

Service Manual

Model: **VOICE plus**

MIC PREAMPLIFIER/VOICE PROCESSOR



www.altoproaudio.com

Version: 1.1

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1. Specification

ALTO VOICE SPECIFICATIONS

FREQUENCY RESPONSE

LINE IN TO MAIN OUT 10HZ TO 50KHZ:+0/-2DB

DISTORTION

MIC->INS SEND <0.01% /-30DBu/30DB GAIN

LINE->INS SEND <0.01% /0DB/UNITY

NOISE

MAIN OUT BAL -88DBu

RECORDING OUT -100DBu

INPUT LEVEL(MAX)

MIC IN +11.7DBu

LINE IN +22.7DBu

OUTPUT LEVEL(MAX)

MAIN OUT BAL +22DBu

MAIN OUT UNBAL +22DBu

RECORDING +22DBu

INSERT SEND +22DBu

POWER SUPPLY

MAINS VOLTAGE U.S./CANADA 120V~,60HZ

U.K./AUSTRALIA 240V~,50HZ

EUROPE 230V~,50HZ

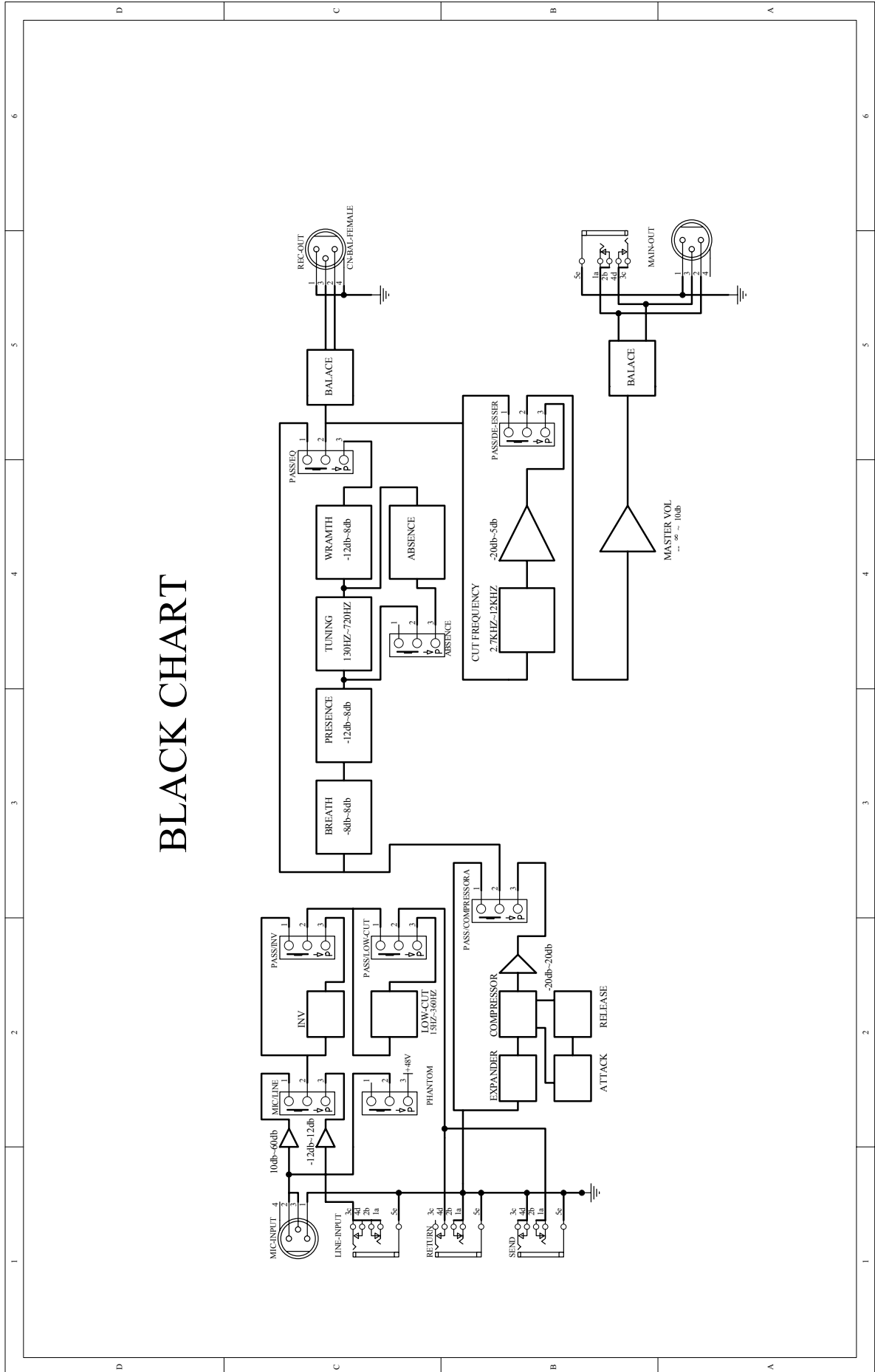
GENERAL EXPORT MODEL 95-120V~,200-245V,50-60HZ

