

Service Manual

AD120VT

CONTENTS

Circuit Diagram: Page 2-15

Structural Diagram: Page 16-17

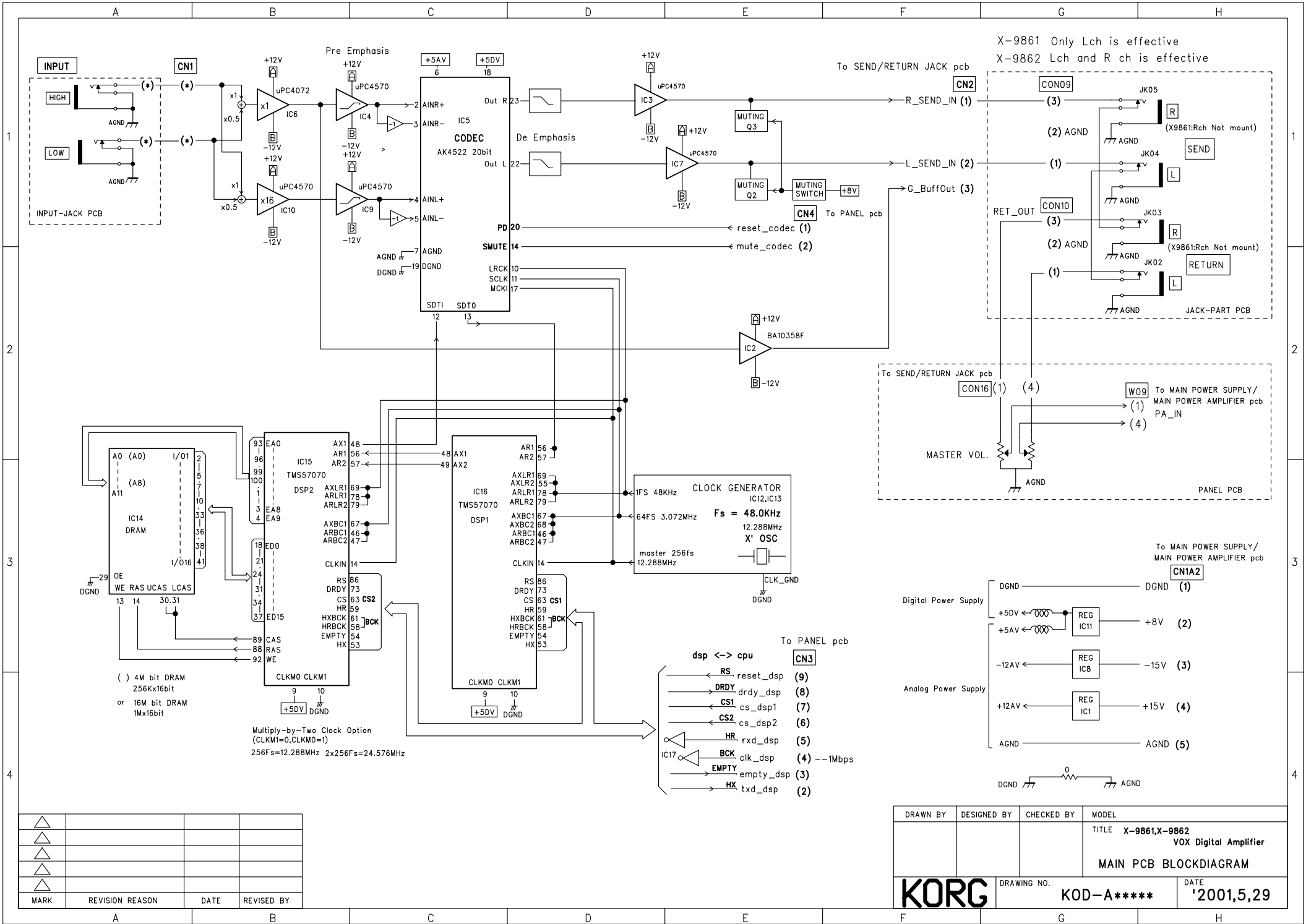
Test Mode: Page 18-19

Parts List: Page:20-35

3rd Edition

