

Service Manual

Model: MIX100

TAPCO
REV.2

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1.Specification

Technical Specifications

Mono input channels

Microphone input	electronically balanced, discrete input configuration
Frequency response	10Hz to 55kHz, +/-3dB
Distortion (THD&N)	0.005% at +4dBu, 1kHz

Gain range	0dB to 50dB(MIC),
SNR (Signal Noise Rated)	100dB

Line input	electronically balanced
Frequency response	10Hz to 55kHz, +/-3dB
Distortion (THD&N)	0.005% at +4dBu, 1kHz
Sensitivity range	+10dBu to -40dBu

Stereo input channels

Line input	unbalanced
Frequency response	10Hz to 55kHz, +/-3dB
Distortion (THD&N)	0.005% at +4dBu, 1kHz

Impedances

Microphone input	3.6Kohm.
All other inputs	10Kohm or greater.
Tape out	1Kohm.
All other output	120ohm.

Equalization

Hi shelving	+/-15dB @12kHz
Mid shelving	+/-15dB @2.5kHz
Low shelving	+/-15dB @80Hz

Main Mix Section

Noise (Bus noise)	Fader 0dB, all input channels assigned and set to UNITY gain:-90dBr(ref.:+4dBu)
Max output	+22dBu unbalanced, 1/4" jacks
AUX Sends max out	+22dBu

Power supply(AC/AC Adaptor)

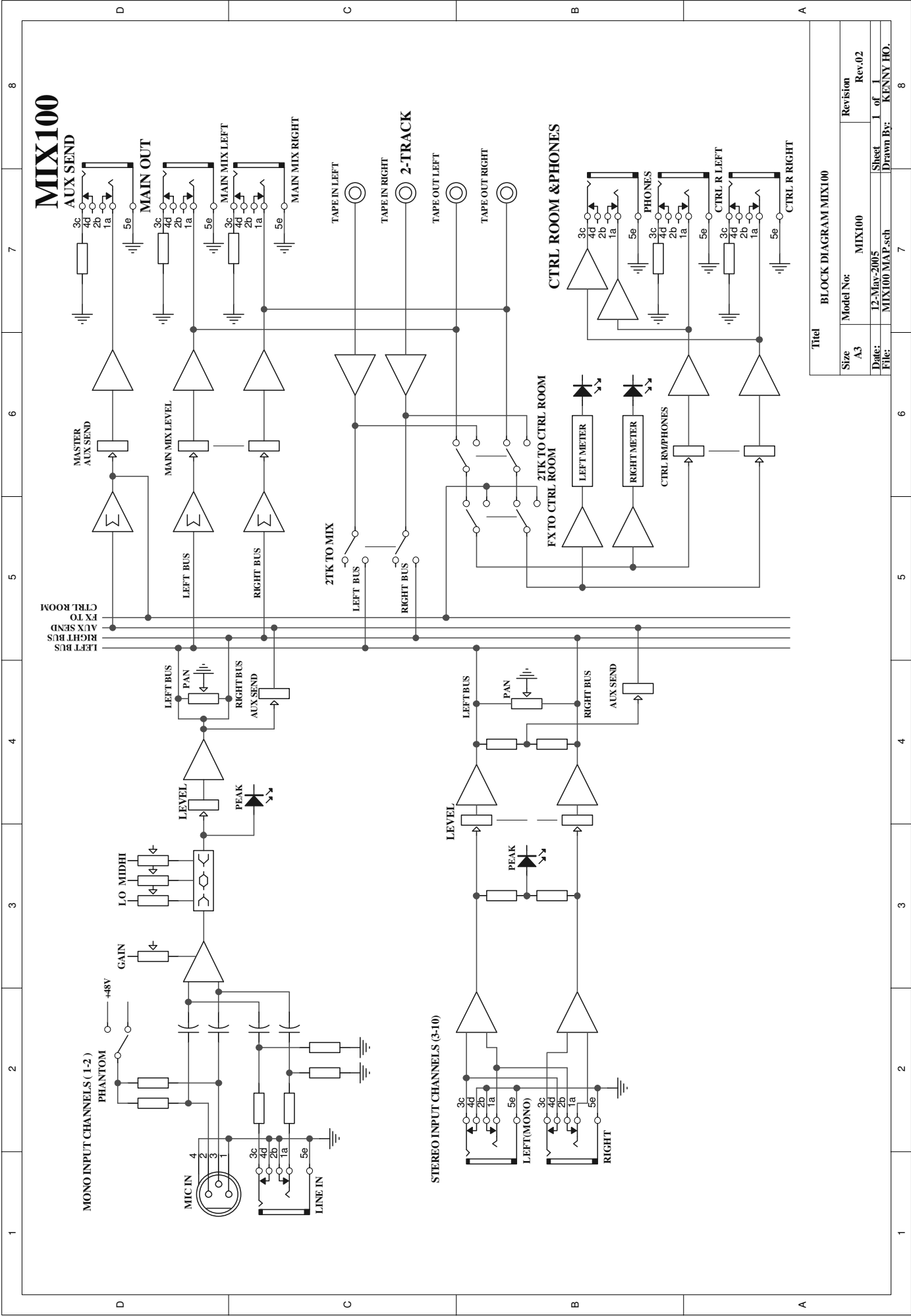
Main voltage	USA/Canada 100-120V~, 60Hz
	Europe 210-230V~, 50Hz
	U.K./Australia 240V~, 50Hz

Power Consumption	11.2watts
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Physical