POWER CONNECTOR 10W MAX

FUSE 100-120V:315mA

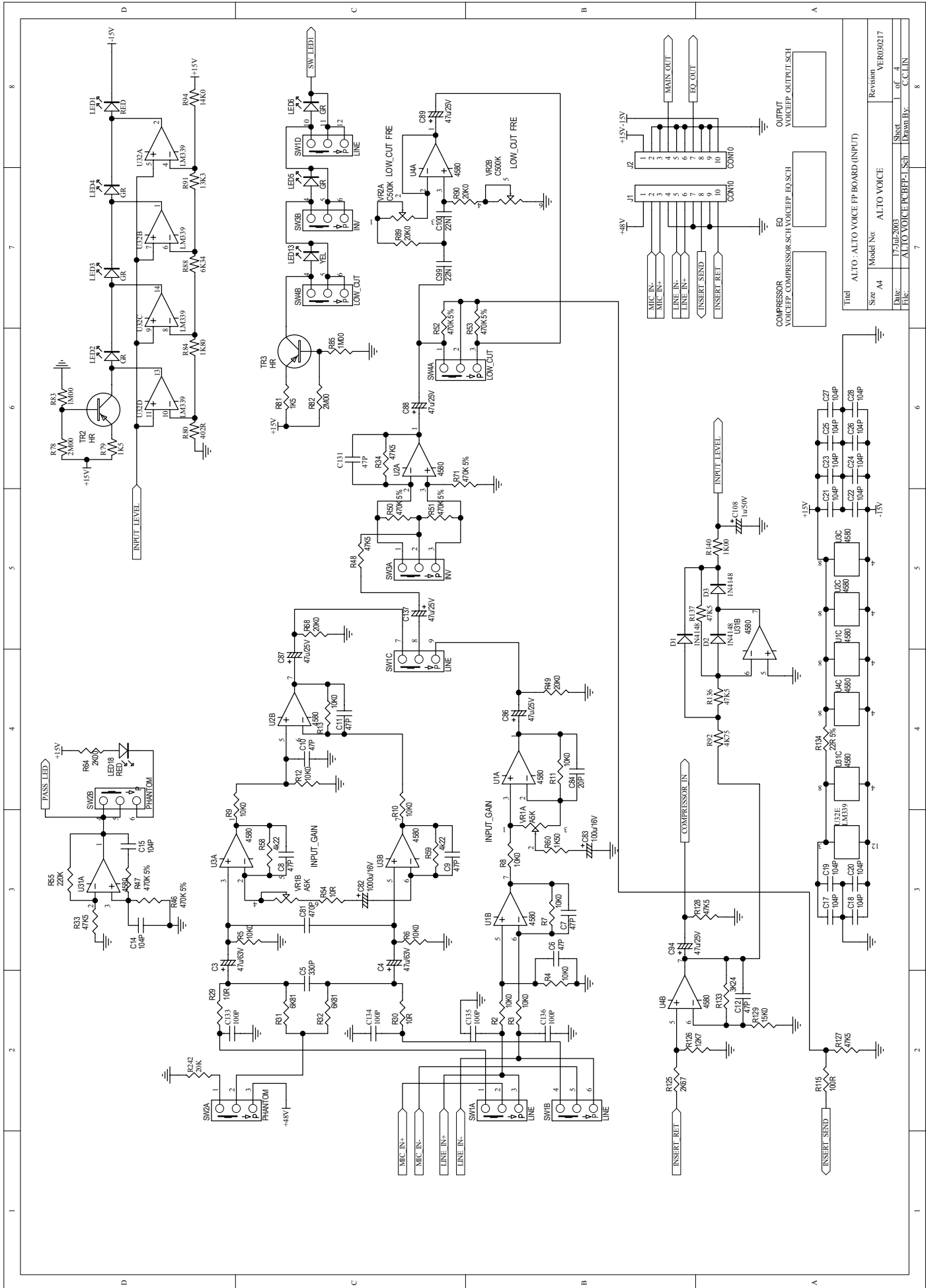
200-240V:250mA

2.Black Diagram



BLACK CHART

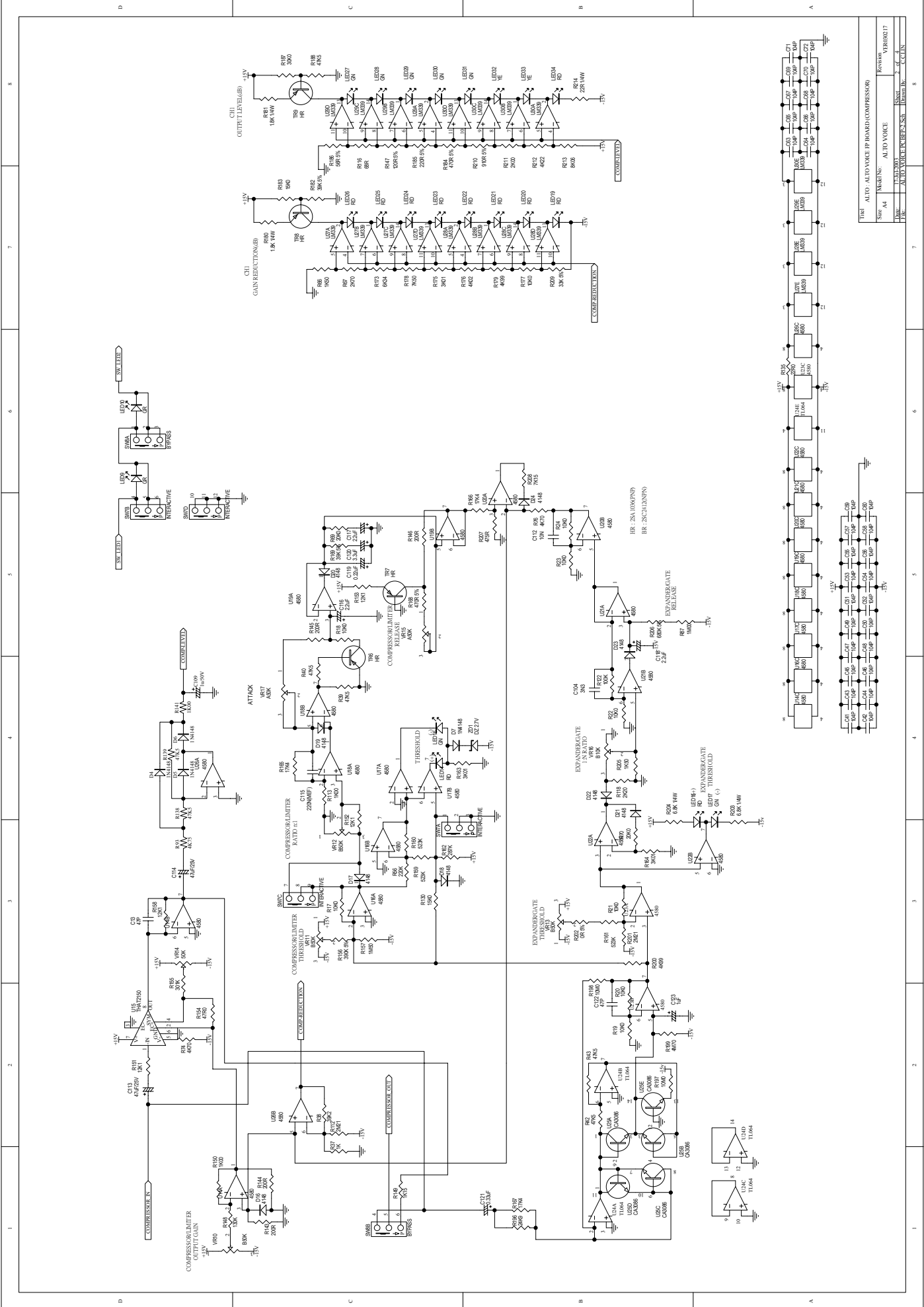
3. Schematic Diagram



Model No.	ALTO VOICE	Revision	VER030217
Title	ALTO : ALTO VOICE FP BOARD (INPUT)		
Date:	17-02-2003	Sheet	of 4
File:	ALTO VOICE PCB.PPC-1.Sch	Drawn By:	C.C.LIN

1 2 3 4 5 6 7 8

D C B A



REV	DATE	BY	CHKD	APP'D	DESCRIPTION
1	11-11-2007	IR	IR	IR	INIT AUTO VOICE (PBOARD/COMPRESSOR)
2					MAKE IN: AUTO VOICE
3					MAKE IN: AUTO VOICE
4					MAKE IN: AUTO VOICE
5					MAKE IN: AUTO VOICE
6					MAKE IN: AUTO VOICE
7					MAKE IN: AUTO VOICE
8					MAKE IN: AUTO VOICE

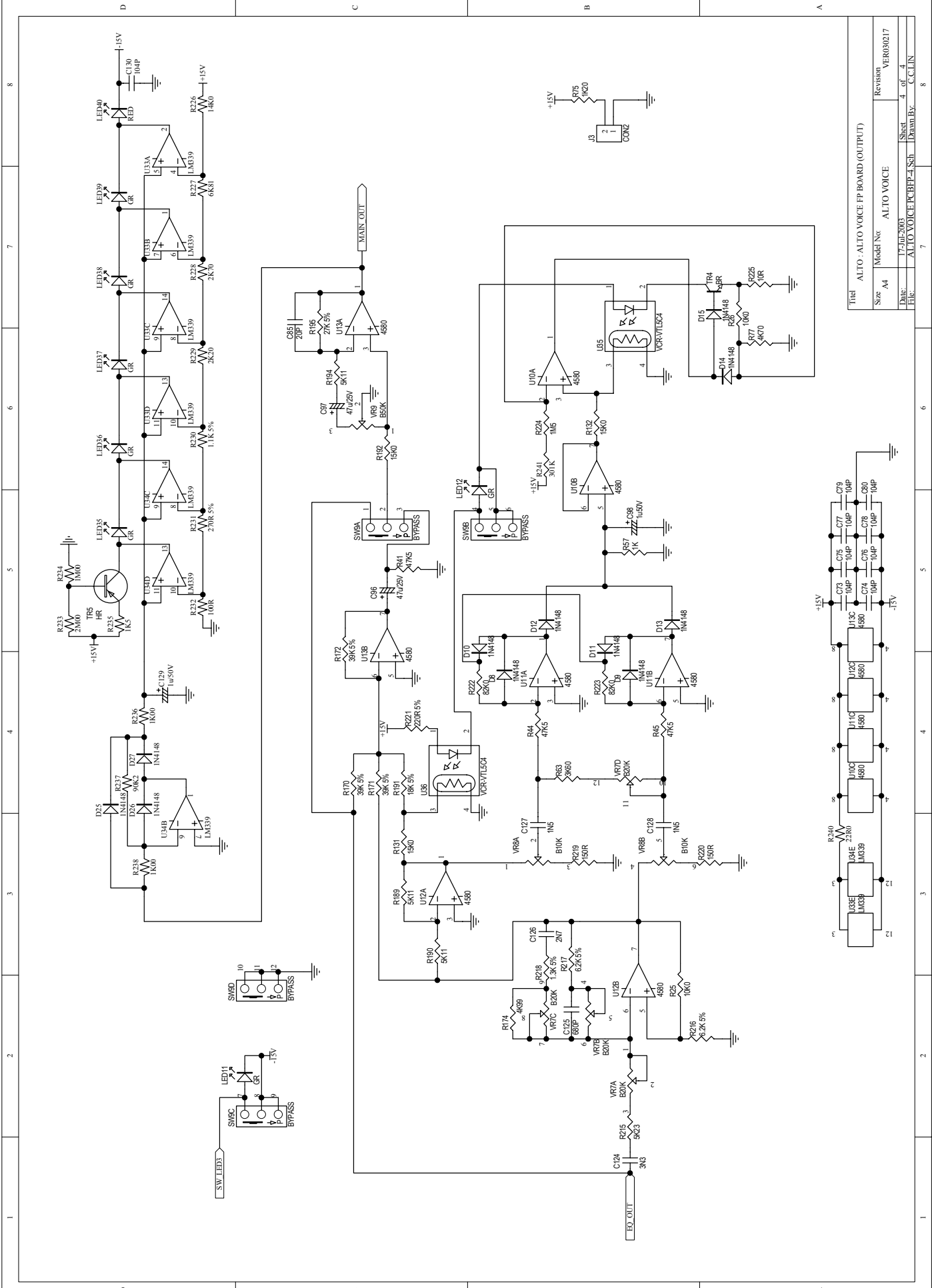
REV	DATE	BY	CHKD	APP'D	DESCRIPTION
1	11-11-2007	IR	IR	IR	INIT AUTO VOICE (PBOARD/COMPRESSOR)
2					MAKE IN: AUTO VOICE
3					MAKE IN: AUTO VOICE
4					MAKE IN: AUTO VOICE
5					MAKE IN: AUTO VOICE
6					MAKE IN: AUTO VOICE
7					MAKE IN: AUTO VOICE
8					MAKE IN: AUTO VOICE

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REV	DATE	BY	CHKD	APP'D	DESCRIPTION
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5					MAKE IN: AUTO VOICE
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7					MAKE IN: AUTO VOICE
8					MAKE IN: AUTO VOICE

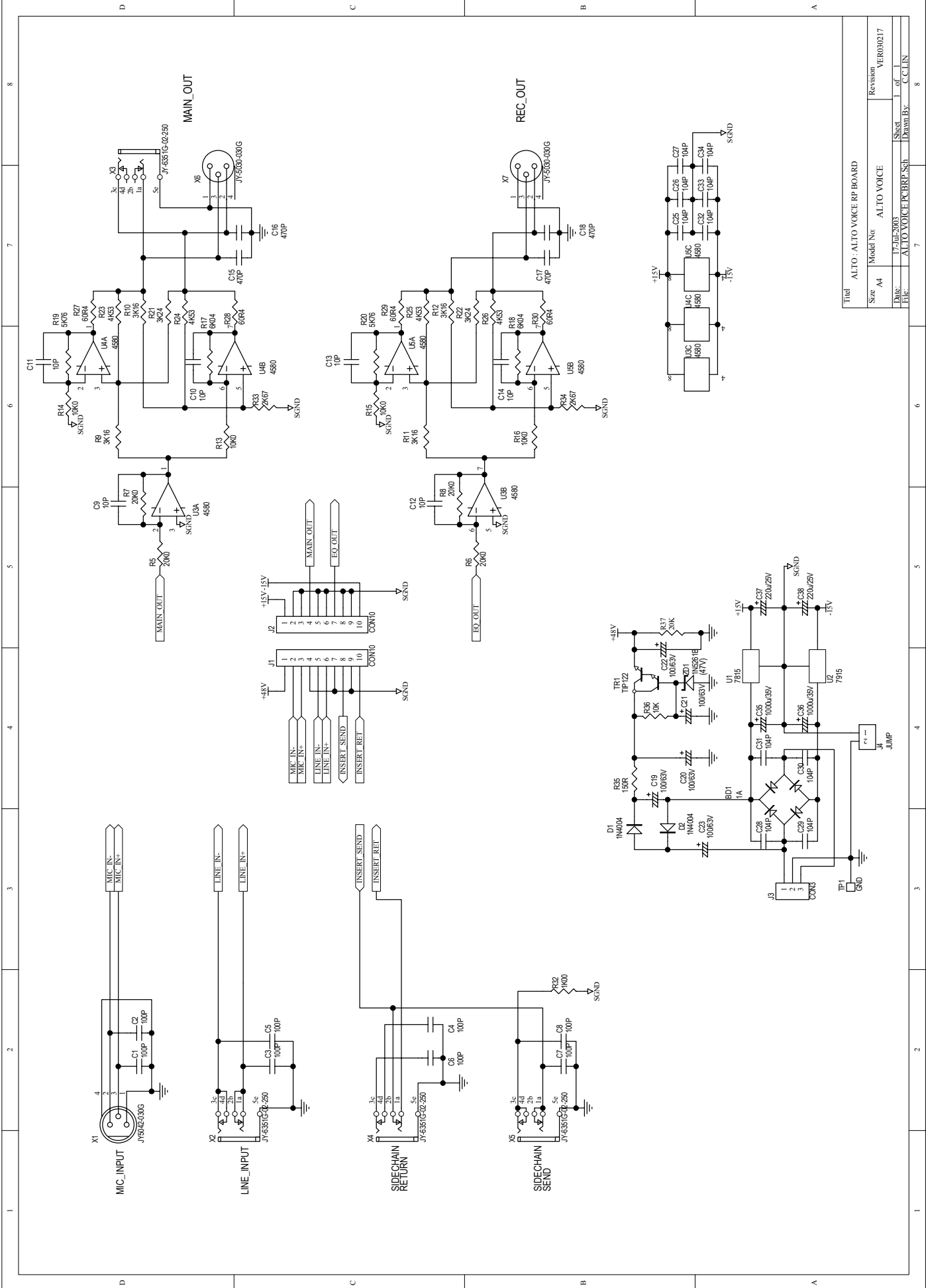
REV	DATE	BY	CHKD	APP'D	DESCRIPTION
1	11-11-2007	IR	IR	IR	INIT AUTO VOICE (PBOARD/COMPRESSOR)
2					MAKE IN: AUTO VOICE
3					MAKE IN: AUTO VOICE
4					MAKE IN: AUTO VOICE
5					MAKE IN: AUTO VOICE
6					MAKE IN: AUTO VOICE
7					MAKE IN: AUTO VOICE
8					MAKE IN: AUTO VOICE