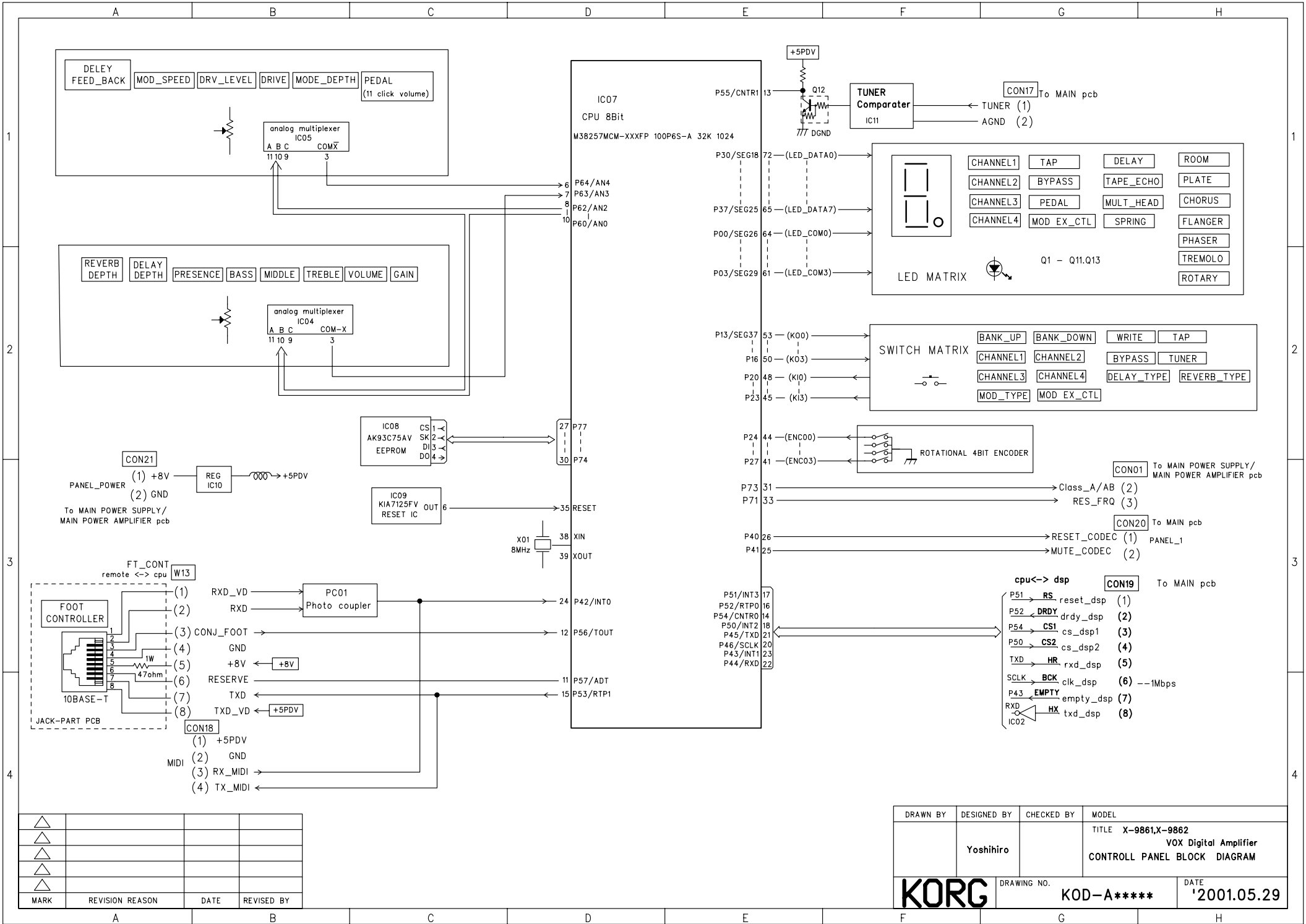
Issued date: June 20th, 2003

Issued by: KORG INC.



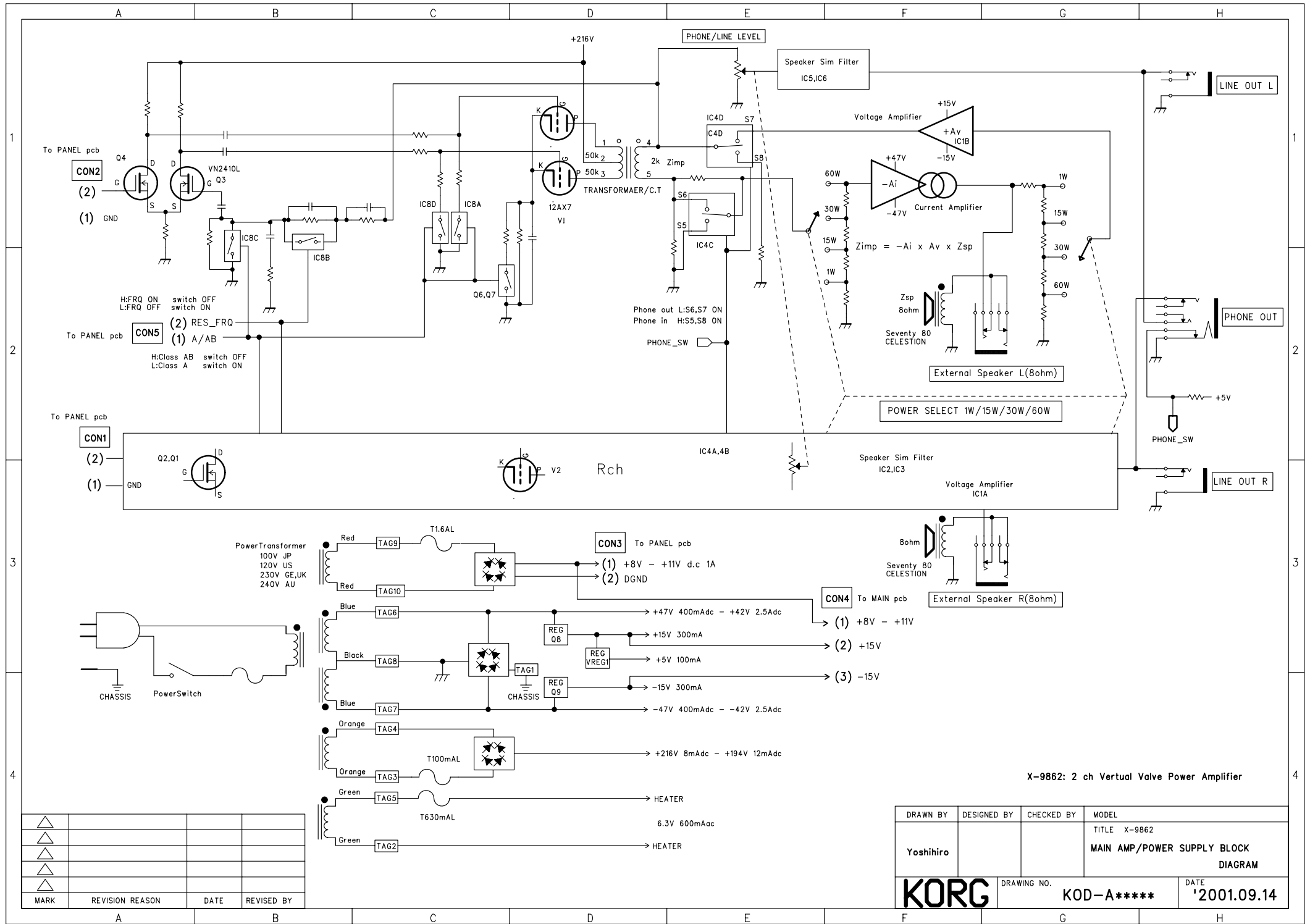
MARK	REVISION	REASON	DATE	REVISED BY
△				
△				
△				
△				