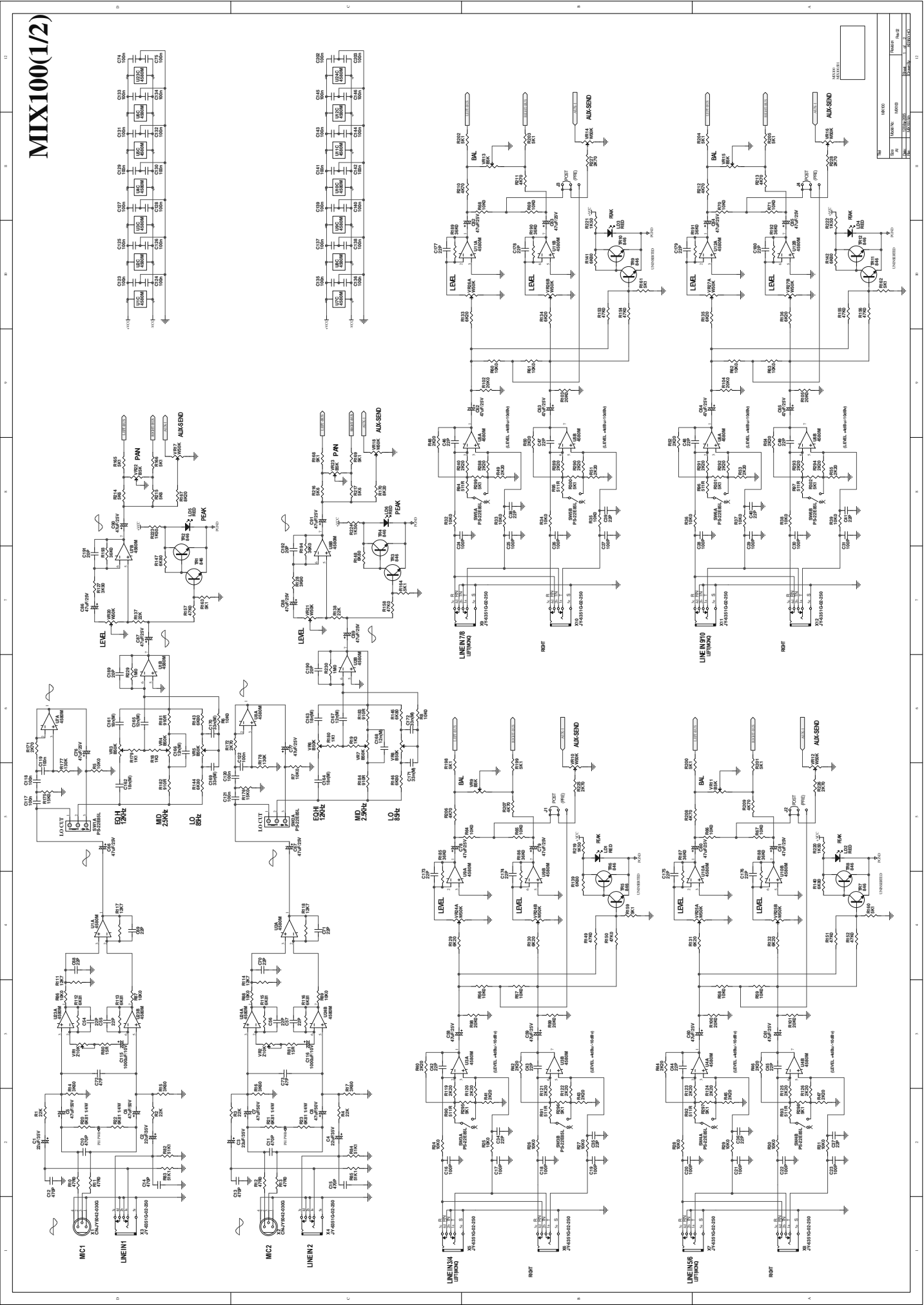
Dimension (W*D*H)	259mmX219mmX50/48mm(10.20"X8.62"X1.97"/1.89")
Net weight	1.40Kg (3.08lb)
Shipping weight	2.05Kg (4.51lb)

2.Block Diagram

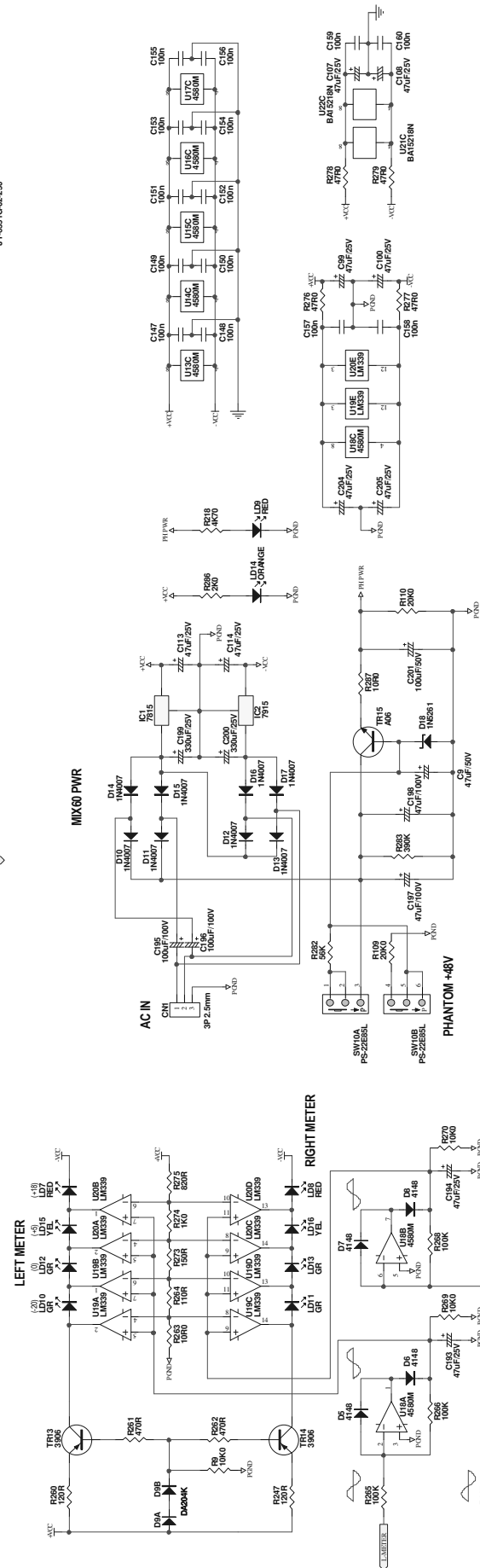
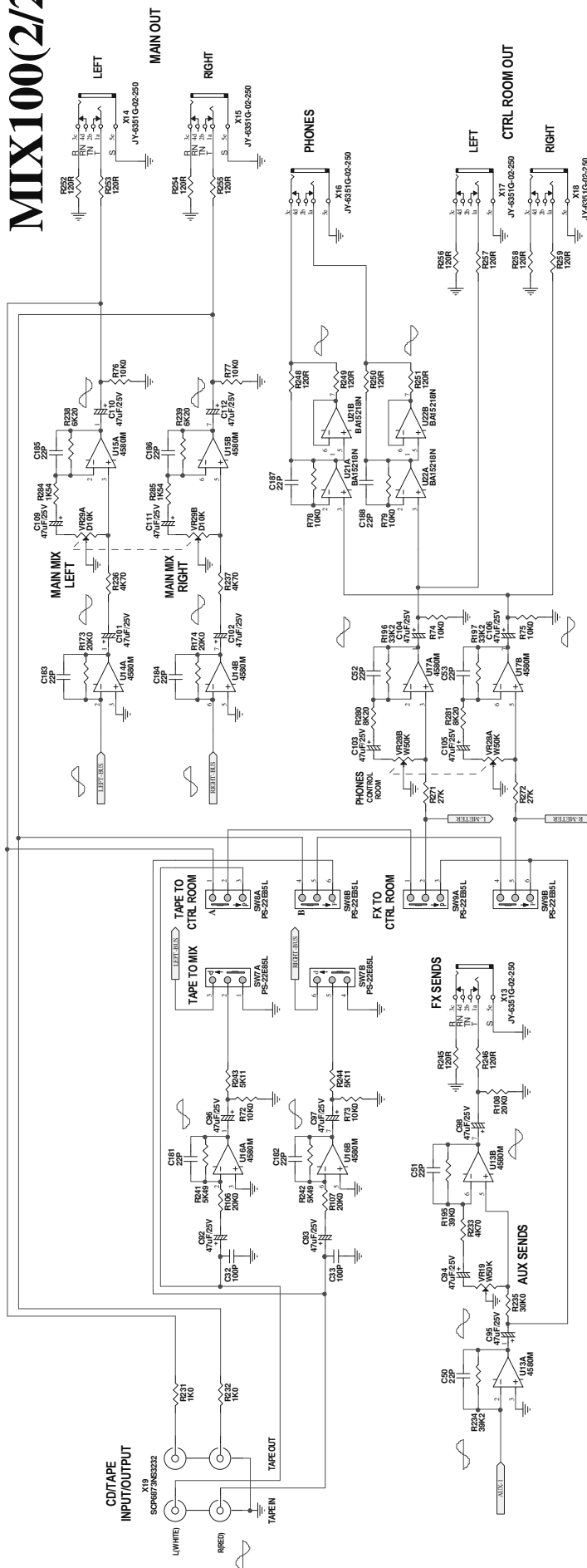