REV	DATE	BY	CHKD	APP'D	DESCRIPTION
1	11-11-2007	IR	IR	IR	INIT AUTO VOICE (PBOARD/COMPRESSOR)
2					MAKE IN: AUTO VOICE
3					MAKE IN: AUTO VOICE
4					MAKE IN: AUTO VOICE
5					MAKE IN: AUTO VOICE
6					MAKE IN: AUTO VOICE
7					MAKE IN: AUTO VOICE
8					MAKE IN: AUTO VOICE



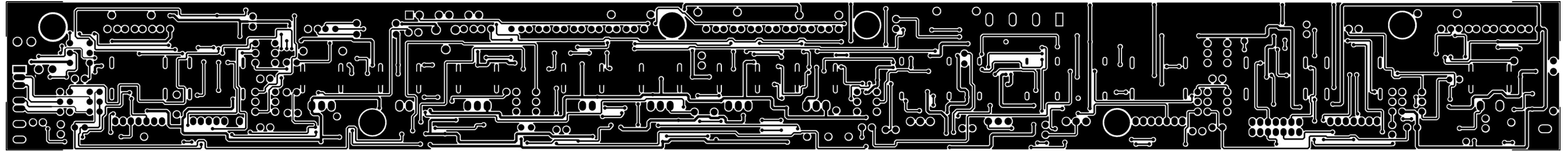
Model No.	ALTO VOICE
Revision	VER030217
Date:	17-02-2005
Sheet	4 of 4
File:	ALTO VOICE PCB.PPC-1.Sch
Drawn By:	C.C.LIN

Title	ALTO VOICE FP BOARD (OUTPUT)
Model No.	ALTO VOICE
Revision	VER030217
Date:	17-02-2005
Sheet	4 of 4
File:	ALTO VOICE PCB.PPC-1.Sch
Drawn By:	C.C.LIN

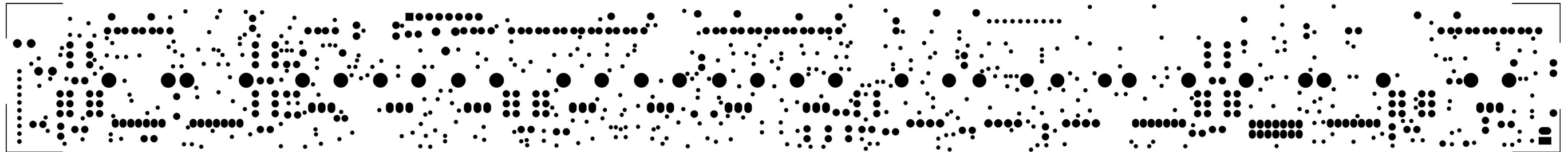


Title: ALTO VOICE RP BOARD	
Size: A4	Revision: VER030217
Date: 17-06-2003	Sheet: 1 of 1
File: ALTO VOICE RECEIVER.Sch	Drawn By: C.C.LIN

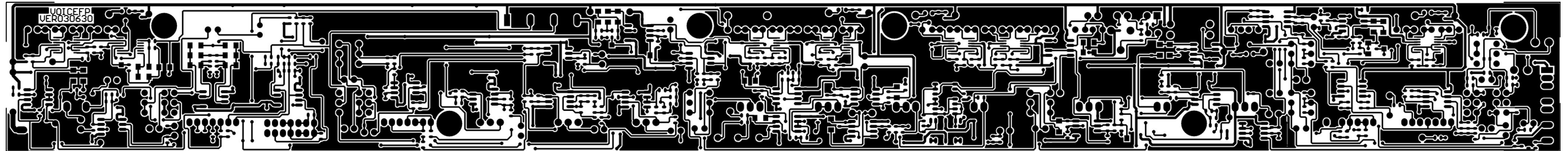
4.PRINTED CIRCUIT BOARD



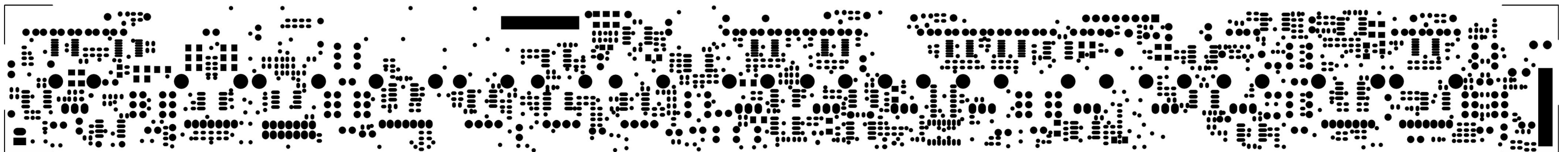
PCB:VOICEFP Top Layer



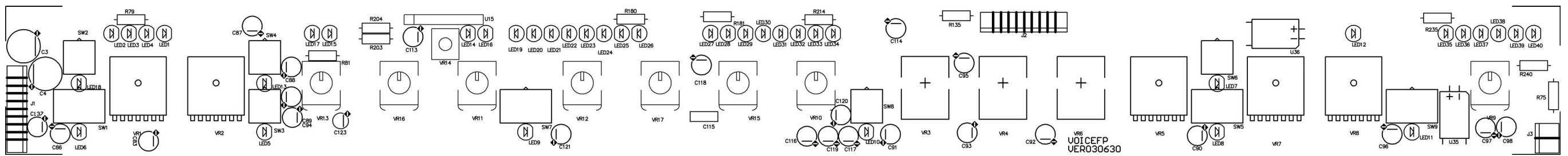
PCB:VOICEFP Top Solder Mask



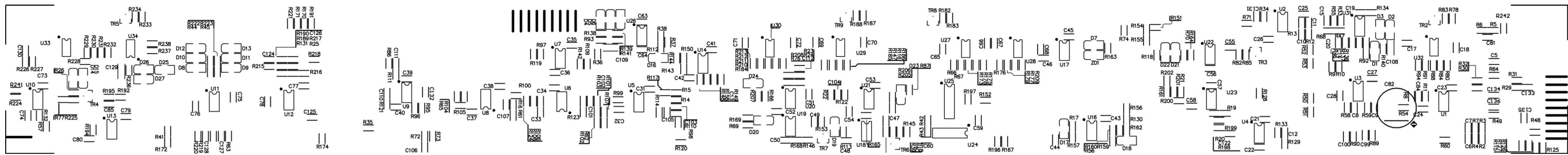
PCB:VOICEFP Bottom Layer



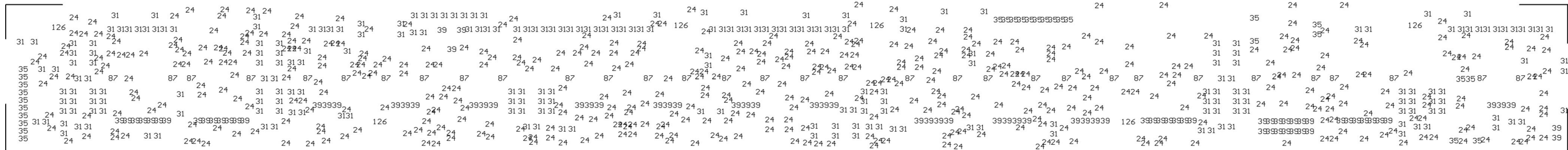
PCB:VOICEFP Bottom Solder Mask



PCB:VOICEFP Top Overlay



PCB:VOICEFP Bottom Overlay



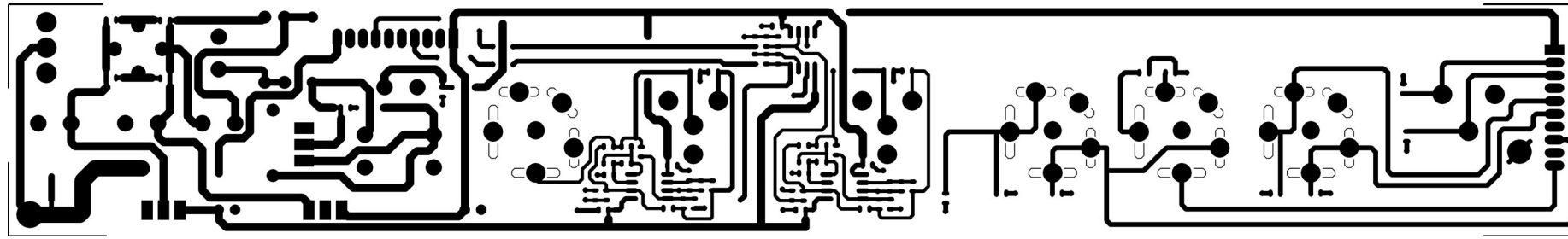
PCB:VOICEFP Drill Drawing Plots

Layer Pair : TopLayer to BottomLayer

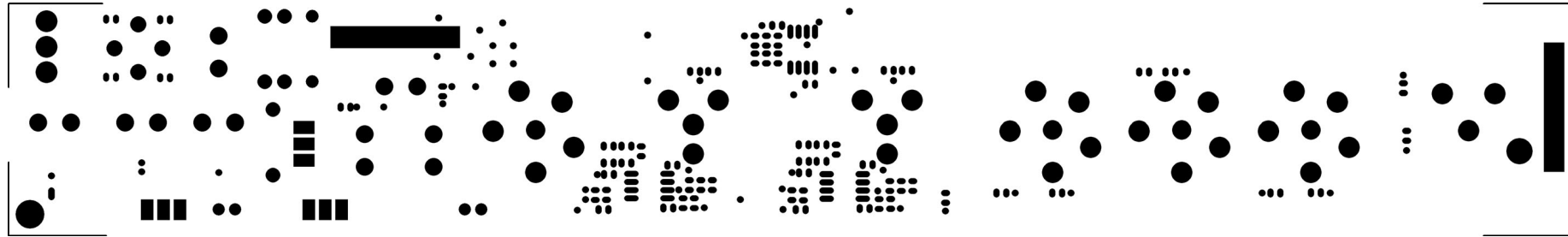
ASCII File : NCDrillOutput.TXT

EIA File : NCDrillOutput.DRL

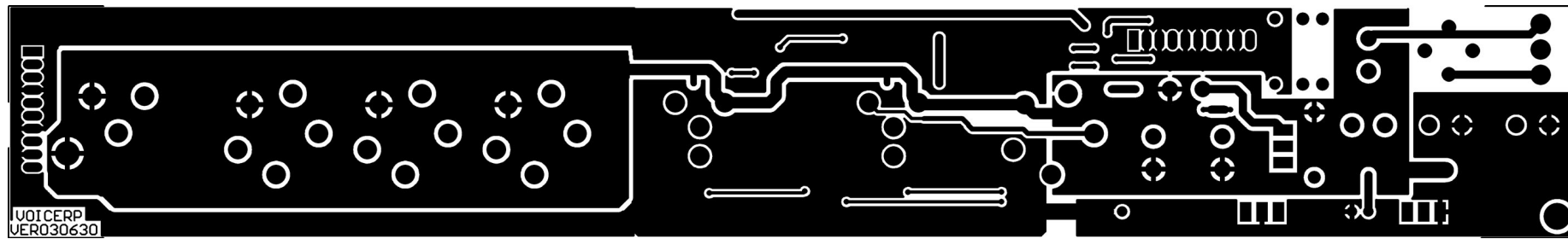
Tool	Hole Size	Hole Count Plated	Tool Travel
T1	24mil (0.6096mm)	464	106.58 Inch (2707.12 mm)
T2	31mil (0.7874mm)	244	72.08 Inch (1830.89 mm)
T3	35mil (0.889mm)	28	32.00 Inch (812.80 mm)
T4	39mil (0.9906mm)	83	35.44 Inch (900.28 mm)
T5	87mil (2.2098mm)	32	30.18 Inch (766.64 mm)
T6	126mil (3.2004mm)	6	NPTH 29.25 Inch (742.90 mm)
Totals		857	305.54 Inch (7760.63 mm)