DRAWN BY	DESIGNED BY	CHECKED BY	MODEL
			TITLE X-9861,X-9862 VOX Digital Amplifier
			MAIN PCB BLOCKDIAGRAM
KORG		DRAWING NO. KOD-A*****	DATE '2001,5,29



MARK	REVISION	REASON	DATE	REVISED BY
△				
△				
△				
△				
△				

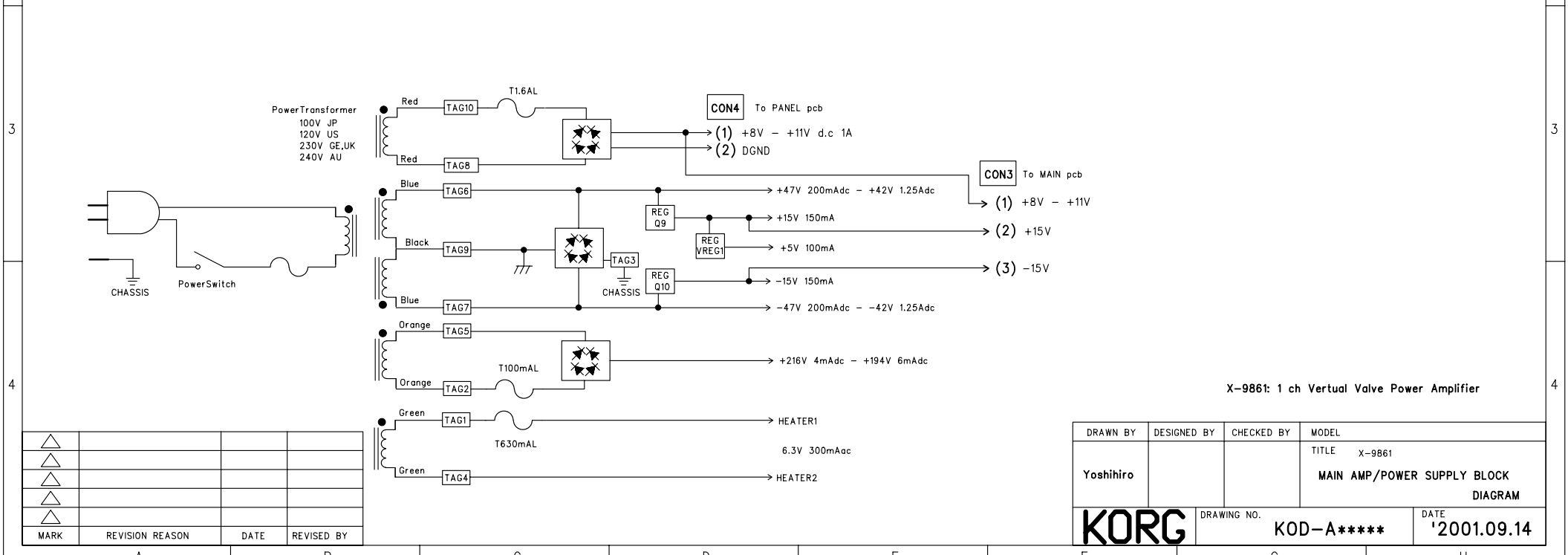
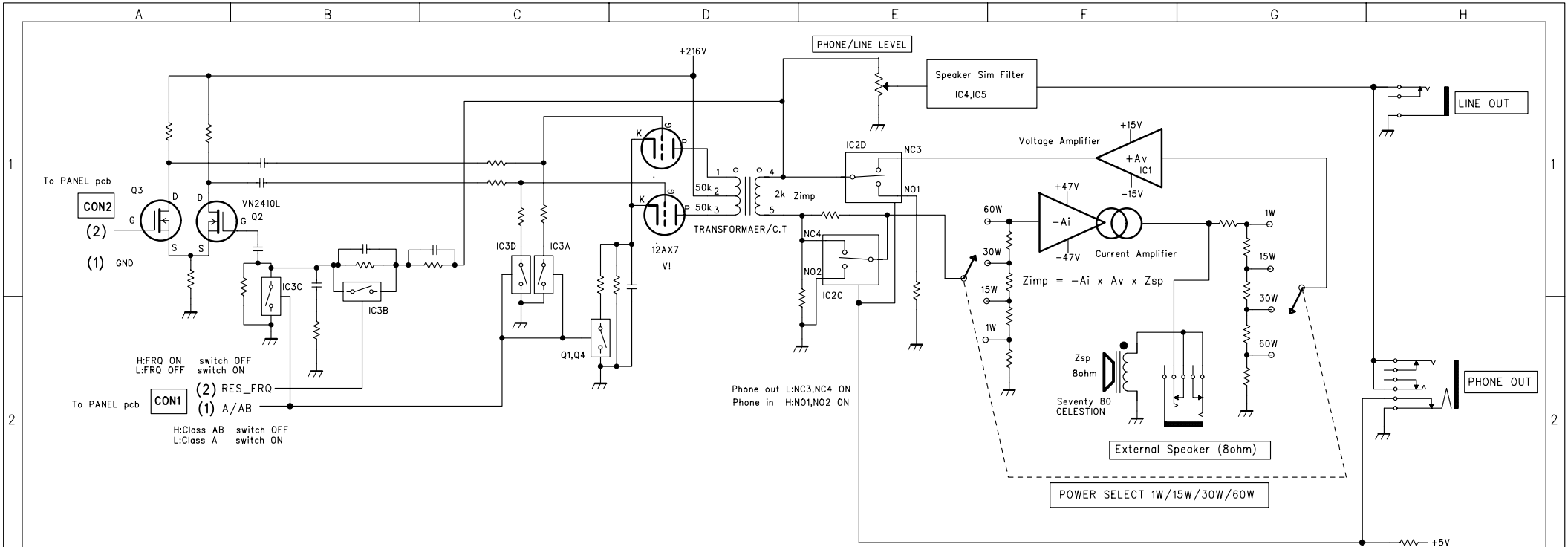
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL
	Yoshihiro		TITLE X-9861,X-9862 VOX Digital Amplifier CONTROLL PANEL BLOCK DIAGRAM
KORG		DRAWING NO.	DATE
		KOD-A*****	'2001.05.29