Title			
BLOCK DIAGRAM MIX100			
Size	Model No	Revision	
A3	MIX100	Rev.02	
Date:	12-May-2005	Sheet	1 of 1
File:	MIX100 MAP.sch	Drawn By:	KENNY HO.

3.Schematic Diagram

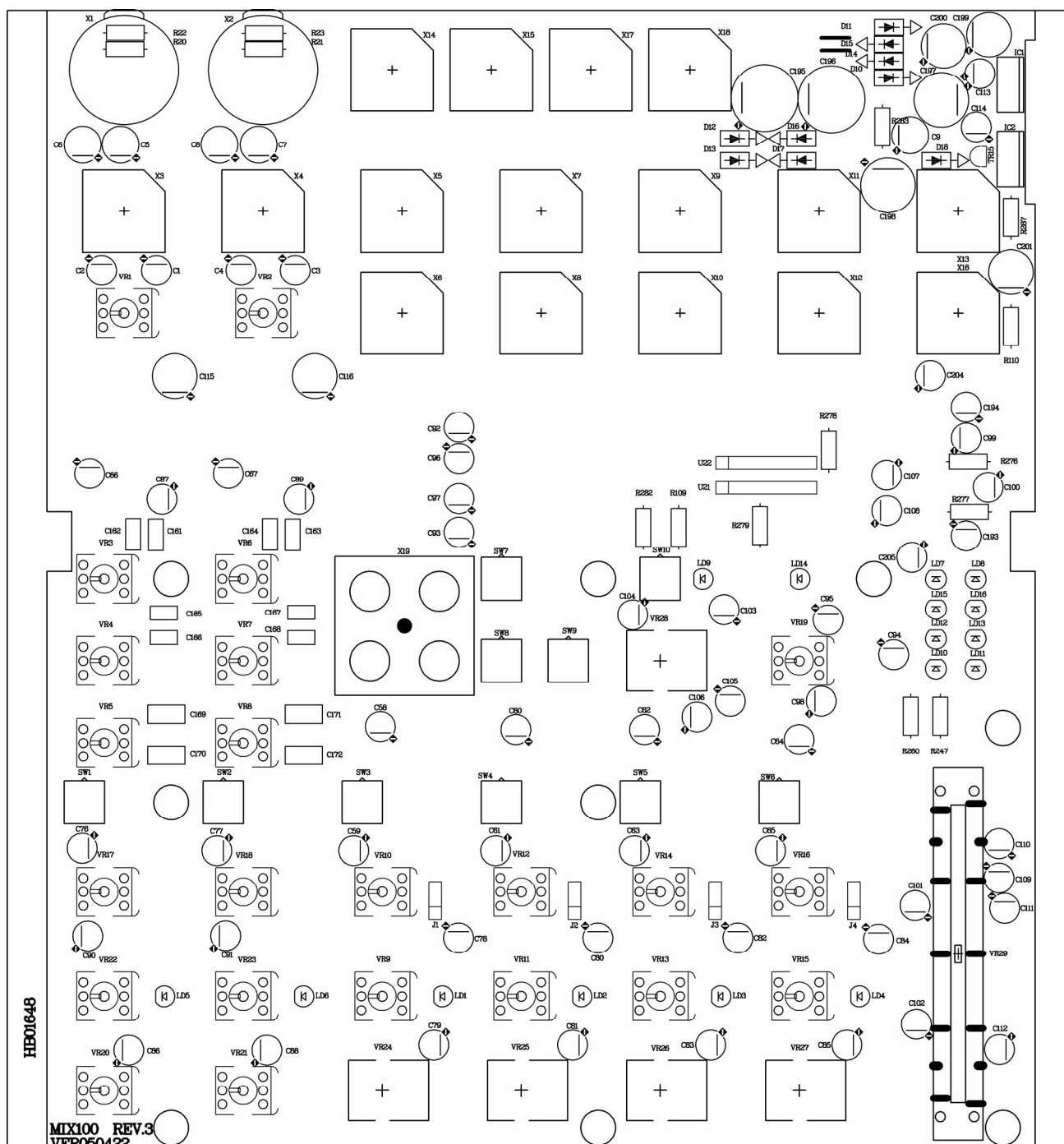


MIX100(2/2)