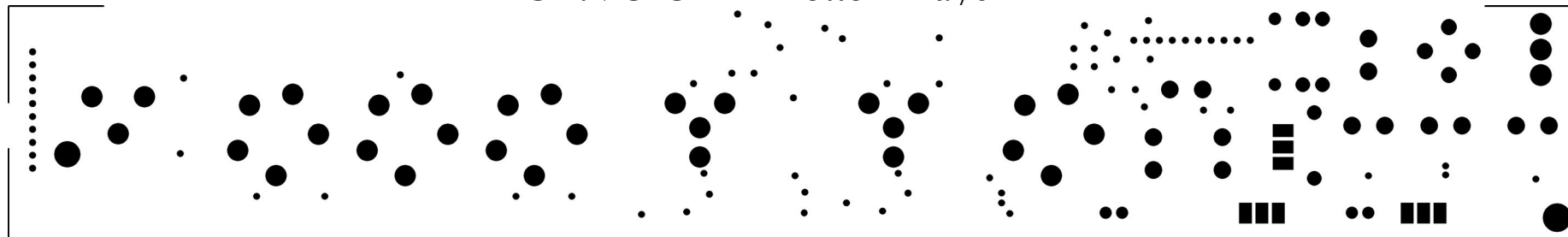
PCB:VOICERP Top Layer



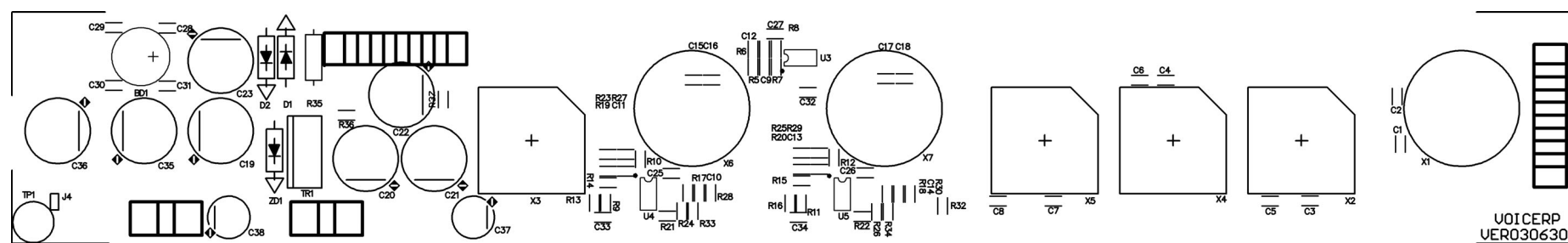
PCB:VOICERP Top Solder Mask



PCB:VOICERP Bottom Layer



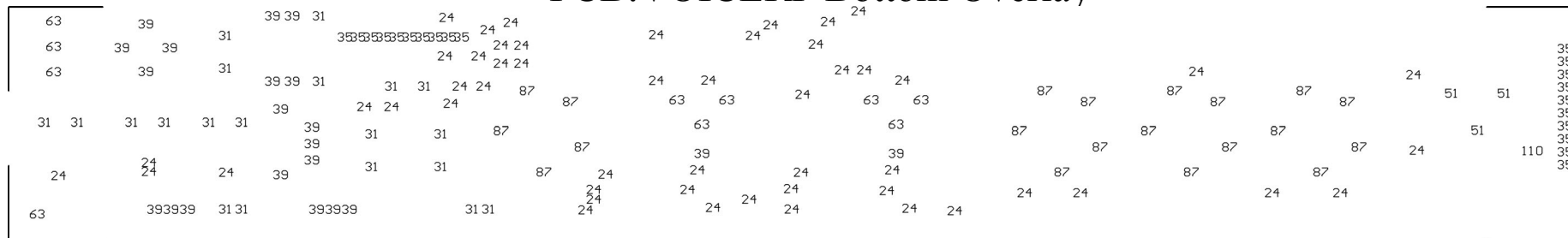
PCB:VOICERP Bottom Solder Mask



PCB:VOICERP Top Overlay



PCB:VOICERP Bottom Overlay



PCB:VOICERP Drill Drawing Plots

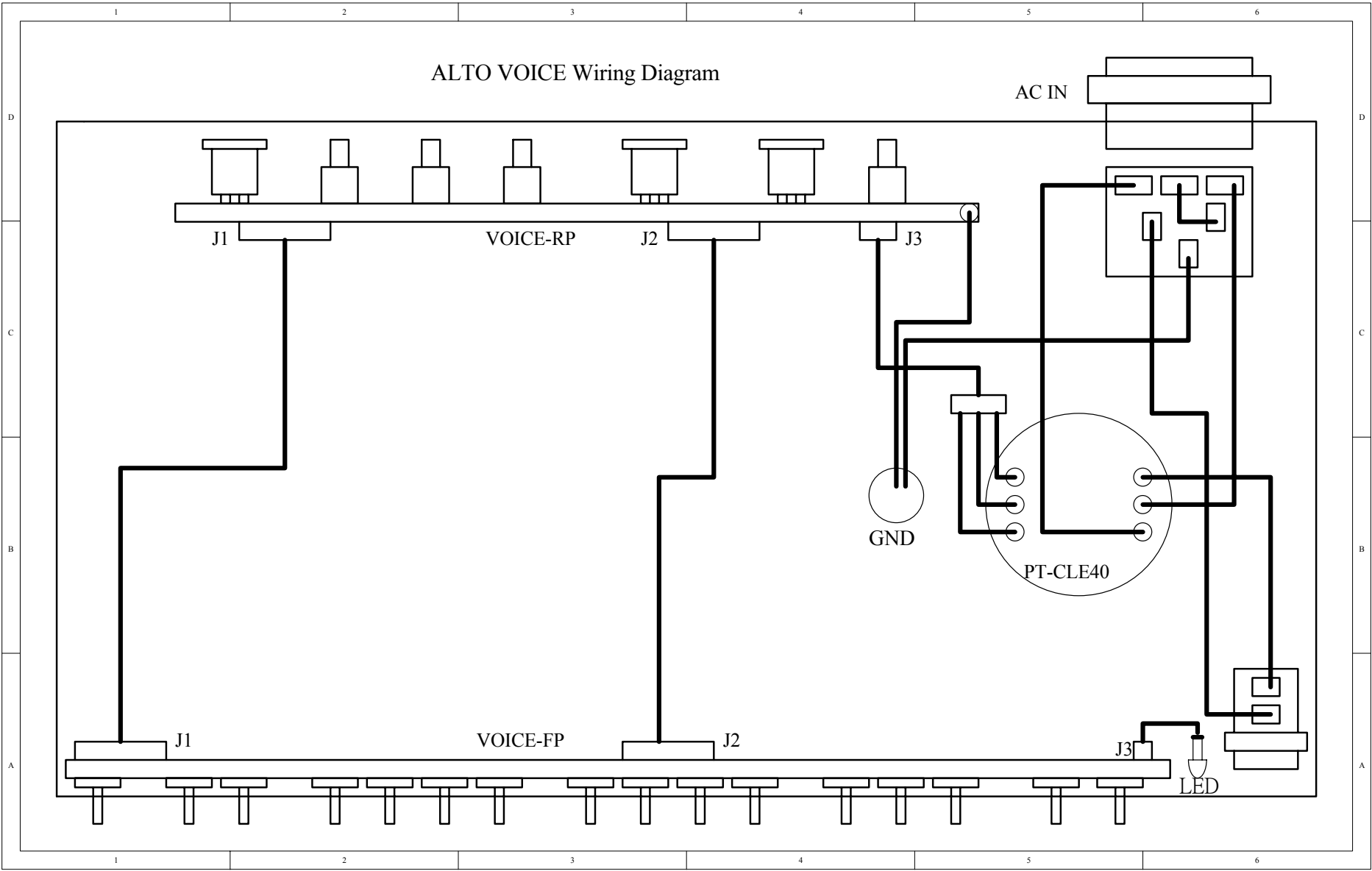
Layer Pair : TopLayer to BottomLayer

ASCII File : NCDrillOutput.TXT

EIA File : NCDrillOutput.DRL

Tool	Hole Size	Hole Count Plated	Tool Travel
T1	24mil (0.6096mm)	52	28.16 Inch (715.25 mm)
T2	31mil (0.7874mm)	20	16.27 Inch (413.28 mm)
T3	35mil (0.889mm)	20	17.44 Inch (442.89 mm)
T4	39mil (0.9906mm)	21	15.72 Inch (399.35 mm)
T5	51mil (1.2954mm)	3	14.77 Inch (375.10 mm)
T6	63mil (1.6002mm)	10	14.13 Inch (358.91 mm)
T7	87mil (2.2098mm)	20	18.04 Inch (458.12 mm)
T8	110mil (2.794mm)	1	14.38 Inch (365.31 mm)
Totals		147	138.91 Inch (3528.20 mm)

ALTO VOICE Wiring Diagram



Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 000011[YAFEN]
 Item No. PF00322 Version
 DESCRIPTION: VOICE PLUS
 VOICE PLUS_ALTO_230V

Date 2003/10/01
 Page No.: 1/20

UNIT: PCS
 Date: 2003/07/18

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer
Component Remark	Item Description				Attrition Rate	
0001-----	MA03322				1.0000	2003/07/18
	panel			PCS	1	N
	VOICE PLUS				0.00 %	
0002-----	MB02265				1.0000	2003/07/18
	rear board			PCS	1	N
	VOICE PLUS				0.00 %	
0003-----	MI00899				1.0000	2003/07/18
	front board			PCS	1	N
	VOICE PLUS				0.00 %	
0004-----	MB00522				1.0000	2003/07/18
	bottom board			PCS	1	N
	CLE2.0				0.00 %	
0005-----	MC00209				1.0000	2003/07/18
	top cover			PCS	1	N
	CLE2.0				0.00 %	
0006-----	TD00118				1.0000	2003/07/18
	transformer			PCS	1	N
	PT-CLE40(include FUSE102)				0.00 %	
0007-----	SD00077				1.0000	2003/07/18
	integrated circuit			PCS	1	N
	7815(TO-220)				0.00 %	
	U1					
0008-----	SD00079				1.0000	2003/07/18
	integrated circuit			PCS	1	N
	7915(TO-220)				0.00 %	
	U2					
0009-----	NI01876				2.0000	2003/07/18
	LED spacer support			PCS	1	N
	7.6*4.5*184				0.00 %	
0010-----	NI01156				9.0000	2003/07/18
	button			PCS	1	N
	3*W6*18.3				0.00 %	
0011-----	NI01178				2.0000	2003/07/18
	guide honor pillar			PCS	1	N
	3.1*85				0.00 %	
0012-----	NI00362				16.0000	2003/07/18
	plastic knob			PCS	1	N
	(COOL GRAY 8C/white)				0.00 %	
0013-----	NI00896				16.0000	2003/07/18
	knob cover			PCS	1	N
	8.5*4 bule 072C				0.00 %	
0014-----	NI02085				1.0000	2003/07/18
	power switch fixed sleeve			PCS	1	N
	22*9.69 072C blue				0.00 %	
0015-----	NI02408				16.0000	2003/07/18

