T092 BREDE	4PCS	Q2-5
4	122-J1751-00	MOS J175 30vds3Vgs 125 Ω Fair	1PC	Q1
4	160-00713-00	IC TL071IP DIP8 ST -40 TO 85 °C	1PC	U3
4	160-08203-00	IC TBA820M DIP8	1PC	U2
4	160-78240-00	IC MC7824BTG 24V T0-220 ON -40°C TO +125°C	1PC	U1
4	210-05005-00	SW SP JS-552 ON-ON	3PCS	SW1, 2, 4
4	211-01630-21	T/S JACK HORIZ CHROME_NUT LIH- SHENG LJB0664H-4SS	1PC	JK1
4	211-10020-00	HEADER-2P P=2. 54 LOCK VERTICSL LEOCO 2531P02V000	5PCS	CN1, 2, 101, 102, 106
4	211-10020-11	HEADER-2 P=2. 0/180 BOX WHITE LEOCO 2011P02V000	1PC	CN14
4	211-10040-01	HEADER-4 P=3. 96 VERTICAL LOCK LEOCO 3941P04V000	1PC	CN3
4	211-10040-04	HEADER-4 P=2. 54 VERTICAL LOCK LEOCO 2531P04V000	2PCS	CN11, 13
4	211-10060-02	HEADER-6 P=2. 54 VERTICAL LOCK LEOCO 2531P06V000	1PC	CN9
4	211-10070-02	HEADER-7 P=2. 54 VERTICAL LOCK LEOCO 2531P07V000	3PCS	CN104, JP2B, 3B
4	211-10080-01	HEADER-8 P=2. 54 VERTICAL LOCK LEOCO 2531P08V000	1PC	JP1B
4	211-11008-00	8PIN IC SOCKET DIP8 2. 54MM	2PCS	U2, U3
4	211-13090-03	TUBE SOCKET GZC9-B (PCB) ATTACHTO 12AX7WA	4PCS	V1-4
4	212-10070-01	7P/WAFER 24AWG UL2651 80MM P=2. 54MM RIBBON CABLE	2PCS	JP2A, JP3A
4	212-10080-05	8P/WAFER 24AWG UL2651 80MM P=2. 54MM RIBBON CABLE	1PC	JP1A
4	380-12118-12	TER WIRE 18AWG1015 120MM BLACK 250*0. 8MM*1	2PCS	SW_G, G2
4	526-11ART-00	HEATSINK SIZE:W25. 4*W13*H35 AL T1. 2 BLK	1PC	FOR U1
4	593-23008-30	M/E PAN HEAD SCR #4-40*8AWZW	1PC	FOR U1
4	610-10304-00	NUT 3. 0*4 K/NUT4#-40TZW	1PC	FOR U1
4	615-43069-00	1/4"PLASTIC SPACER K. Y. CHS-7	6PCS	FOR R201, 202, 203
4	615-44000-01	LED-3MM HOUSING K. Y. LED-301	3PCS	FOR LED
4	618-00250-02	TERMINAL 250 K. Y. PCRS250 VERT	4PCS	J108-111
4	710-00000-02	SILCONE 737RTV SIL-MORE MOMENTIVE TSE3854DS	5g	
4	710-M1800-00	Glue M180	5g	
4	ATFAT50C001	FAT50 PRE BOARD AI	1PC	
5	000-01011-10	CF. RES 100 Ω 1/4W 5% BREDE HOR	3PCS	R75, 80, 205
5	000-01021-10	CF. RES 1K 1/4W 5% BREDE HORIZ	2PCS	R2, 33
5	000-01031-10	CF. RES 10K 1/4W 5% BREDE HORIZ	12PCS	R4, 45, 77, 79, 81, 84, R91, 92, 93, 95, 207, 208

	Part no.	Specification	Q'ty	Ref. Designator	
	5	000-01032-10	CF.RES 10K 1/2W 5% BREDE HORIZ	1PC	R25
	5	000-01041-10	CF.RES 100K 1/4W 5% BREDE HORI	11PCS	R26, 27, 39, 42, 44, 76, R78, 86, 94, 96, 206
	5	000-01051-10	CF.RES 1M 1/4W 5% BREDE HORIZ	3PCS	R1, 21, 83
	5	000-01071-10	CF.RES 1 Ω 1/4W 5% BREDE HORIZ	1PC	R88
	5	000-01211-10	CF.RES 120 Ω 1/4W 5%BREDE HOR	1PC	R90