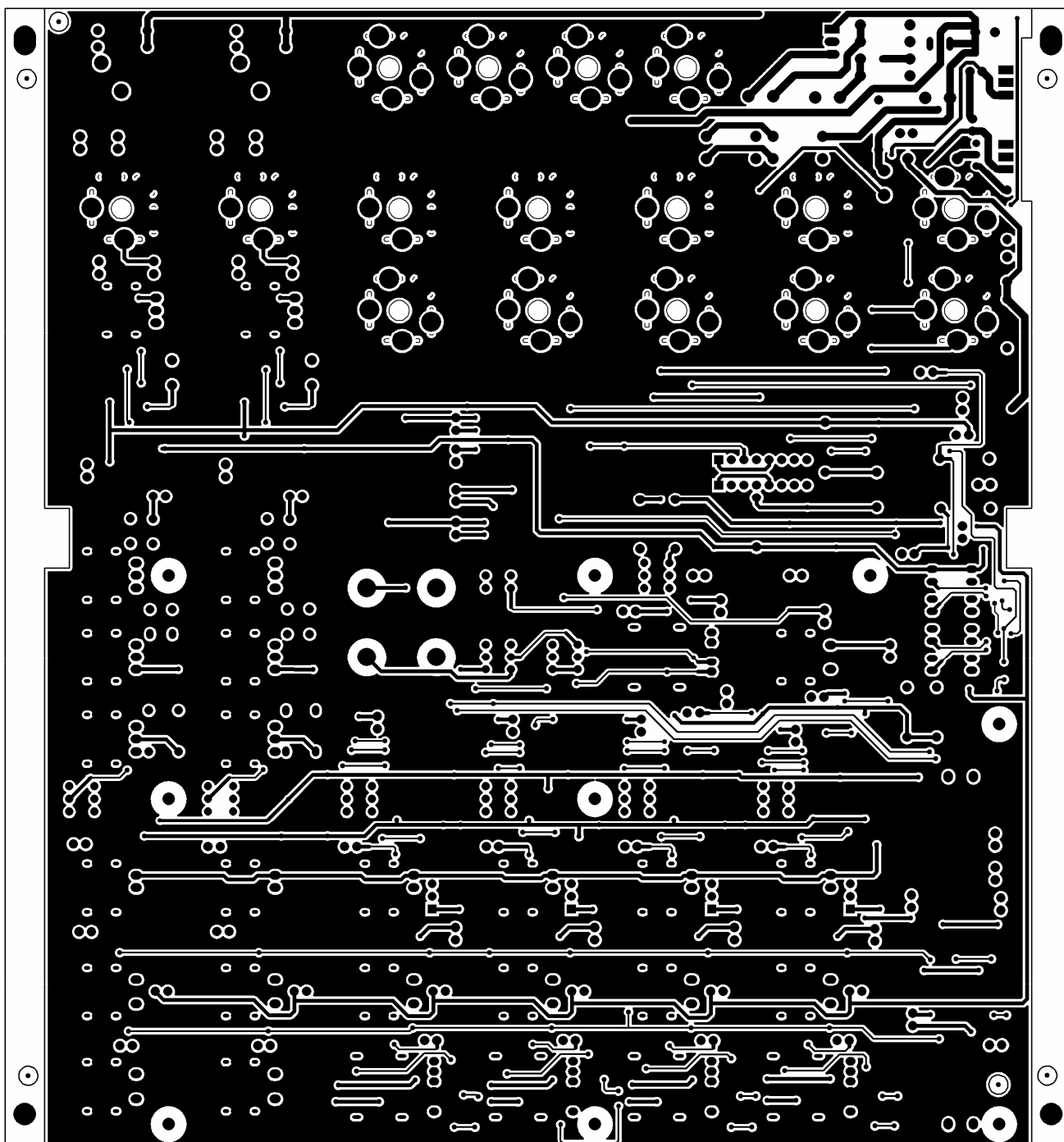


Total	MX100	
Size A2	Model No:	Revision
Date: 12-May-2005		Rev:02
File: MX100-SP1	Sheet 2 of 2	Drawn By: RENNY HO