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Report No.: IEBO_P02
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 Item No. PF00322 Version
 DESCRIPTION: VOICE PLUS
 VOICE PLUS_ALTO_230V

Date 2003/10/01
 Page No.: 2/20

UNIT: PCS
 Date: 2003/07/18

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer
Component Remark	Item Description				Attrition Rate	
	fixed piece			PCS	1	N
	15*2.7mm CONTROL30				0.00 %	
0016-----	HC00015				1.0000	2003/07/18
	AC outlett			PCS	1	N
	(S)315-B (AC select)				0.00 %	
0017-----	HD00006				1.0000	2003/07/18
	fuse			PCS	1	N
	315mA 250V 5.2*20mm CSA/S/UL/VDE				0.00 %	
0018-----	NI00308				1.0000	2003/07/18
	power sw bottom			PCS	1	N
	15*17				0.00 %	
0019-----	NI01159				1.0000	2003/07/18
	power switch bottom cover			PCS	1	N
	6*2.5 YELLOW C				0.00 %	
0020-----	HI00023				1.0000	2003/07/18
	power switch			PCS	1	N
	SDDLB 1007U				0.00 %	
0021-----	SA00065				1.0000	2003/07/18
	L.E.D			PCS	1	N
	LG2043 green				0.00 %	
0022-----	MG00041				6.0000	2003/07/18
	screw			PCS	1	N
	M3*6				0.00 %	
0023-----	MG00162				2.0000	2003/07/18
	Ni screw			PCS	1	N
	M3*8				0.00 %	
0024-----	MG00025				13.0000	2003/07/18
	screw			PCS	1	N
	M3*6				0.00 %	
0025-----	MG00042				4.0000	2003/07/18
	screw			PCS	1	N
	M3*10				0.00 %	
0026-----	MG00045				4.0000	2003/07/18
	screw			PCS	1	N
	M3*7				0.00 %	
0027-----	MG00061				6.0000	2003/07/18
	screw			PCS	1	N
	M3*10				0.00 %	
0028-----	MG00111				1.0000	2003/07/18
	colour screw			PCS	1	N
	M4*30				0.00 %	
0029-----	ME00015				2.0000	2003/07/18
	colour nut			PCS	1	N
	3m/m				0.00 %	
0030-----	ME00016				2.0000	2003/07/18

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
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 VOICE PLUS_ALTO_230V

Date 2003/10/01
 Page No.: 3/20

UNIT: PCS
 Date: 2003/07/18

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer
Component Remark	Item Description				Attrition Rate	
	colour nut			PCS	1	N
	4m/m				0.00 %	
0031-----	ME00060				4.0000	2003/07/18
	MIC socket nut-HC00125 Appendix			PCS	1	N
	hexagon(JY-6351G-02-250)				0.00 %	
0032-----	MF00061				4.0000	2003/07/18
	MIC socket washer-HC00125			PCS	1	N
	circle (JY-6351G-02-250)				0.00 %	
0033-----	MF00019				1.0000	2003/07/18
	colour washer			PCS	1	N
	4* 12*1t				0.00 %	
0034-----	MF00037				4.0000	2003/07/18
	spring washer			PCS	1	N
	3* 5*1t				0.00 %	
0035-----	MF00038				2.0000	2003/07/18
	spring washer			PCS	1	N
	4* 7*1t				0.00 %	
0036-----	MF00048				2.0000	2003/07/18
	washer			PCS	1	N
	4* 8*0.5t				0.00 %	
0037-----	NI00443				1.0000	2003/07/18
	rubber coil			PCS	1	N
	20* 60*2tB				0.00 %	
0038-----	HA01638				1.0000	2003/07/18
	header wiring AF:W94			PCS	1	N
	2P 280				0.00 %	
0039-----	HA01798				1.0000	2003/07/18
	wire UL1617 AWG22			PCS	1	N
	250mm black				0.00 %	
0040-----	HA01835				1.0000	2003/07/18
	wire UL1617 22AWG			PCS	1	N
	80mm brown				0.00 %	
0041-----	HA01333				1.0000	2003/07/18
	wire 4.5*8.5mm			PCS	1	N
	150mm UL1015 18AWG green/yellow				0.00 %	
0042-----	HA00861				1.0000	2003/07/18
	power cord Europe 3P			PCS	1	N
	LT-312+0.75*3C(H05VV-F) 6FT+LT-501				0.00 %	
0043-----	NI00240				2.0000	2003/07/18
	sleeving flame retardant			PCS	1	N
	2.5*10mm				0.00 %	
0044-----	NI00252				8.0000	2003/07/18
	sleeving flame retardant			PCS	1	N
	4*20mm				0.00 %	
0045-----	MJ00123				1.0000	2003/07/18

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Report No.: IEBO_P02
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 VOICE PLUS_ALTO_230V

Date 2003/10/01
 Page No.: 4/20

UNIT: PCS
 Date: 2003/07/18

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer
Component Remark	Item Description				Attrition Rate	
	heat-sink(white)			PCS	1	N
0046-----	65*18*4 SCX-P234				0.00 %	
	NC00005				1.0000	2003/07/18
	silicone insulator			PCS	1	N
0047-----	TO-220 square type				0.00 %	
	NI02249				2.0000	2003/07/18
	caushion			PCS	1	N
0048-----	TW-1(TO-220)				0.00 %	
	NI00218				3.0000	2003/07/18
	cable tie-black			PCS	1	N
0049-----	ALT-102SB				0.00 %	
	NI00501				4.0000	2003/07/18
	foot cushion			PCS	1	N
0050-----	12.7*9*3t(SF-004)				0.00 %	
	NA00137				1.0000	2003/07/18
	clip-chain bag			PCS	1	N
0051-----	5*7				0.00 %	
	NA00123				1.0000	2003/07/18
	PE bag			PCS	1	N
0052-----	0.04t*580*300mm		KG		0.00 %	
	HJ00006				1.0000	2003/07/18
	desiccant			PCS	1	N
0053-----	30g				0.00 %	
	NB02167				1.0000	2003/07/18
	colour box			PCS	1	N
0054-----	VOICE PLUS ALTO				0.00 %	
	NB02163				1.0000	2003/07/18
	paper sheet			PCS	1	N
0055-----	X23,34,40				0.00 %	
	NB02164				1.0000	2003/07/18
	paper sheet			PCS	1	N
0056-----	X23,34,40				0.00 %	
	NB02088				1.0000	2003/07/29
	outter carton 4 hole			PCS	4	N
0057-----	(1H) ALTO 19"series				0.00 %	
	NF00061				1.0000	2003/07/18
	assurance card			PCS	1	N
0058-----	ALTO				0.00 %	
	NE06314				4.0000	2003/07/18
	label 30*11mm			PCS	1	N
0059-----	VOICE PLUS				0.00 %	
	NE05004				4.0000	2003/07/18
	label 30*11mm			PCS	1	N
0060-----	ALTO				0.00 %	
	HK01566				1.0000	2003/07/18

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
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 DESCRIPTION: VOICE PLUS
 VOICE PLUS_ALTO_230V

Date 2003/10/01
 Page No.: 5/20

UNIT: PCS
 Date: 2003/07/18

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer
Component Remark	Item Description				Attrition Rate	
0001-----	PC board			PCS	1	N
	P-VOICEFP-DIP				0.00 %	
	RA00165				3.0000	2003/07/18
	fixed resistor 1/4W			PCS	1	N
	22 M type				0.00 %	
	R240 R135 R214					
0002-----	RA00215				1.0000	2003/07/18
	fixed resistor 1/4W			PCS	1	N
	1.2K M type				0.00 %	
	R75					
0003-----	RA00217				3.0000	2003/07/18
	fixed resistor 1/4W			PCS	1	N
	1.5K M type				0.00 %	
	R235 R81 R79					
0004-----	RA00219				2.0000	2003/07/18
	fixed resistor 1/4W			PCS	1	N
	1.8K M type				0.00 %	
	R181 R180					
0005-----	RA00236				2.0000	2003/07/18
	fixed resistor 1/4W			PCS	1	N
	6.8K M type				0.00 %	
	R204 R203					
0006-----	CF00038				1.0000	2003/07/18
	metal-film capacitor MSC			PCS	1	N
	0.22uF/63V 5% CASE02				0.00 %	
	C115					
0007-----	CB00003				1.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	0.22uF/50V 5*11mm				0.00 %	
	C119					
0008-----	CB00126				1.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	0.33uF/50V 5*11mm				0.00 %	
	C121					
0009-----	CB00009				2.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	1.0uF/50V 4*7mm				0.00 %	
	C123 C98					
0010-----	CB00012				3.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	2.2uF/50V 4*5mm				0.00 %	
	C116 C117 C118					
0011-----	CB00013				1.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	3.3uF/50V 5*11mm				0.00 %	
	C120					

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Component Remark	Item Description				Usage Rate	@:Phantom Layer
					Attrition Rate	
0012-----	CB00039				14.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	47uF/25V 5*11mm				0.00 %	
	C86 C87 C88 C89 C90 C91 C92 C93 9C94 C95 C96 C97 C11 C114 C137					
0013-----	CB00042				2.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	47uF/63V 105 LZ 8*11mm				0.00 %	
	C3 C4					
0014-----	CB00046				1.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	100uF/16V 6*5mm				0.00 %	
	C83					
0015-----	CB00070				1.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	1000uF/16V 10*16mm				0.00 %	
	C82					
0016-----	SB00014				2.0000	2003/07/18
	opto-imaging PHOTO_CELL			PCS	1	N
	VTL5C4				0.00 %	
	U35 U36					
0017-----	SD00015				1.0000	2003/07/18
	integrated circuit			PCS	1	N
	THAT2150A				0.00 %	
	U15					
0018-----	SA00072				14.0000	2003/07/18
	L.E.D			PCS	1	N
	3 red LI2340/A				0.00 %	
	LED40 LED1 LED18 LED15 LED14 LED34 LED20 LED19 LED21 LED24					
	LED25 LED22 LED23 LED26					
0019-----	SA00071				23.0000	2003/07/18
	L.E.D			PCS	1	N
	3 green LVG2340/A				0.00 %	
	LED2 LED3 LED4 LED5 LED6 LED7 LED8 LED9 LED10 LED11 LED12 LED16					
	LED17 LED27 LED28 LED29 LED30 LED31 LED35 LED36 LED37 LED38					
	LED39					
0020-----	SA00073				3.0000	2003/07/18
	L.E.D			PCS	1	N
	3 yellow LVY2340/A				0.00 %	
	LED32 LED33 LED13					
0021-----	NI01772				9.0000	2003/07/18
	LED separating pillar			PCS	1	N
	LEDS-7 7mm				0.00 %	
	LED18 LED6 LED13 LED5 LED9 LED10 LED7 LED8 LED11					
0022-----	NI01781				31.0000	2003/07/18
	LED eparating pillar			PCS	1	N
	LEDS-8 8mm				0.00 %	