X-9862: 2 ch Virtual Valve Power Amplifier

MARK	REVISION	REASON	DATE	REVISED BY
△				
△				
△				
△				

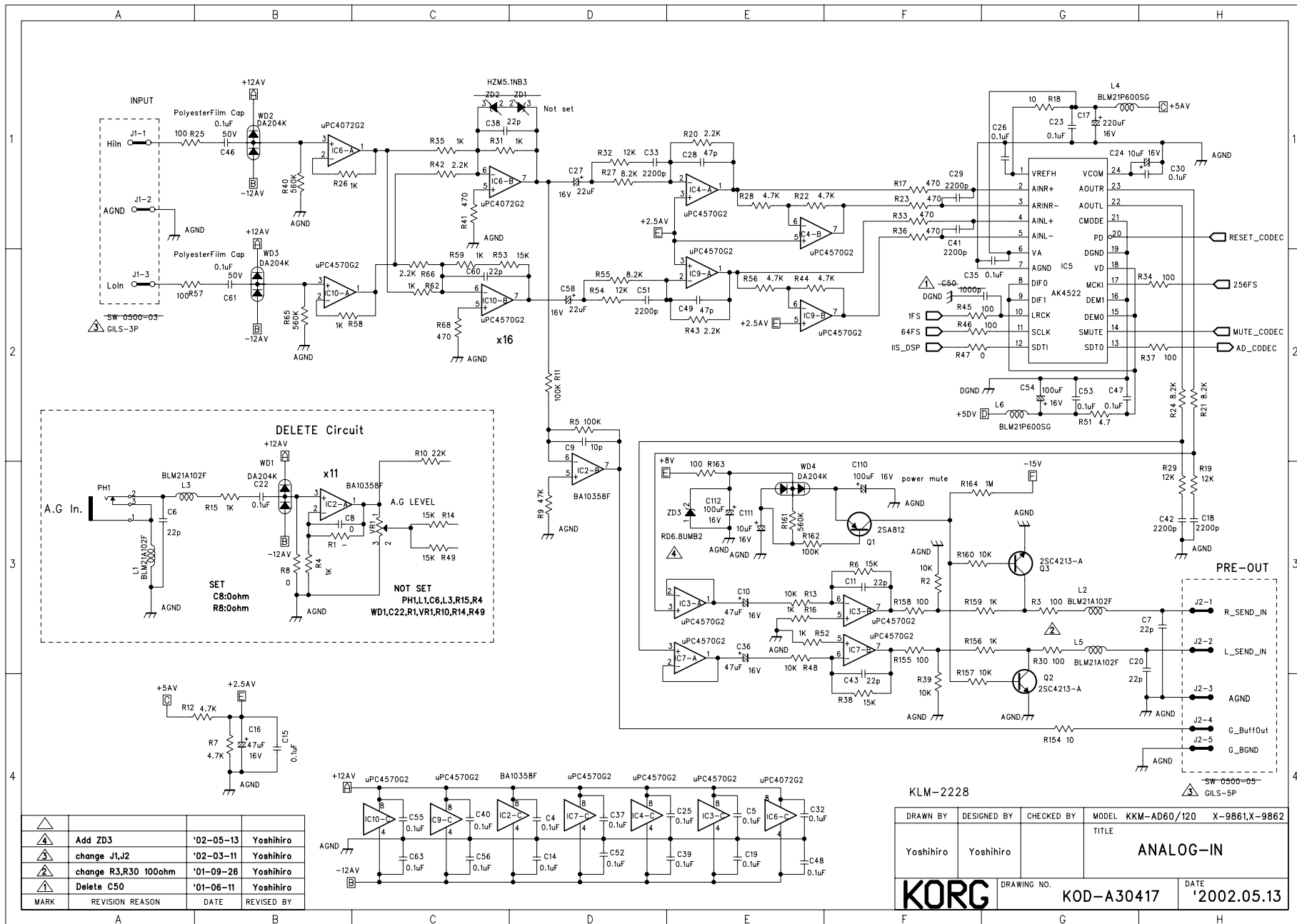
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL
Yoshihiro			TITLE X-9862 MAIN AMP/POWER SUPPLY BLOCK DIAGRAM
KORG		DRAWING NO. KOD-A*****	DATE '2001.09.14