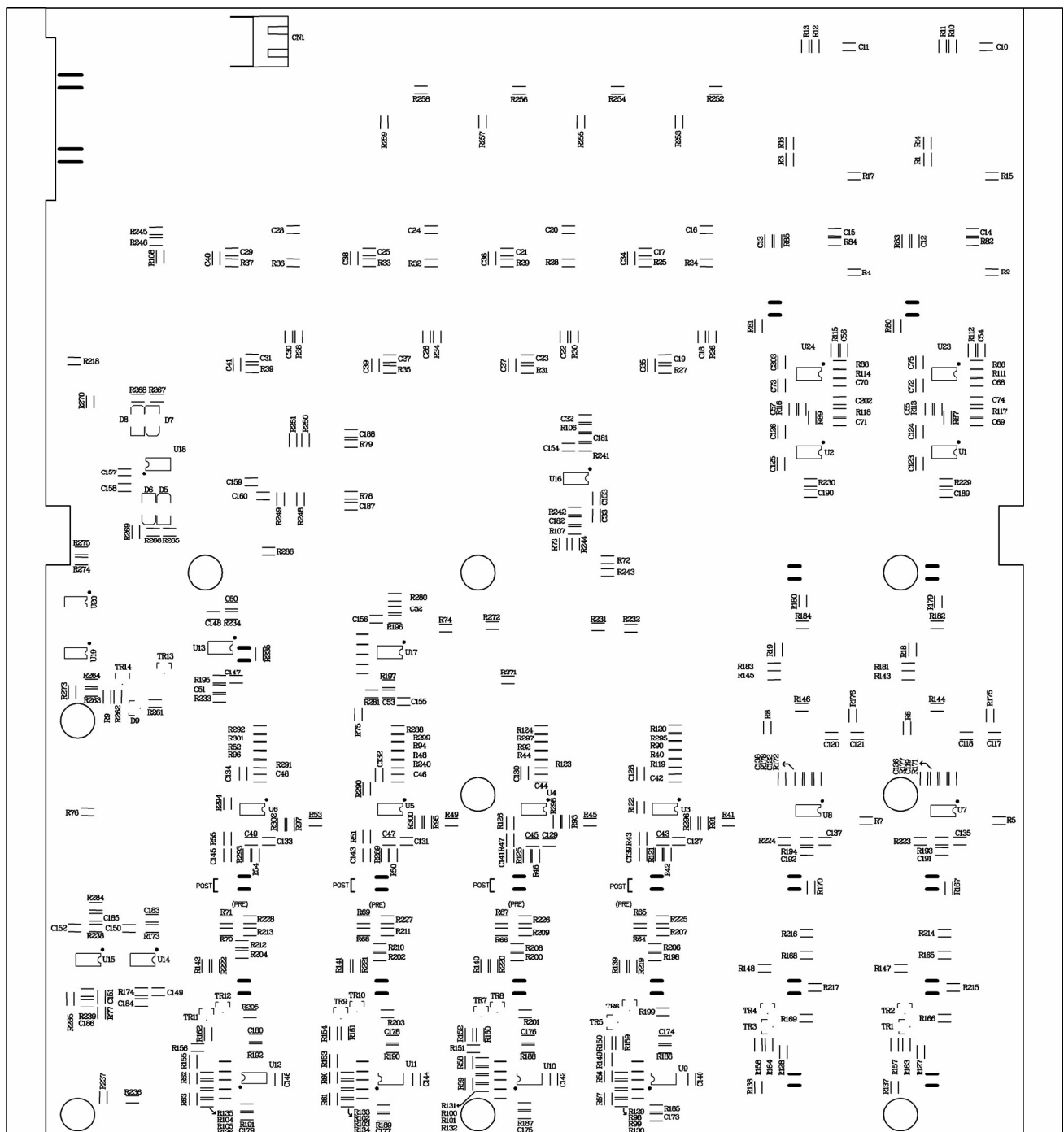
4. Printed Circuit Board

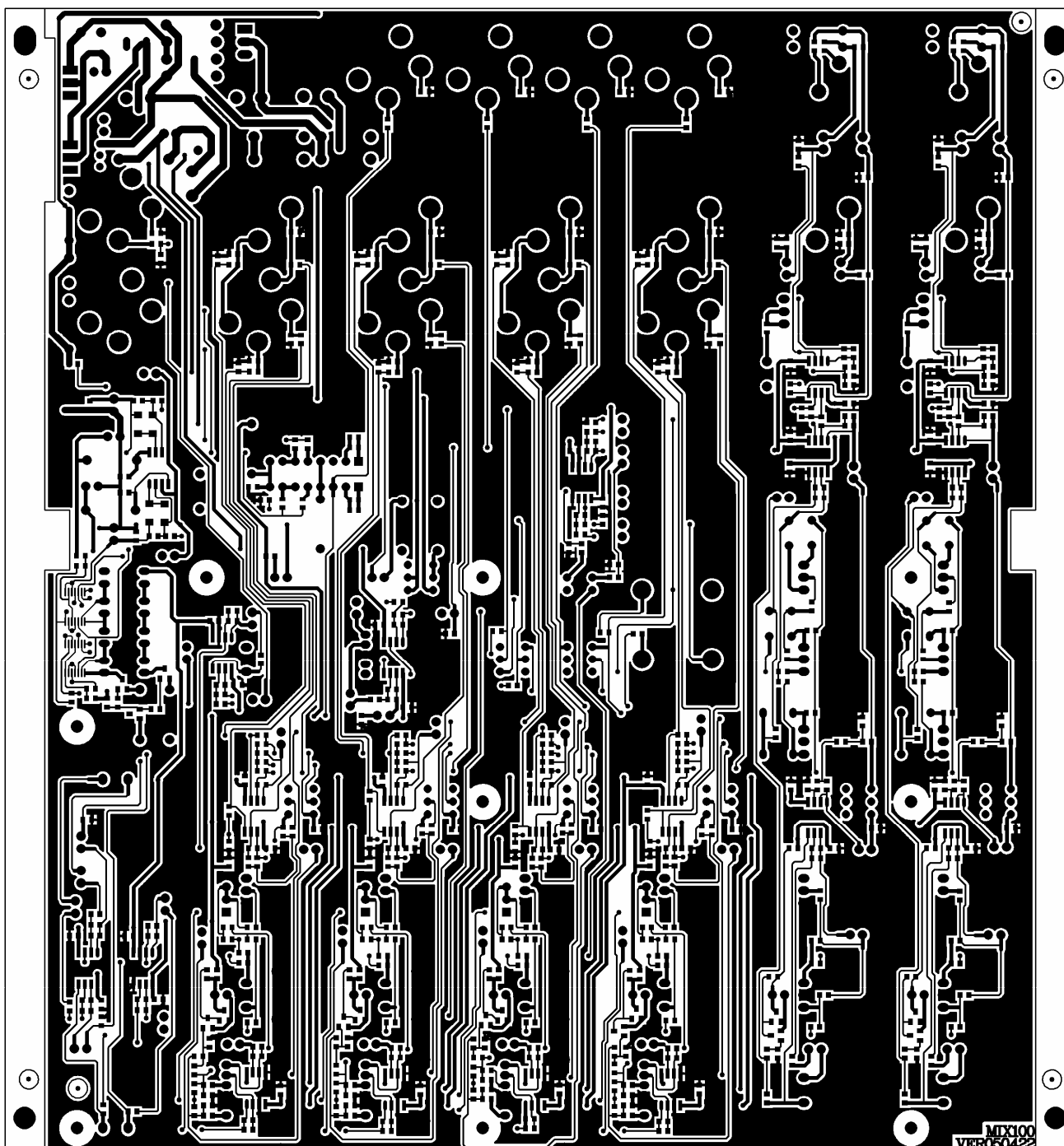


PCB : MIX100 Top Overlay

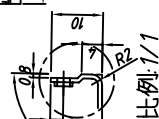


PCB : MIX100 Top Layer





PCB : MIX100 Bottom Layer



2. 噴漆色號為CS0056 Gray Metallic Paint

B料號: MA00058

ZC料號:MA00949

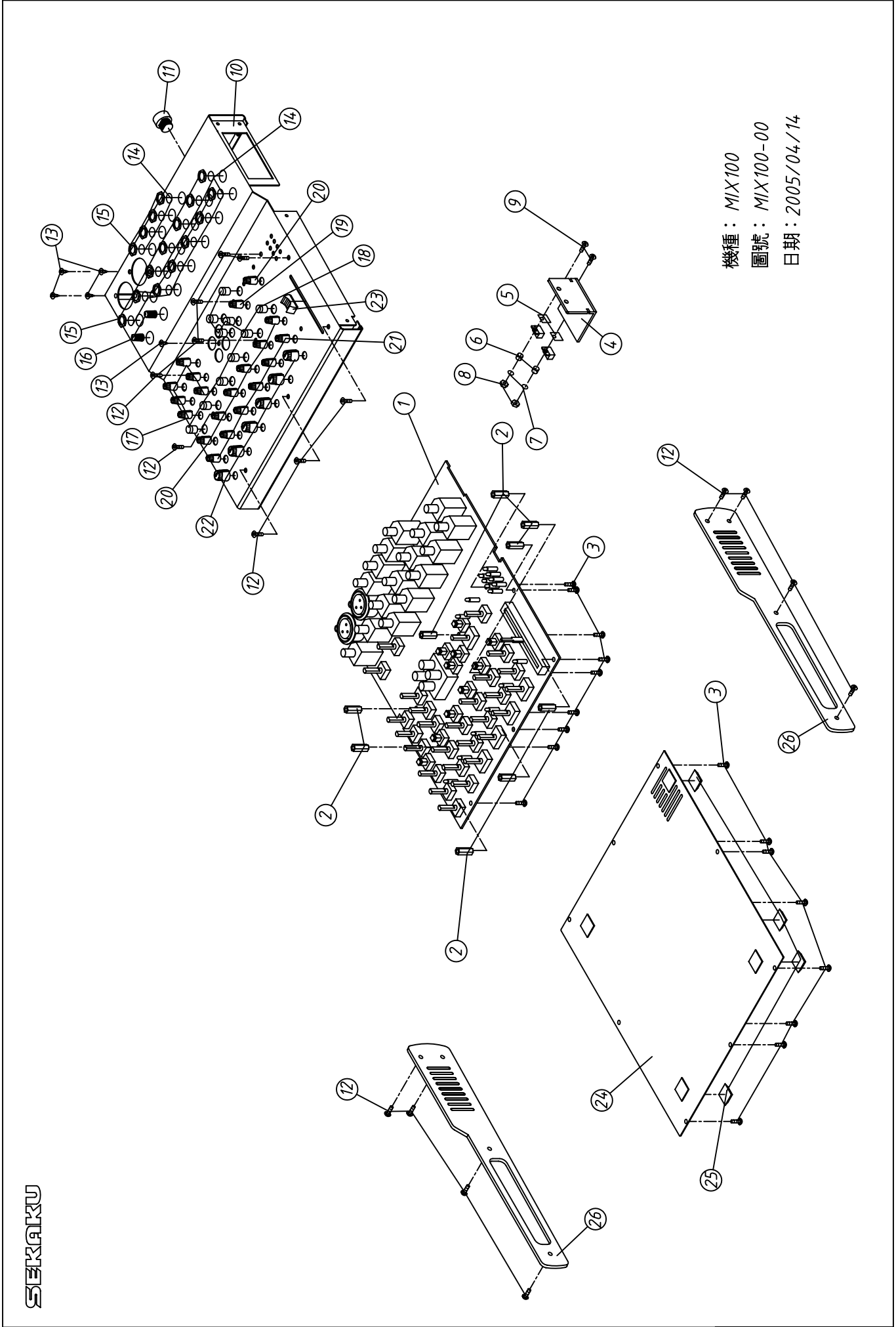
圖號	更改內容	更改者	日期	尺寸公差 ± mm				審核	電子	結構	表面處理	機種		
				超過	以下	精級	粗級					材質	件名	
A	R13取消	王錫賢	2005/03/04	65	250	0.15	0.4	1.2	繪圖	王錫賢	2005/01/06	比例	1/2	圖號
				30	65	0.15	0.3	0.8						
				0	5	0.1	0.2	0.5						
A	修改大多請依此圖為準	王錫賢	2005/02/20	250	1000	0.3	0.5	2	適用機種			規格	36.38×22×209×250.5	料號
				1000	1500	0.4	0.6	2.5						
				1500	2500	0.5	0.7	3.5						
圖號	更改內容	更改者	日期											