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Component Remark	Item Description				Usage Rate	@:Phantom Layer
					Attrition Rate	
	LED1 LED2 LED3 LED4 LED12 LED14 LED15 LED16 LED17 LED19 LED20 LED21 LED22 LED23 LED24 LED25 LED26 LED27 LED28 LED29 LED30 LED31 LED32 LED33 LED34 LED35 LED36 LED37 LED38 LED39 LED40					
0023-----	HI00162 push-button switch 2 paragraphs 6p PS-22E8552L SW2 SW3 SW4 SW6 SW8			PCS	5.0000 1 0.00 %	2003/07/18 N
0024-----	HI00163 push-button switch 2 stage 12P PS-42E85 SW1 SW5 SW7 SW9			PCS	4.0000 1 0.00 %	2003/07/18 N
0025-----	HA02084 header wiring AF:W359 10P(male)-10P(fnale) 220mm J1 J2			PCS	2.0000 1 0.00 %	2003/07/18 N
0026-----	HA01388 header wiring 2P 100 J3			PCS	1.0000 1 0.00 %	2003/07/18 N
0027-----	RC00171 resistor 50K 6 EVND8A VR14			PCS	1.0000 1 0.00 %	2003/07/18 N
0028-----	RC00294 potentiometer B50K 35mm R1411GOA-V1B503FN00-00 VR1			PCS	1.0000 1 0.00 %	2003/08/06 N
0029-----	RC00205 potentiometer B10K L:35 R1411GOA-V1B103FN00-00 VR8			PCS	1.0000 1 0.00 %	2003/07/18 N
0030-----	RC00213 potentiometer B10K 35 R0911NOB-V1B103FN00-00 VR16			PCS	1.0000 1 0.00 %	2003/07/18 N
0031-----	RC00324 potentiometer B10K RV110T-40E1-30A-B10K VR3 VR4 VR6			PCS	3.0000 1 0.00 %	2003/07/18 N
0032-----	RC00204 potentiometer A20K L:35 R1411GOA-V1A203FN00-00 VR5			PCS	1.0000 1 0.00 %	2003/07/18 N
0033-----	RC00327 potentiometer B20K R1411FOX-V1B203FL00-00			PCS	1.0000 1 0.00 %	2003/07/18 N

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Component Remark	Item Description				Usage Rate	@:Phantom Layer
					Attrition Rate	
	VR7					
0034-----	RC00218				2.0000	2003/07/18
	potentiometer			PCS	1	N
	A50K R0911NOB-V1A503FN00-00				0.00 %	
	VR15 VR17					
0035-----	RC00217				5.0000	2003/07/18
	potentiometer			PCS	1	N
	B50K R0911NOB-V1B503FN00-00				0.00 %	
	VR9 VR10 VR11 VR12 VR13					
0036-----	RC00326				1.0000	2003/07/18
	potentiometer			PCS	1	N
	C500K R1411GOA-V1C504FN00-00				0.00 %	
	VR2					
0037-----	NI01831				3.0000	2003/07/18
	separating pillar			PCS	1	N
	8.5*4*17 black				0.00 %	
	LED18 LED13 LED7					
0038-----	HK01567				1.0000	2003/07/18
	PC board			PCS	1	N
	P-VOICEFP-SMD				0.00 %	
0001-----	HB00970				1.0000	2003/07/18
	pc board			PCS	1	N
	VOICEFP(1*4)_VER030825				0.00 %	
0002-----	RD00272				3.0000	2003/08/06
	SMD precise resistor 1/10W			PCS	1	N
	10.0 ±1% 0603				0.00 %	
	R29 R30 R225					
0003-----	RD00298				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	47.0 ±1% 0603				0.00 %	
	R154					
0004-----	RD00394				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	68.0 ±1% 0603				0.00 %	
	R116					
0005-----	RD00274				2.0000	2003/08/29
	SMD precise resistor 1/10W			PCS	1	N
	100 ±1% 0603				0.00 %	
	R114 R115					
0006-----	RD00200				3.0000	2003/09/09
	SMD precise resistor 1/10W			PCS	1	N
	150 ±1% 0603				0.00 %	
	R219 R220 R232					
0007-----	RD00277				4.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	200 ±1% 0603				0.00 %	

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Component Remark	Item Description				Usage Rate	@:Phantom Layer
					Attrition Rate	
	R143 R144 R145 R146					
0008-----	RD00279				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	402 ±1% 0603				0.00 %	
	R80					
0009-----	RD00315				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	475 ±1% 0603				0.00 %	
	R207					
0010-----	RD00282				9.0000	2003/09/03
	SMD precise resistor 1/10W			PCS	1	N
	1.00K ±1% 0603				0.00 %	
	R150 R110 R111 R113 R140 R141 R236 R57 R37					
0011-----	RD00396				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	1.15K ±1% 0603				0.00 %	
	R149					
0012-----	RD00201				5.0000	2003/08/06
	SMD precise resistor 1/10W			PCS	1	N
	1.50K ±1% 0603				0.00 %	
	R60 R66 R84 R205 R11					
0013-----	RD00203				4.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	2.00K ±1% 0603				0.00 %	
	R124 R211 R64 R65					
0014-----	RD00392				4.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	2.20K ±1% 0603				0.00 %	
	R229 R117 R118 R119					
0015-----	RD00271				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	2.67K ±1% 0603				0.00 %	
	R125					
0016-----	RD00322				2.0000	2003/09/01
	SMD precise resistor 1/10W			PCS	1	N
	2.70K ±1% 0603				0.00 %	
	R67 R142					
0017-----	RD00385				3.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	3.01K ±1% 0603				0.00 %	
	R175 R163 R164					
0018-----	RD00285				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	3.24K ±1% 0603				0.00 %	
	R133					
0019-----	RD00406				3.0000	2003/07/18

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Component Remark	Item Description				Usage Rate	@:Phantom Layer
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0020-----	SMD precise resistor 1/10W 3.60K ±1% 0603 R61 R62 R63			PCS	1 0.00 %	N
	RD00364				1.0000	2003/07/18
0021-----	SMD precise resistor 1/10W 4.02K ±1% 0603 R176			PCS	1 0.00 %	N
	RD00397				1.0000	2003/08/06
0022-----	SMD precise resistor 1/10W 4.22K ±1% 0603 R212			PCS	1 0.00 %	N
	RD00415				5.0000	2003/07/18
0023-----	SMD precise resistor 1/10W 4.70K ±1% 0603 R72 R73 R74 R76 R77			PCS	1 0.00 %	N
	RD00386				2.0000	2003/07/18
0024-----	SMD precise resistor 1/10W 4.75K ±1% 0603 R92 R93			PCS	1 0.00 %	N
	RD00209				3.0000	2003/07/18
0025-----	SMD precise resistor 1/10W 4.99K ±1% 0603 R179 R200 R174			PCS	1 0.00 %	N
	RD00210				19.0000	2003/08/14
0026-----	SMD precise resistor 1/10W 5.11K ±1% 0603 R189 R190 R95 R96 R97 R98 R99 R100 R101 R102 R103 R104 R105 R106 R107 R108 R109 R215 R19			PCS	1 0.00 %	N
	RD00287				2.0000	2003/07/18
0027-----	SMD precise resistor 1/10W 6.34K ±1% 0603 R173 R88			PCS	1 0.00 %	N
	RD00288				2.0000	2003/09/01
0028-----	SMD precise resistor 1/10W 6.81K ±1% 0603 R31 R32			PCS	1 0.00 %	N
	RD00366				2.0000	2003/09/01
0029-----	SMD precise resistor 1/10W 7.15K ±1% 0603 R208 R226			PCS	1 0.00 %	N
	RD00213				1.0000	2003/07/18
0030-----	SMD precise resistor 1/10W 7.50K ±1% 0603 R178			PCS	1 0.00 %	N
	RD00289				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N

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Component Remark	Item Description				Usage Rate	@:Phantom Layer
					Attrition Rate	
	8.06K ±1% 0603				0.00 %	
	R213					
0031-----	RD00214				24.0000	2003/08/06
	SMD precise resistor 1/10W			PCS	1	N
	10.0K ±1% 0603				0.00 %	
	R177 R2 R3 R4 R7 R8 R9 R10 R12 R13 R14 R15 R16 R17 R18 R19 R20 R21					
	R22 R23 R24 R25 R26 123					
0032-----	RD00301				4.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	12.1K ±1% 0603				0.00 %	
	R151 R152 R153 R158					
0033-----	RD00432				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	12.7K ±1% 0603				0.00 %	
	R126					
0034-----	RD00216				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	13.3K ±1% 0603				0.00 %	
	R91					
0035-----	RD00217				1.0000	2003/09/01
	SMD precise resistor 1/10W			PCS	1	N
	14.0K ±1% 0603				0.00 %	
	R94					
0036-----	RD00218				6.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	15.0K ±1% 0603				0.00 %	
	R183 R192 R129 R130 R131 R132					
0037-----	RD00293				3.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	17.4K ±1% 0603				0.00 %	
	165 R166 R167					
0038-----	RD00219				7.0000	2003/08/09
	SMD precise resistor 1/10W			PCS	1	N
	20.0K ±1% 0603				0.00 %	
	R49 R68 R69 R70 R89 R90 R242					
0039-----	RD00294				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	24.9K ±1% 0603				0.00 %	
	R196					
0040-----	RD00329				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	30.0K ±1% 0603				0.00 %	
	R187					
0041-----	RD00290				19.0000	2003/07/22
	SMD precise resistor 1/10W			PCS	1	N
	47.5K ±1% 0603				0.00 %	