X-9861: 1 ch Vertual Valve Power Amplifier

△			
△			
△			
△			
MARK	REVISION REASON	DATE	REVISED BY

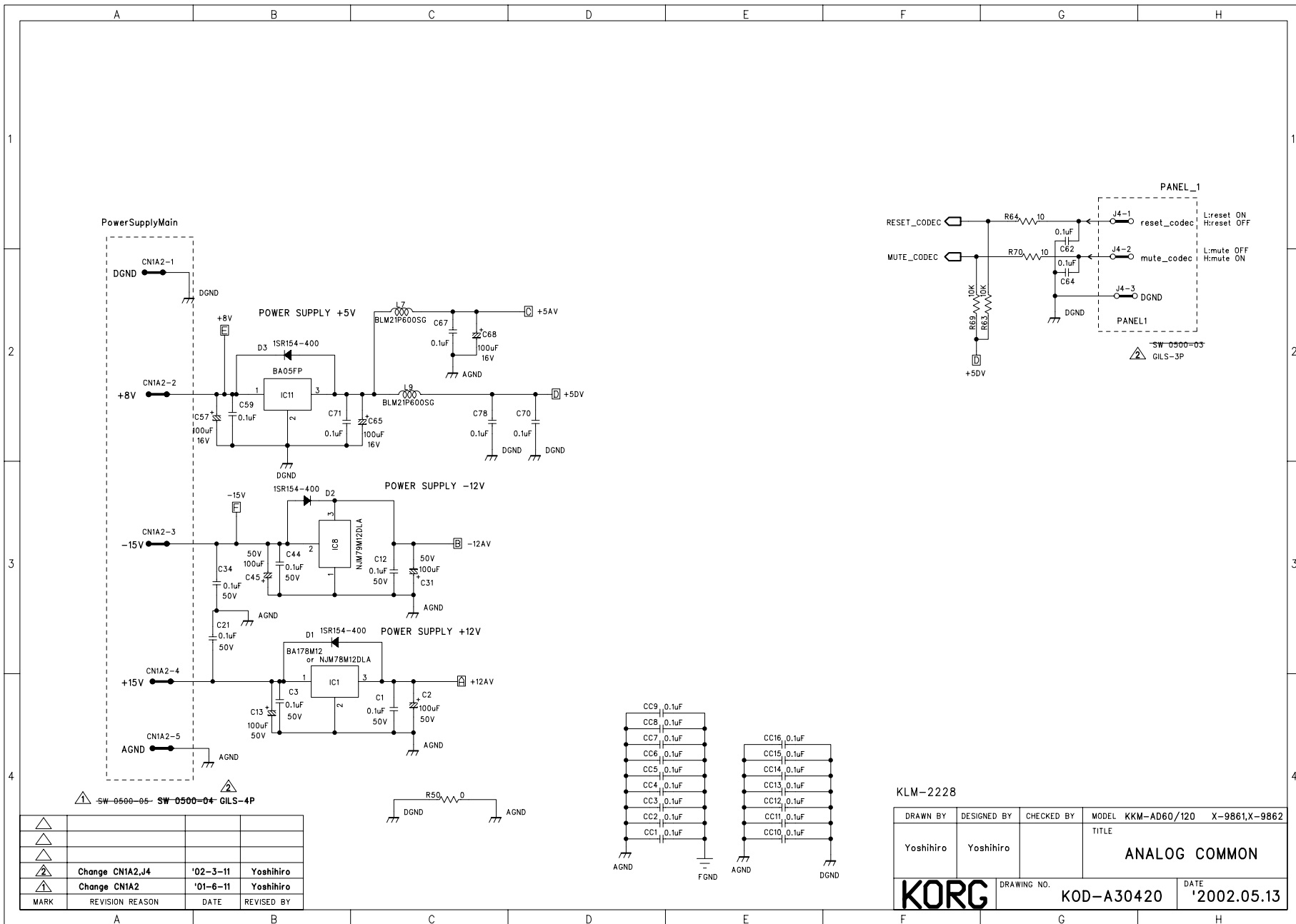
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL
Yoshihiro			TITLE X-9861
			MAIN AMP/POWER SUPPLY BLOCK DIAGRAM
DRAWING NO. KOD-A*****		DATE '2001.09.14	