	5	000-01521-10	CF.RES 1.5K 1/4W 5% BREDE HORI	4PCS	R11, 23, 36, 49
	5	000-01541-10	CF.RES 150K 1/4W 5% BREDE HORI	1PC	R51
	5	000-02221-10	CF.RES 2.2K 1/4W 5% BREDE HORI	1PC	R98
	5	000-02222-10	CF.RES 2.2K 1/2W 5% BREDE HORI	1PC	R5
	5	000-02231-10	CF.RES 22K 1/4W 5% BREDE HORIZ	5PCS	R8, 46, 48, 74, 82
	5	000-02241-10	CF.RES 220K 1/4W 5% BREDE HORI	8PCS	R6, 17, 20, 29, 32, 41, R43, 54
	5	000-02251-10	CF.RES 2.2M 1/4W 5% BREDE HORI	3PCS	R7, 14, 34
	5	000-02741-10	CF.RES 270K 1/4W 5% BREDE HORI	1PC	R18
	5	000-03321-10	CF.RES 3.3K 1/4W 5% BREDE HORI	2PCS	R15, 50
	5	000-03341-10	CF.RES 330K 1/4W 5% BREDE HORI	6PCS	R19, 30, 57-59, 99
	5	000-04711-10	CF.RES 470 Ω 1/4W 5% BREDE HOR	1PC	R47
	5	000-04721-10	CF.RES 4.7K 1/4W 5% BREDE HORI	1PC	R97
	5	000-04731-10	CF.RES 47K 1/4W 5% BREDE HORIZ	3PCS	R9, 10, 87
	5	000-04741-10	CF.RES 470K 1/4W 5% BREDE HORI	2PCS	R13, 22
	5	000-05601-10	CF.RES 56 Ω 1/4W 5% BREDE HOR	1PC	R89
	5	000-05621-10	CF.RES 5.6K 1/4W 5% BREDE HOR	1PC	R73
	5	000-05631-10	CF.RES 56K 1/4W 5% BREDE HOR	1PC	R52
	5	000-06831-10	CF.RES 68K 1/4W 5% BREDE HORIZ	1PC	R28
	5	005-01043-10	MOF: RES MO 1WS 5% 100K OHM	6PCS	R3, 12, 24, 37, 38, 56
	5	005-03343-13	MOF.RES 330K 1WS 5% HORZ BREDE	1PC	R16
	5	005-04723-13	MOF.RES 4.7K 1WS 5% HORZ BREDE	1PC	R40
	5	005-08233-13	MOF.RES 82K 1WS 5% HORZ BREDE	1PC	R55
	5	090-00031-00	DIODE 1N4007 BREDE HORIZ	9PCS	D1-3, D7-12
	5	090-02021-00	DIODE 1N914 .5W D0-35 PKG	12PCS	D13-24
	5	P00-PLFT5-00	FAT50 PRE PCB FR4 20Z DUAL 370*118*1.6 20Z REV D00	1PC	PCBA
2		FAT50C002	FAT50 PWRAMP BOARD PCBA	1PC	
3		MIFAT50C002	FAT50 PWRAMP BOARD MI	1PC	
4		002-04716-01	WIR.RES 470 Ω 5W 5% BULK HORZ MINI WIRE WOUND	1PC	R70
4		005-03344-10	MOF.RES 330K 2W 5% HORIZ BREDE	1PC	R69
4		005-04714-10	MOF.RES 470 Ω 2W 5% BREDE HORI	2PCS	R65, 68
4		034-10790-20	E/C 100uF 500V M 105 °C P=10MM 25*35MM HSW101M2H035M_JAMICON	1PC	CE8
4		034-226B0-20	E/C 22uF450V M 105 °C 16*22MM P=7.5MM	1PC	CE10
4		034-47690-20	E/C 47uF500V M 105 °C AL 16*32 P=7.5MM	1PC	CE9
4		034-47820-20	E/C 4700uF25V M 105 °C 16*32MM P=7.5MM	3PCS	CE101, 102, 103
4		090-BL410-00	BRIDGE DIODE KBL410 4A1KV	2PCS	BD1, BD2
4		090-Z5C12-12	ZN DIODE BZX85C-12V	4PCS	ZD1-4
4		211-10030-03	Pocket Straight Header-3 P2.54 VERTICAL Leoco 2550P03VU00	1PC	CN201
4		211-10030-08	HEADER-3 P=3.96 VERTICAL LOCK LEOCO 3941P03V000	1PC	CN6