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Component Remark	Item Description	Usage Rate	Attrition Rate	@:Phantom Layer		
	R127 R128 R136 R137 R138 R139 R48 R188 R33 R34 R35 R36 R39 R40 R41 R42 R43 R44 R45					
0042-----	RD00416	2.0000			2003/07/18	
	SMD precise resistor 1/10W	1		PCS	N	
	82.0K ±1% 0603	0.00			%	
	R222 R223					
0043-----	RD00318	1.0000			2003/09/03	
	SMD precise resistor 1/10W	1		PCS	N	
	200K ±1% 0603	0.00			%	
	R237					
0044-----	RD00224	6.0000			2003/09/03	
	SMD precise resistor 1/10W	1		PCS	N	
	100K ±1% 0603	0.00			%	
	R120 R121 R122 R5 R6 R238					
0045-----	RD00225	1.0000			2003/07/18	
	SMD precise resistor 1/10W	1		PCS	N	
	130K ±1% 0603	0.00			%	
	R148					
0046-----	RD00388	2.0000			2003/07/18	
	SMD precise resistor 1/10W	1		PCS	N	
	221K ±1% 0603	0.00			%	
	R55 R56					
0047-----	RD00310	1.0000			2003/07/18	
	SMD precise resistor 1/10W	1		PCS	N	
	287K ±1% 0603	0.00			%	
	R162					
0048-----	RD00291	2.0000			2003/07/18	
	SMD precise resistor 1/10W	1		PCS	N	
	301K ±1% 0603	0.00			%	
	R155 R241					
0049-----	RD00296	3.0000			2003/07/18	
	SMD precise resistor 1/10W	1		PCS	N	
	523K ±1% 0603	0.00			%	
	R159 R160 R161					
0050-----	RD00292	5.0000			2003/07/18	
	SMD precise resistor 1/10W	1		PCS	N	
	1.00M ±1% 0603	0.00			%	
	R83 R85 R86 R87 R234					
0051-----	RD00342	2.0000			2003/07/18	
	SMD precise resistor 1/10W	1		PCS	N	
	1.50M ±1% 0603	0.00			%	
	R157 R224					
0052-----	RD00319	3.0000			2003/07/18	
	SMD precise resistor 1/10W	1		PCS	N	
	2.00M ±1% 0603	0.00			%	
	R78 R82 R233					

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Component Remark	Item Description				Attrition Rate	
0053-----	RD00387				2.0000	2003/07/22
	SMD precise resistor 1/10W			PCS	1	N
	2.21M ±1% 0603				0.00 %	
	R201 R112					
0054-----	RD00391				1.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	4.75M ±1% 0603				0.00 %	
	R199					
0055-----	RD00390				2.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N
	10.0M ±1% 0603				0.00 %	
	R197 R198					
0056-----	RD00059				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	0.0 ±5% 0603				0.00 %	
	R202					
0057-----	RD00063				2.0000	2003/08/06
	SMD fixed resistor 1/10W			PCS	1	N
	22 ±5% 0603				0.00 %	
	R134 R54					
0058-----	RD00346				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	56 ±5% 0603				0.00 %	
	R186					
0059-----	RD00069				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	120 ±5% 0603				0.00 %	
	R147					
0060-----	RD00073				2.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	220 ±5% 0603				0.00 %	
	R185 R221					
0061-----	RD00078				2.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	470 ±5% 0603				0.00 %	
	R168 R184					
0062-----	RD00079				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	560 ±5% 0603				0.00 %	
	R80					
0063-----	RD00349				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	910 ±5% 0603				0.00 %	
	R210					
0064-----	RD00350				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N

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Component Remark	Item Description				Usage Rate	@:Phantom Layer
					Attrition Rate	
	1.1K ±5% 0603 R230				0.00 %	
0065-----	RD00351				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	1.3K ±5% 0603 R218				0.00 %	
0066-----	RD00086				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	1.8K ±5% 0603 R84				0.00 %	
0067-----	RD00096				2.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	6.2K ±5% 0603 R216 R217				0.00 %	
0068-----	RD00104				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	18K ±5% 0603 R191				0.00 %	
0069-----	RD00106				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	27K ±5% 0603 R195				0.00 %	
0070-----	RD00108				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	33K ±5% 0603 R209				0.00 %	
0071-----	RD00109				5.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	39K ±5% 0603 R182 R169 R170 R171 R172				0.00 %	
0072-----	RD00345				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	390K ±5% 0603 R156				0.00 %	
0073-----	RD00123				7.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	470K ±5% 0603 R46 R47 R50 R51 R52 R53 R71				0.00 %	
0074-----	RD00312				1.0000	2003/07/18
	SMD fixed resistor 1/10W			PCS	1	N
	680K ±5% 0603 R206				0.00 %	
0075-----	CI00109				2.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	20PF/50v NPO ±5% C84 C85				0.00 %	

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0076-----	CI00055				11.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	47PF/50V NPO ±5%				0.00 %	
	C6 C7 C8 C9 10 C11 C12 C13 C122 C131 C132					
0077-----	CI00059				4.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	100PF/50V NPO ±5%				0.00 %	
	C133 C134 C135 C136					
0078-----	CI00062				1.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	330PF/50V NPO ±5				0.00 %	
	C5					
0079-----	CI00063				1.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	470PF/50V NPO ±5				0.00 %	
	C81					
0080-----	CI00064				1.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	680PF/50V NPO ±5				0.00 %	
	C125					
0081-----	CI00129				2.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	0.0015uF/-50V X7R ±10%				0.00 %	
	C127 C128					
0082-----	CI00066				1.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	0.0018uF/50V X7R ±10%				0.00 %	
	C110					
0083-----	CI00068				1.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	0.0027uF/25V X7R ±10				0.00 %	
	C126					
0084-----	CI00140				2.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	0.056uF/25V X7R±10%				0.00 %	
	C106 C107					
0085-----	CI00069				3.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	0.0033uF/25V X7R ±10				0.00 %	
	C103 C104 C124					
0086-----	CI00071				2.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	0.01uF/50V X7R ±10%				0.00 %	
	C111 C112					
0087-----	CI00072				4.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N

Multi-Level BOM Structure Listing

Report No.: IEBO_P02 Date: 2003/10/01
 Prepared by: 000011[YAFEN] Page No.: 16/20
 Item No.: PF00322 Version: UNIT: PCS
 DESCRIPTION: VOICE PLUS Date: 2003/07/18
 VOICE PLUS_ALTO_230V

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Description				Usage Rate	@:Phantom Layer
					Attrition Rate	
	0.022uF/50V X7R ±10%				0.00 %	
	C99 C100 C101 C102					
0088-----	CI00075				64.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	0.1uF/50V Y5V +80,-20%				0.00 %	
	C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C31					
	C32 C33 C34 C35 C36 C37 C38 C39 C40 C41 C42 C43 C44 C45 C46 C47					
	C48 C49 C50 C51 C52 C53 C54 C55 C56 C57 C58 C59 C60 C63 C64 C65					
	C66 C67 C68 C69 C70 C71 C72 C73 C74 C75 C76 C77 C78 C79 C80 C130					
0089-----	CI00029				3.0000	2003/07/18
	SMD ceramic capacitor 0805			PCS	1	N
	0.1uF/50V Y5V				0.00 %	
	C108 C109 C129					
0090-----	SE00011				26.0000	2003/09/01
	SMD rectifier diode			PCS	1	N
	RLS4148 0.5A (LL-34)				0.00 %	
	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D16 D17 D18 D19					
	D20 D21 D22 D23 D24 D25 D26					
0091-----	SE00014				1.0000	2003/07/18
	SMD zener diode			PCS	1	N
	1/2W 2.7V(RLZ5.1B) LL-34				0.00 %	
	ZD1					
0092-----	SF00010				1.0000	2003/07/18
	SMD transistor			PCS	1	N
	2SC2412K(R)(MMBT3904LT1)				0.00 %	
	TR4					
0093-----	SF00004				7.0000	2003/07/18
	SMD transistor			PCS	1	N
	2SA1036K(R)(MMBT3906LT1)				0.00 %	
	TR2 TR3 TR5 TR6 TR7 TR8 TR9					
0094-----	SG00119				1.0000	2003/07/18
	SMD integrated circuit			PCS	1	N
	CA3086M96				0.00 %	
	U25					
0095-----	SG00107				1.0000	2003/07/18
	SMDintegrated circuit			PCS	1	N
	TL064CDT				0.00 %	
	U24					
0096-----	SG00116				7.0000	2003/07/18
	smd integrated circuit			PCS	1	N
	BA1033FV E2				0.00 %	
	U27 U28 U29 U30 U32 U33 U34					
0097-----	SG00122				24.0000	2003/07/18
	SMD integrated circuit			PCS	1	N
	NJM4580M-TE3				0.00 %	
	U1 U2 U3 U4 U5 U6 U7 U8 U9 U10 U11 U12 U13 U14 U16 U17 U18 U19					

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 000011[YAFEN]
 Item No. PF00322 Version
 DESCRIPTION: VOICE PLUS
 VOICE PLUS_ALTO_230V

Date 2003/10/01
 Page No.: 17/20

UNIT: PCS
 Date: 2003/07/18

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Description				Usage Rate	@:Phantom Layer
					Attrition Rate	
	<u>U20 U21 U22 U23 U26 U31</u>					
0098-----	RD00317				1.0000	2003/07/23
	SMD precise resistor 1/10W			PCS	1	
	39.2K ±1% 0603				0.00 %	
	R38					
0099-----	RD00365				2.0000	2003/08/07
	SMD precise resistor 1/10W			PCS	1	
	5.62K ±1% 0603				0.00 %	
	R58 R59					
0100-----	CI00092				1.0000	2003/08/09
	SMD ceramic capacitor 0603			PCS	1	
	0.0068uF/50V X7R ±10%				0.00 %	
	C105					
0101-----	RD00077				1.0000	2003/09/03
	SMD fixed resistor 1/10W			PCS	1	
	390 ±5% 0603				0.00 %	
	R231					
0102-----	RD00204				1.0000	2003/09/03
	SMD precise resistor 1/10W			PCS	1	
	2.49K ±1% 0603				0.00 %	
	R228					
0103-----	RD00425				1.0000	2003/09/03
	SMD precise resistor 1/10W			PCS	1	
	1.65K ±1% 0603				0.00 %	
	R227					
0061-----	HK01568				1.0000	2003/07/18
	PC board			PCS	1	N
	P-VOICERP-DIP				0.00 %	
0001-----	RA00187				1.0000	2003/07/18
	fixed resistor 1/4W			PCS	1	N
	150				0.00 %	
	R35					
0002-----	CB00051				5.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	100uF/63V 10*12mm				0.00 %	
	C19 C20 C21 C22 C23					
0003-----	CB00056				2.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	220uF/25V 8*11mm				0.00 %	
	C37 C38					
0004-----	CB00073				2.0000	2003/07/18
	electrolytic capacitor			PCS	1	N
	1000uF/35V 13*20mm				0.00 %	
	C35 C36					
0005-----	SA00001				1.0000	2003/07/18
	bridge rectifier			PCS	1	N

Multi-Level BOM Structure Listing

Report No.: IEBO_P02 Date: 2003/10/01
 Prepared by: 000011[YAFEN] Page No.: 18/20
 Item No.: PF00322 Version: UNIT: PCS
 DESCRIPTION: VOICE PLUS Date: 2003/07/18
 VOICE PLUS_ALTO_230V