MARK	REVISION	REASON	DATE	REVISED BY
△	1	Add ZD3	'02-05-13	Yoshihiro
△	2	change J1,J2	'02-03-11	Yoshihiro
△	3	change R3,R30 100ohm	'01-09-26	Yoshihiro
△	4	Delete C50	'01-06-11	Yoshihiro

KLM-222B

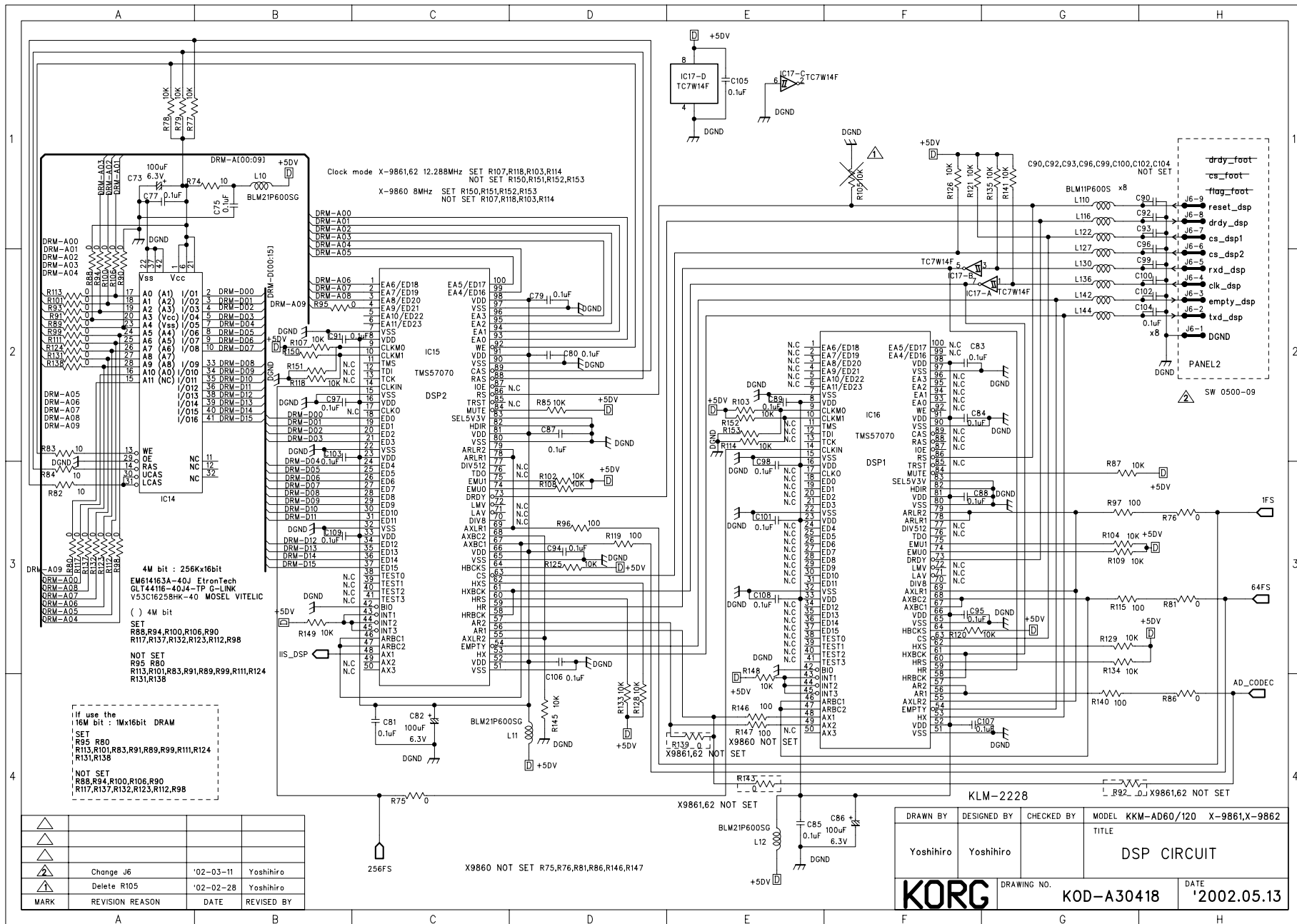
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL	KKM-AD60/120	X-9861,X-9862
Yoshihiro	Yoshihiro		TITLE	ANALOG-IN	
KORG		DRAWING NO.	KOD-A30417	DATE	'2002.05.13