ZB料號:M102706

[illegible]

6.Exploded Views & Mechanical Parts List



機種: MIX100
図号: MIX100-00
日期: 2005/04/14

SEKAKU

Mechanical Parts List				
Model No.		TAPCO MIX-100		
Level	Part No.	Description	Specification	Qty
1	HK05178	PC board	P-MIX100-DIP	1
2	MG00304	copper pillar	M3*14*0.5PH	9
3	MG00041	screw	M3*6	17
4	MI02702	bady	MIX50 2t*27*35*39_V1.0	1
5	NC00005	silicone insulator	TO-220 square type	2
6	NI02249	insulate bean	TW-1(TO-220)	2
7	MF00037	washer	φ3*φ5*1t	2
8	ME00015	nut	3m/m	2
9	MG00162	screw	M3*8	2
10	MA00949	panel-CS0056	MIX100 TAPCO_V1.0	1
11	HC00106	XLR MIC jack (mini)	92M-503-3P	1
12	MG00249	M3*6mm	screw	17
13	MG00061	screw	M3*10	5
14	MF00061	washer	JY-6351G-02-250	16
15	ME00060	nut	JY-6351G-02-250	16
16	NI03693	knob	φ9.3*14.2 P/N(LOUD)760-081-01	2
17	NI03730	knob	φ10.2*17.5mm (CS0038 CS0015)	6
18	NI03691	knob	φ7*7.36 P/N(LOUD)0012143-07	10
19	NI03734	knob	φ10.2*17.5mm (CS0038 CS0042)	1
20	NI03733	knob	φ10.2*17.5mm (CS0038 CS0055)	7
21	NI03731	knob	φ10.2*17.5mm (CS0038 CS0008)	6
22	NI03736	knob	φ14*18.1mm (CS0038 CS0042)	6
23	NI03701	knob	24*11.5*11_V1.0	1
24	MB03993	rear board	MIX100_V1.3	1
25	NI00498	self-adhere foot cushion	12.7*7*6mm(SF-005)	4
26	MI02706	side cover board	MIX100_V1.3	2
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7.Electrical Parts List