4		211-10040-04	HEADER-4 P=2.54 VERTICAL LOCK LEOCO 2531P04V000	1PC	CN10
4		211-10060-02	HEADER-6 P=2.54 VERTICAL LOCK LEOCO 2531P06V000	1PC	CN8
4		211-10030-03	Pocket Straight Header-3 P2.54 VERTICAL Leoco 2550P03VU00	1PC	CN201
4		211-10030-08	HEADER-3 P=3.96 VERTICAL LOCK LEOCO 3941P03V000	1PC	CN6
4		211-10040-04	HEADER-4 P=2.54 VERTICAL LOCK LEOCO 2531P04V000	1PC	CN10
4		211-10060-02	HEADER-6 P=2.54 VERTICAL LOCK LEOCO 2531P06V000	1PC	CN8

	Part no.	Specification	Qty	Ref. Designator
	4	211-13080-01	CERAMIC SOCKET:GZC8-YPIN SHANGHAI B&F	2PCS V5, V6
	4	301-20820-00	Zinc Oxide Varistor 20MM 82V TVR20820KSY S20K50 P=10MM	2PCS VDR1, VDR2
	4	380-10118-07	TER WIRE 18AWG 1015 RED 100MM 250 tem*1	2PCS F1-1, F1-2
	4	618-00250-02	TERMINAL 250 K. Y. PCRS250 VERT	16PCS J1-6, 8, 9, 12, 101-107
	4	710-00000-02	SILCONE 737RTV SIL-MORE MOMENTIVE TSE3854DS	3g
	4	710-M1800-00	Glue M180	3g
	4	AIFAT50C002	FAT50 PWRAMP BOARD AI	1PC
	5	000-02221-10	CF. RES 2.2K 1/4W 5% BREDE HORI	2PCS R61, 64
	5	005-02223-13	MOF. RES 2.2K 1WS 5% HORZ BREDE	2PCS R71, 72
	5	005-04783-13	MOF. RES 0.47Ω 1Ws J BREDE HORI	2PCS R201, 202
	5	P00-PLFT5-01	FAT50 PWAMP PCB FR4 20Z DUAL 182*75*1.6 REV D00	1PC PCBA
2		FAT50C003	FAT50 JACK (OUTPUT) BOARD PCBA	1PC
3		MIFAT50C003	FAT50 JACK (OUTPUT) BOARD MI	1PC
	4	022-02542-14	ROT/VR 9MM 250KB 20% L=15MM ALPHA RV09BF-20-15K-250KB	1PC VR12
	4	023-05032-04	DUAL ROT/VR 14MM 50KB*2 L=15MM IDL R14130N-15FA-50KB ALPHA RV142F-20E1-15A-50KB	1PC VR11
	4	211-01630-14	6.4 Φ PHONE JACK T/S 39-116-01 LJB0661H-21-4SS LIH SHENG	6PCS JK2-7
	4	211-01630-15	6.4 Φ PHONE JK T/R/S 39-117-01 LJB0661H-21-6 LIH SHENG	2PCS JK8, 9
	4	211-10020-00	HEADER-2P P=2.54 LOCK Vertical LEOCO 2531P02V000	1PC CN105
	4	211-10030-08	HEADER-3 P=3.96 VERTICAL LOCK LEOCO 3941P03V000	1PC CN7
	4	211-10040-04	HEADER-4 P=2.54 VERTICAL LOCK LEOCO 2531P04V000	1PC CN12
	4	211-10070-02	HEADER-7 P=2.54 VERTICAL LOCK LEOCO 2531P07V000	1PC CN103
	4	AIFAT50C003	FAT50 JACK (OUTPUT) BOARD AI	1PC
	5	000-01031-10	CF. RES 10K 1/4W 5% BREDE HORIZ	3PCS R31, 35, 60
	5	P00-PLFT5-02	FAT50 JACK PCB FR4 20Z DUAL 250*36*1.6 REV B00	1PC PCBA
1		FAT50BT002	Palmer FAT50	1PC
2		070-031FT-50	FAT50 X' MER 115/230Vac E196	1PC
2		280-20160-03	FUSE T1.6AL SLOW 5*20 GLASS VDE/CCC/UL HOLLYLAND 50T-016H	1PC

... END ...