△			
△			
△			
△	Change CN1A2,J4	'02-3-11	Yoshihiro
△	Change CN1A2	'01-6-11	Yoshihiro
MARK	REVISION REASON	DATE	REVISED BY

KLM-2228

DRAWN BY	DESIGNED BY	CHECKED BY	MODEL	KKM-AD60/120	X-9861,X-9862
Yoshihiro	Yoshihiro		TITLE		
			ANALOG COMMON		
KORG		DRAWING NO.	KOD-A30420	DATE	'2002.05.13



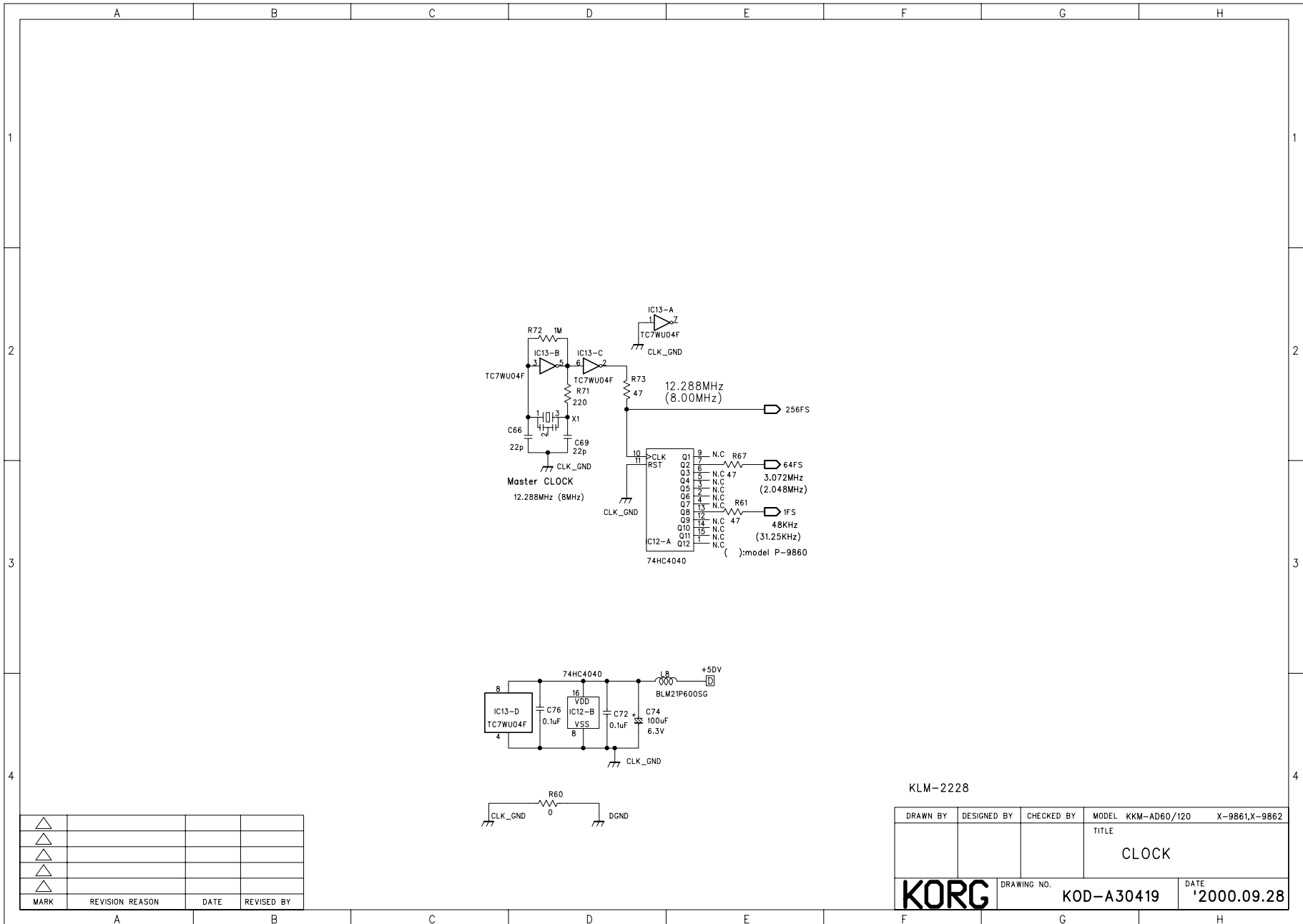
DRM-A(00:09) +5DV
 C73 6.3V L10 BLM21P600SG
 Clock mode X-9861,62 12.288MHz SET R107,R118,R103,R114
 NOT SET R150,R151,R152,R153
 X-9860 8MHz SET R150,R151,R152,R153
 NOT SET R107,R118,R103,R114