	PF02333	MIX100	MIX100_TAPCO_120V_(TAPCO)		Revised:2005/5/13
Level	Part No.	Description	Specification	Qty	Reference
└0001	MA00949	panel-CS0056	MIX100 TAPCO_V1.0	1	
└0002	MI02706	side cover board	MIX100_V1.0	2	
└0003	MB03993	chassis	MIX100_V1.0	1	
└0004	HC00106	balance MIC jack(mini)	92M-503-3P	1	
└0005	ME00060	MIC jack	JY-6351G-02-250	16	
└0006	MF00061	MIC jack	JY-6351G-02-250	16	
└0007	MG00061	screw	M3*10	5	
└0008	MG00041	screw	M3*6	17	
└0009	MG00249	M3*6mm	screw	17	
└0010	NI03693	knob	φ9.3*14.2 P/N(LOUD)760-081-01	2	
└0011	NI03734	knob	φ10.2*17.5mm (CS0038 CS0042)	1	
└0012	NI03730	knob	φ10.2*17.5mm (CS0038 CS0015)	6	
└0013	NI03731	knob	φ10.2*17.5mm (CS0038 CS0008)	6	
└0014	NI03733	knob	φ10.2*17.5mm (CS0038 CS0055)	7	
└0015	NI03736	knob	φ14*18.1mm (CS0038 CS0042)	6	
└0016	NI03701	knob	24*11.5*11_V1.0	1	
└0017	NI03691	knob	φ7*7.36 P/N(LOUD)0012143-07	10	
└0018	HA03905	wire	3P 65mm UL1007 22AWG	1	
└0019	MG00304	copper pillar	M3*14*0.5PH	9	
└0020	TG00167	adaptor	120V/60Hz_AC18.5V/350mA_EI-57_UL CSA	1	
└0021	NI00498	self-adhere foot cushion	12.7*7*6mm(SF-005)	4	
└0022	NA00123	PE bag	0.04t*580*300mm	1	
└0023	HJ00006	desiccant	30g	1	
└0024	NI03714	handle	172*17 TAPCO CS0055 orang_V1.0	1	
└0025	NB03744	colour box	MIX100 TAPCO_V1.0	1	
└0026	NA00385	silk wadding	MIX100 left_V1.0	1	
└0027	NA00386	silk wadding	MIX100 right_V1.0	1	
└0028	NB03754	carton	MIX100 TAPCO_V1.0	1	
└0029	HK05178	PC board	P-MIX100-DIP	1	
└0001	CB00052	electrolytic capacitor	100uF/100V φ13*21mm	2	C195,C196
└0002	CC00023	mylar capacitor	0.012uF/100V 3%	4	C165,C166,C167,C168
└0003	CC00026	mylar capacitor	0.018uF/100V 10%	4	C161,C162,C163,C164
└0004	CB00132	electrolytic capacitor	330uF/25V 105°C LZ φ8*15mm	2	C199,C200
└0005	CC00031	mylar capacitor	0.033uF/100V 3%	4	C169,C170,C171,C172
└0006	HC00066	row-wire header	3P 2.5mm 90°	1	CN1
└0007	SD00077	integrated circuit	L7815CV(TO-220)(ST)(MOROCCO)	1	IC1
└0008	SD00079	integrated circuit	L7915CV(TO-220)(ST)	1	IC2
└0009	RC00358	potentiometer	B50KΩ-RD09F113A223-50K2BT(SAS1);30F-C	6	VR3,VR4,VR5,VR6,VR7,VR8
└0010	RC00465	potentiometer	B5KΩ RD09F113A225-5K2BT(SAS1);30F-C	6	VR9,VR11,VR13,VR15,VR22,VR23
└0011	SD00007	integrated circuit	BA15218N (M5218L substitute)	2	U21,U22
└0012	HC00126	balance MIC jack	JY-5042-030G female plug 180°	2	X1,X2
└0013	RC00285	slide potentiometer-dual unit	D10KΩ RF60112P600G-10KD*2(SAS1)	1	VR29
└0014	SA00052	L.E.D	φ3 round(green)long foot 26	4	LD10,LD11,LD12,LD13
└0015	HC00125	MIC jack	JY-6351G-02-250	16	X3,X4,X5,X6,X7,X8,X9,X10,X11,X12,X13,X14,X15,X16,X17,X18
└0016	SA00266	L.E.D	φ3 26mm	1	LD14
└0017	HI00314	push-button switch	26P KFC-D85(SELF-LOCK)	10	SW1,SW2,SW3,SW4,SW5,SW6,SW7,SW8,SW9,SW10
└0018	SA00053	L.E.D	φ3 round(red)long foot 26mm	9	LD1,LD2,LD3,LD4,LD5,LD6,LD7,LD8,LD9
└0019	HC00528	RCA jack	SCP6873NS3232T1 4P red white	1	X19
└0020	RC00359	potentiometer	W50KΩ RD09F113A224-50K4BT(SAS1);30F-C	9	VR10,VR12,VR14,VR16,VR17,VR18,VR19,VR20,VR21
└0021	RC00361	potentiometer	W50KΩ RD12L12CA60B-50K4BT*2(SAS1);30F-C	5	VR24,VR25,VR26,VR27,VR28
└0022	SA00054	L.E.D	3m/m round(yellow)long foot 26	2	LD15,LD16
└0023	RC00356	potentiometer	Z10KΩ RD09F1130042-10KZ(SAS1);30F	2	VR1,VR2
└0024	NI01782	LED spacer support	LEDS-11 11mm	16	
└0025	AC00002	solder wire	63/37%	40	
└0026	MI02702	body	MIX50 2t*29*35*39_V1.0	1	
└0027	ME00015	color nut	3m/m	2	
└0028	MF00037	washer	φ3.2*φ5.5*1t	2	
└0029	MG00162	screw	M3*8	2	
└0030	NI02249	insulate bean	TW-1(TO-220)	2	
└0031	NC00005	silicone insulator	TO-220 square type	2	
└0032	HK05179	PC board	P-MIX100-AI	1	
└0001	CB00255	electrolytic capacitor	1000uF/10V φ8*11mm 5mm	2	C115,C116
└0002	CB00280	electrolytic capacitor	100uF/50V φ8*11mm	1	C201
└0003	RA01258	fixed resistor 1/4W	10Ω	1	R287
└0004	RA01260	fixed resistor 1/4W	120Ω	2	R247,R260
└0005	SA00159	rectifier diode	1A/1000V IN4007	8	D10,D11,D12,D13,D14,D15,D16,D17
└0006	SA00127	zener diode	1/2W 47V 1N5261	1	D18
└0007	RA01362	precise resistor 1/4W	20.0KΩ	2	R109,R110
└0008	CB00242	electrolytic capacitor	22uF/35V φ5*11mm	4	C1,C2,C3,C4
└0009	RA01237	precise resistor 1/4W	390KΩ	1	R283
└0010	RA01259	fixed resistor 1/4W	47Ω	4	R276,R277,R278,R279
└0011	CB00254	electrolytic capacitor	47uF/100V φ10*12mm 5mm	2	C197,C198