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Description				Usage Rate	@:Phantom Layer
					Attrition Rate	
	1A/400V RB154				0.00 %	
	BD1					
0006-----	SA00089				2.0000	2003/07/18
	AC diode			PCS	1	N
	C901,DB3				0.00 %	
	D1 D2					
0007-----	SA00127				1.0000	2003/07/18
	zener diode			PCS	1	N
	1/2W 47V 1N5261				0.00 %	
	ZD1					
0008-----	HA02190				1.0000	2003/07/18
	wire CF:W303			PCS	1	N
	150mm black				0.00 %	
	TP1					
0009-----	SB00043				1.0000	2003/07/18
	transistor			PCS	1	N
	TIP122(ST)				0.00 %	
	TR1					
0010-----	HC00397				2.0000	2003/07/18
	row-wire header			PCS	1	N
	10P 2.0mm 180°				0.00 %	
	J1 J2					
0011-----	HC00089				1.0000	2003/07/18
	row-wire header			PCS	1	N
	3P 3.9mm 180°				0.00 %	
	CN1					
0012-----	HC00392				2.0000	2003/07/18
	MIC jack for balance			PCS	1	N
	JY-5030-030G 180°				0.00 %	
	X6 X7					
0013-----	HC00126				1.0000	2003/07/18
	MIC jack for balance			PCS	1	N
	JY-5042-030G female plug 180°				0.00 %	
	X1					
0014-----	HC00125				4.0000	2003/07/18
	MIC jack			PCS	1	N
	JY-6351G-02-250				0.00 %	
	X2 X3 X4 X5					
0015-----	HK01569				1.0000	2003/07/18
	PC board			PCS	1	N
	P-VOICERP-SMD				0.00 %	
0001-----	HB00971				1.0000	2003/07/18
	pc board			PCS	1	N
	VOICERP(1*4)_VER030630				0.00 %	
0002-----	RD00297				4.0000	2003/07/18
	SMD precise resistor 1/10W			PCS	1	N

Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 000011[YAFEN]
 Item No. PF00322 Version
 DESCRIPTION: VOICE PLUS
 VOICE PLUS_ALTO_230V

Date 2003/10/01
 Page No.: 19/20

UNIT: PCS
 Date: 2003/07/18

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer	Attrition Rate
	60.4 ±1% 0603 R27 R28 R29 R30				0.00 %		
0003-----	RD00282 SMD precise resistor 1/10W 1.00K ±1% 0603 R31 R32			PCS	2.0000 1 0.00 %	2003/07/18 N	
0004-----	RD00271 SMD precise resistor 1/10W 2.67K ±1% 0603 R33 R34			PCS	2.0000 1 0.00 %	2003/07/18 N	
0005-----	RD00363 SMD precise resistor 1/10W 3.16K ±1% 0603 R9 R10 R11 R12			PCS	4.0000 1 0.00 %	2003/07/18 N	
0006-----	RD00285 SMD precise resistor 1/10W 3.24K ±1% 0603 R21 R22			PCS	2.0000 1 0.00 %	2003/07/18 N	
0007-----	RD00286 SMD precise resistor 1/10W 4.53K ±1% 0603 R23 R24 R25 R26			PCS	4.0000 1 0.00 %	2003/07/18 N	
0008-----	RD00299 SMD precise resistor 1/10W 5.76K ±1% 0603 R19 R20			PCS	2.0000 1 0.00 %	2003/07/18 N	
0009-----	RD00214 SMD precise resistor 1/10W 10.0K ±1% 0603 R13 R14 R15 R16 R36			PCS	5.0000 1 0.00 %	2003/07/18 N	
0010-----	RD00219 SMD precise resistor 1/10W 20.0K ±1% 0603 R5 R6 R7 R8 R37			PCS	5.0000 1 0.00 %	2003/07/18 N	
0011-----	CI00047 SMD ceramic capacitor 0603 10PF/50V NPO ±5% C9 C10 C11 C12 C13 C14			PCS	6.0000 1 0.00 %	2003/07/18 N	
0012-----	CI00059 SMD ceramic capacitor 0603 100PF/50V NPO ±5% C1 C2 C3 C5 C6 C7 C8 C4			PCS	8.0000 1 0.00 %	2003/07/18 N	
0013-----	CI00063 SMD ceramic capacitor 0603 470PF/50V NPO ±5 C15 C16 C17 C18			PCS	4.0000 1 0.00 %	2003/07/18 N	

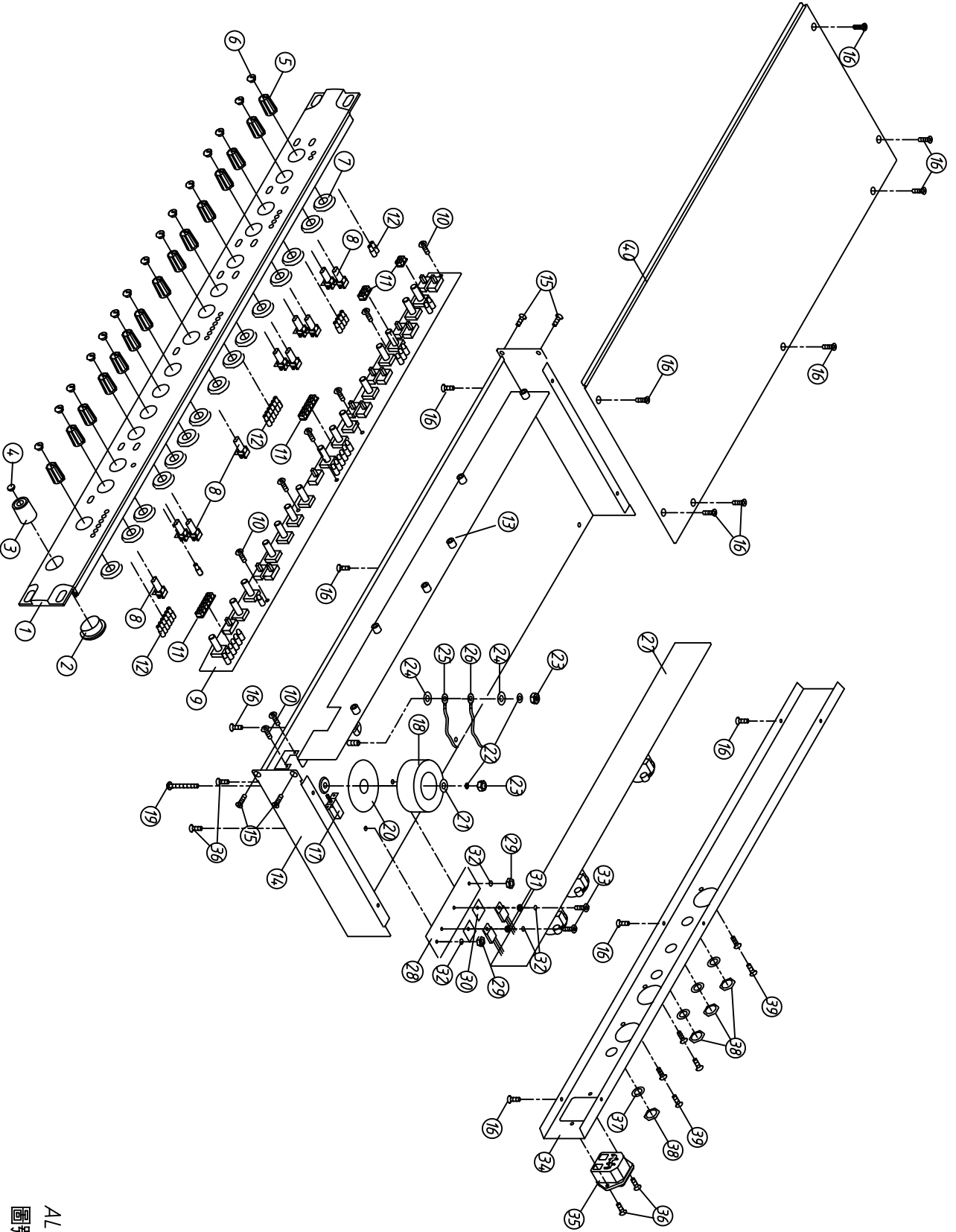
Multi-Level BOM Structure Listing

Report No.: IEBO_P02
 Prepared by 000011[YAFEN]
 Item No. PF00322 Version
 DESCRIPTION: VOICE PLUS
 VOICE PLUS_ALTO_230V

Date 2003/10/01
 Page No.: 20/20

UNIT: PCS
 Date: 2003/07/18

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer
Component Remark	Item Description				Attrition Rate	
0014-----	CI00075				10.0000	2003/07/18
	SMD ceramic capacitor 0603			PCS	1	N
	0.1uF/50V Y5V +80,-20%				0.00	%
	C25 C26 C27 C28 C29 C30 C31 C32 C33 C34					
0015-----	SG00122				3.0000	2003/07/18
	SMD integrated circuit			PCS	1	N
	NJM4580M-TE3				0.00	%
	U3 U4 U5					
0016-----	RD00300				2.0000	2003/08/07
	SMD precise resistor 1/10W			PCS	1	
	6.04K ±1% 0603				0.00	%
	R17 R18					



AL TO VOICE
圖號: VOICE-03
日期: 20030703

8.Exploded Views

SEKAKU ELECTRON INDUSTRY CO., LTD.

Model:VOICE PLUS Part List

2003/08/21

NoVOICEPLUS-0 0

NO	Material No	Item Name	Specific	unit	material	remark	NO	Material No	Item Name	Specific	unit	material	remark
1	MA03322	panel	VOICE PLUS	1			28	MJ00123	heat-sink(white)	65*18*4 SCX-P234	1		
2	NI02085	power switch fixed sleeve	22*9.69 072C blue	1			29	ME00015	colour nut	3m/m	2		
3	NI00308	power sw bottom	15*17	1			30	NC00005	silicone insulator	TO-220 square type	2		
4	NI01159	power switch bottom cover	6*2.5 YELLOW C	1			31	NI02249	caushion	TW-1(TO-220)	2		
5	NI00362	plastic knob	(COOL GRAY 8C/white)	16			32	MF00037	spring washer	3* 5*1t	4		
6	NI00896	knob cover	8.5*4 bule 072C	16			33	MG00162	Ni screw	M3*8	2		
7	NI02408	fixed piece	15*2.7mm white CONTROL30	16			34	MB02265	rear board	VOICE PLUS	1		
8	NI01156	button	3*W6*18.3	9			35	HC00015	AC outlett	(S)315-B (AC select)	1		
9		semi-finished goods		1			36	MG00042	screw	M3*10	4		
10	MG00041	screw	M3*6	6			37	ME00060	MIC socket nut- HC00125 Appendix	hexagon(JY-6351G-02-250)	4		
11	NI01876	LED spacer support	7.6*4.5*184	2			38	MF00061	MIC socket washer-HC00125	circle (JY-6351G-02-250)	4		
12	NI01178	guide honor pillar	3.1*85	2			39	MG00061	screw	M3*10	6		
13	MI00899	front board	VOICE PLUS	1			40	MC00209	top cover	CLE2.0	1		
14	MB00522	bottom board	CLE2.0	1			41						
15	MG00045	screw	M3*7	4			42						
16	MG00025	screw	M3*6	13			43						
17	HI00023	power switch	SDDL B 1007U	1			44						
18	TD00118	transformer	PT-CLE40(include FUSE102)	1			45						
19	MG00111	colour screw	M4*30	1			46						
20	NI00443	rubber coil	20* 60*2tB	1			47						
21	MF00019	colour washer	4* 12*1t	1			48						
22	MF00038	spring washer	4* 7*1t	2			49						
23	ME00016	colour nut	4m/m	2			50						
24	MF00048	washer	4* 8*0.5t	2			51						
25	HA01798	wire UL1617 AWG22	250mm black	1			52						
26	HA01333	wire 4.5*8.5mm	150mm UL1015 18AWG green/yellow	1			53						
27		semi-finished goods		1			54						