	PF02333	MIX100	MIX100_TAPCO_120V_(TAPCO)		Revised:2005/5/13
Level	Part No.	Description	Specification	Qty	Reference
	-0012	CB00194 electrolytic capacitor	47uF/25V ϕ 5*11mm	53	C58,C59,C60,C61,C62,C63,C64,C65,C66,C67,C76,C77,C78,C79,C80,C81,C82,C83,C84,C85,C86,C87,C88,C89,C90,C91,C92,C93,C94,C95,C96,C97,C98,C99,C100,C101,C102,C103,C104,C105,C106,C107,C108,C109,C110,C111,C112,C113,C114,C193,C194,C204,C205
	-0013	CB00249 electrolytic capacitor	47uF/50V ϕ 6.3*11mm 2.5mm	5	C5,C6,C7,C8,C9
	-0014	RA01348 precise resistor 1/4W	56.0K 1% P type	1	R282
	-0015	RA01262 precise resistor 1/4W	6.81K Ω	4	R20,R21,R22,R23
	-0016	SB00039 transistor	MPSA06(TO-92)/(PHI)	1	TR15
	-0017	HK05180 PC board	P-MIX100-SMD	1	
	-0001	HB01648 PCB	MIX100_VER050422	1	
	-0002	RD00224 SMD precise resistor 1/10W	100K Ω $\pm$ 1% 0603	4	R265,R266,R267,R268
	-0003	CI00059 SMD ceramic capacitor 0603	100PF/50V NPO $\pm$ 5%	18	C16,C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28,C29,C30,C31,C32,C33
	-0004	CI00075 SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	48	C74,C75,C117,C118,C119,C120,C121,C122,C123,C124,C125,C126,C127,C128,C129,C130,C131,C132,C133,C134,C135,C136,C137,C138,C139,C140,C141,C142,C143,C144,C145,C146,C147,C148,C149,C150,C151,C152,C153,C154,C155,C156,C157,C158,C159,C160,C202,C203
	-0005	RD00214 SMD precise resistor 1/10W	10.0K Ω $\pm$ 1% 0603	51	R5,R6,R7,R8,R9,R24,R25,R26,R27,R28,R29,R30,R31,R32,R33,R34,R35,R36,R37,R38,R39,R56,R57,R58,R59,R60,R61,R62,R63,R64,R65,R66,R67,R68,R69,R70,R71,R72,R73,R74,R75,R76,R77,R78,R79,R86,R87,R88,R89,R269,R270
	-0006	RD00272 SMD precise resistor 1/10W	10.0 Ω $\pm$ 1% 0603	1	R263
	-0007	RD00275 SMD precise resistor 1/10W	110 Ω $\pm$ 1% 0603	1	R264
	-0008	RD00069 SMD fixed resistor 1/10W	120 Ω $\pm$ 5% 0603	14	R245,R246,R248,R249,R250,R251,R252,R253,R254,R255,R256,R257,R258,R259
	-0009	RD00432 SMD precise resistor 1/10W	12.7K Ω $\pm$ 1% 0603	4	R111,R114,R117,R118
	-0010	RD00225 SMD precise resistor 1/10W	130K Ω $\pm$ 1% 0603	2	R177,R178
	-0011	RD00200 SMD precise resistor 1/10W	150 Ω $\pm$ 1% 0603	1	R273
	-0012	RD00218 SMD precise resistor 1/10W	15.0K Ω $\pm$ 1% 0603	2	R175,R176
	-0013	RD00527 SMD precise resistor 1/10W	15.0 Ω $\pm$ 1% 0603	2	R80,R81
	-0014	RD00282 SMD precise resistor 1/10W	1.00K Ω $\pm$ 1% 0603	3	R231,R232,R274
	-0015	RD00350 SMD fixed resistor 1/10W	1.1K Ω $\pm$ 5% 0603	2	R179,R180
	-0016	RD00351 SMD fixed resistor 1/10W	1.3K Ω $\pm$ 5% 0603	2	R18,R19
	-0017	RD00201 SMD precise resistor 1/10W	1.50K Ω $\pm$ 1% 0603	6	R219,R220,R221,R222,R223,R224
	-0018	RD00443 SMD precise resistor 1/10W	1.54K Ω $\pm$ 1% 0603	2	R284,R285
	-0019	RD00292 SMD precise resistor 1/10W	1.00M Ω $\pm$ 1% 0603	2	R229,R230
	-0020	RD00219 SMD precise resistor 1/10W	20.0K Ω $\pm$ 1% 0603	13	R98,R99,R100,R101,R102,R103,R104,R105,R106,R107,R108,R173,R174
	-0021	CI00109 SMD ceramic capacitor 0603	20PF/50v NPO $\pm$ 5%	4	C189,C190,C191,C192
	-0022	RD00105 SMD fixed resistor 1/10W	22K Ω $\pm$ 5% 0603	6	R1,R2,R3,R4,R137,R138
	-0023	CI00051 SMD ceramic capacitor 0603	22PF/50V NPO $\pm$ 5%	44	C34,C35,C36,C37,C38,C39,C40,C41,C42,C43,C44,C45,C46,C47,C48,C49,C50,C51,C52,C53,C54,C55,C56,C57,C68,C69,C70,C71,C173,C174,C175,C176,C177,C178,C179,C180,C181,C182,C183,C184,C185,C186,C187,C188
	-0024	RD00106 SMD fixed resistor 1/10W	27K Ω $\pm$ 5% 0603	2	R271,R272
	-0025	RD00203 SMD precise resistor 1/10W	2.00K Ω $\pm$ 1% 0603	1	R286
	-0026	RD00392 SMD precise resistor 1/10W	2.20K Ω $\pm$ 1% 0603	32	R40,R41,R42,R43,R44,R45,R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R119,R120,R121,R122,R123,R124,R125,R126,R240,R288,R289,R290,R291,R292,R293,R294
	-0027	RD00322 SMD precise resistor 1/10W	2.70K Ω $\pm$ 1% 0603	6	R171,R172,R225,R226,R227,R228
	-0028	RD00329 SMD precise resistor 1/10W	30.0K Ω $\pm$ 1% 0603	1	R235
	-0029	RD00370 SMD precise resistor 1/10W	33.2K Ω $\pm$ 1% 0603	2	R196,R197
	-0030	RD00407 SMD precise resistor 1/10W	36.0K Ω $\pm$ 1% 0603	10	R185,R186,R187,R188,R189,R190,R191,R192,R193,R194
	-0031	SF00053 transistor	MMBT3906(SOT-23)/(PHI)	2	TR13,TR14
	-0032	RD00330 SMD precise resistor 1/10W	39.0K Ω $\pm$ 1% 0603	1	R195
	-0033	RD00317 SMD precise resistor 1/10W	39.2K Ω $\pm$ 1% 0603	1	R234
	-0034	RD00406 SMD precise resistor 1/10W	3.60K Ω $\pm$ 1% 0603	4	R14,R15,R16,R17
	-0035	RD00414 SMD precise resistor 1/10W	3.90K Ω $\pm$ 1% 0603	2	R127,R128
	-0036	SE00011 SMD rectifier diode	RLS4148 0.5A (LL-34)	4	D5,D6,D7,D8
	-0037	SG00122 SMD integrated circuit	NJM4580M-TE3	20	U1,U2,U3,U4,U5,U6,U7,U8,U9,U10,U11,U12,U13,U14,U15,U16,U17,U18,U23,U24
	-0038	CI00063 SMD ceramic capacitor 0603	470PF/50V NPO $\pm$ 5%	6	C10,C11,C12,C13,C14,C15
	-0039	RD00078 SMD fixed resistor 1/10W	470 Ω $\pm$ 5% 0603	2	R261,R262
	-0040	RD00339 SMD precise resistor 1/10W	47.0K Ω $\pm$ 1% 0603	10	R149,R150,R151,R152,R153,R154,R155,R156,R157,R158
	-0041	CI00055 SMD ceramic capacitor 0603	47PF/50V NPO $\pm$ 5%	2	C72,C73

	PF02333	MIX100	MIX100_TAPCO_120V_(TAPCO)		Revised:2005/5/13
Level	Part No.	Description	Specification	Qty	Reference
	└0042	RD00298	SMD precise resistor 1/10W	4	R10,R11,R12,R13
	└0043	RD00341	SMD precise resistor 1/10W	12	R206,R207,R208,R209,R210,R211,R212,R213,R218,R233,R236,R237
	└0044	RD00361	SMD precise resistor 1/8W	8	R90,R91,R92,R93,R94,R95,R96,R97
	└0045	RD00371	SMD precise resistor 1/10W	4	R82,R83,R84,R85
	└0046	RD00094	SMD fixed resistor 1/10W	26	R159,R160,R161,R162,R163,R164,R165,R166,R168,R169,R198,R199,R200,R201,R202,R203,R204,R205,R295,R296,R297,R298,R299,R300,R301,R302
	└0047	RD00210	SMD precise resistor 1/10W	2	R243,R244
	└0048	RD00211	SMD precise resistor 1/10W	2	R241,R242
	└0049	RD00095	SMD fixed resistor 1/10W	4	R214,R215,R216,R217
	└0050	RD00510	SMD precise resistor 1/10W	10	R129,R130,R131,R132,R133,R134,R135,R136,R238,R239
	└0051	RD00326	SMD precise resistor 1/10W	10	R139,R140,R141,R142,R143,R144,R145,R146,R147,R148
	└0052	RD00288	SMD precise resistor 1/10W	4	R112,R113,R115,R116
	└0053	RD00082	SMD fixed resistor 1/10W	1	R275
	└0054	SF00033	SMD transistor	12	TR1,TR2,TR3,TR4,TR5,TR6,TR7,TR8,TR9,TR10,TR11,TR12
	└0055	RD00327	SMD precise resistor 1/10W	4	R167,R170,R280,R281
	└0056	RD00349	SMD fixed resistor 1/10W	4	R181,R182,R183,R184
	└0057	SE00008	SMD rectifier diode	1	D9
	└0058	SG00116	SMD integrated circuit	2	U19,U20
	└0059	AE00221	tin soldering paste	1.2	