4M bit : 256Kx16bit
 EM61463A-40J EltronTech
 GL144116-40J4-TP G-LINK
 V53C16258HK-40 MOSEL VITELIC
 () 4M bit
 SET
 R88,R94,R100,R106,R90
 R117,R137,R132,R123,R112,R98
 NOT SET
 R95 R80
 R113,R101,R83,R91,R89,R99,R111,R124
 R131,R138

If use the
 1M bit : 1Mx16bit DRAM
 SET
 R95 R80
 R113,R101,R83,R91,R89,R99,R111,R124
 R131,R138
 NOT SET
 R88,R94,R100,R106,R90
 R117,R137,R132,R123,R112,R98

△			
△			
△	Change J6	'02-03-11	Yoshihiro
△	Delete R105	'02-02-28	Yoshihiro
MARK	REVISION REASON	DATE	REVISED BY

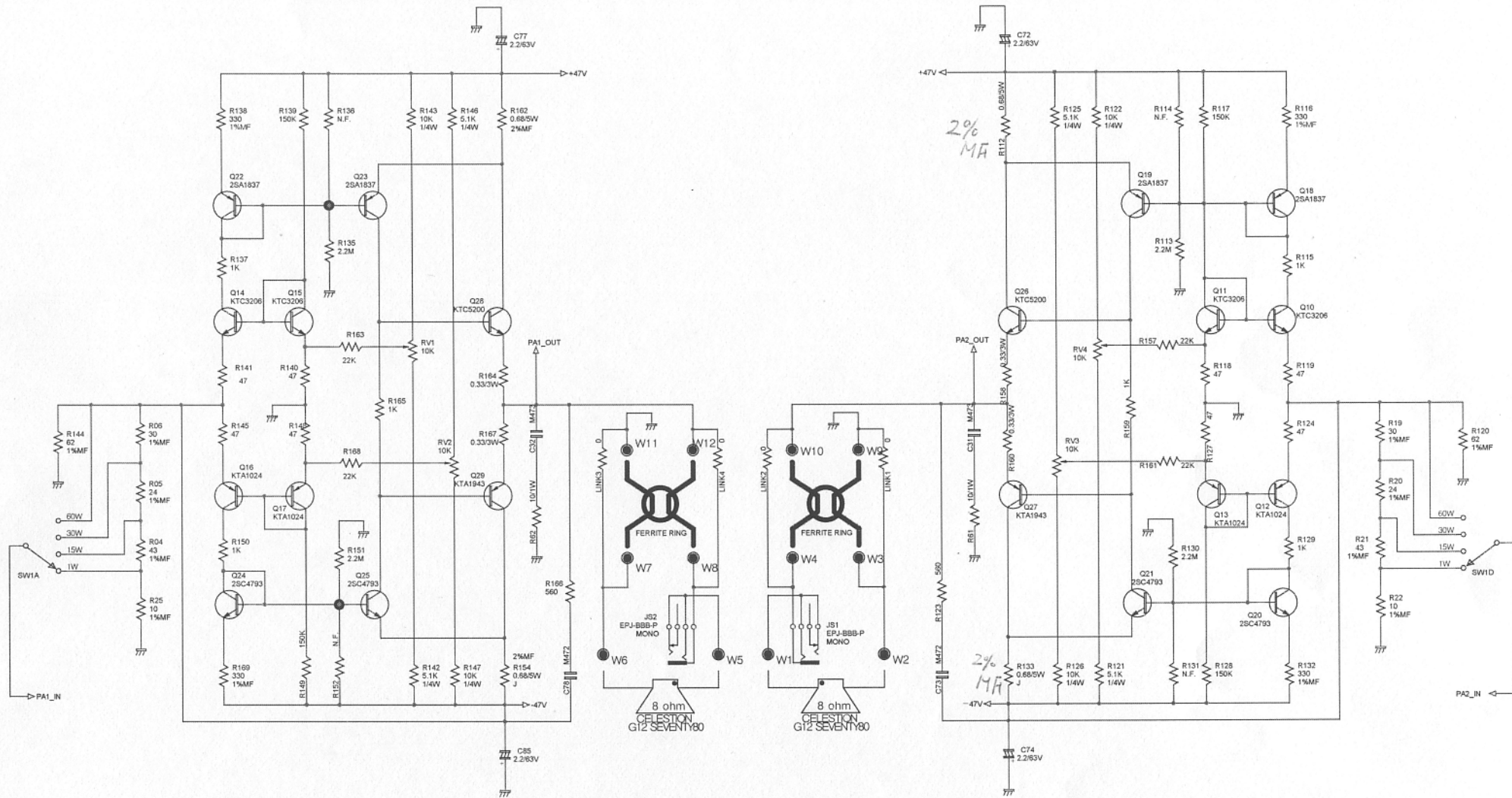
DRAWN BY		DESIGNED BY	CHECKED BY	MODEL	KKM-AD60/120	X-9861,X-9862
Yoshihiro		Yoshihiro		TITLE	DSP CIRCUIT	
KORG		DRAWING NO.	KOD-A30418	DATE	'2002.05.13	



MARK	REVISION REASON	DATE	REVISED BY
△			
△			
△			
△			

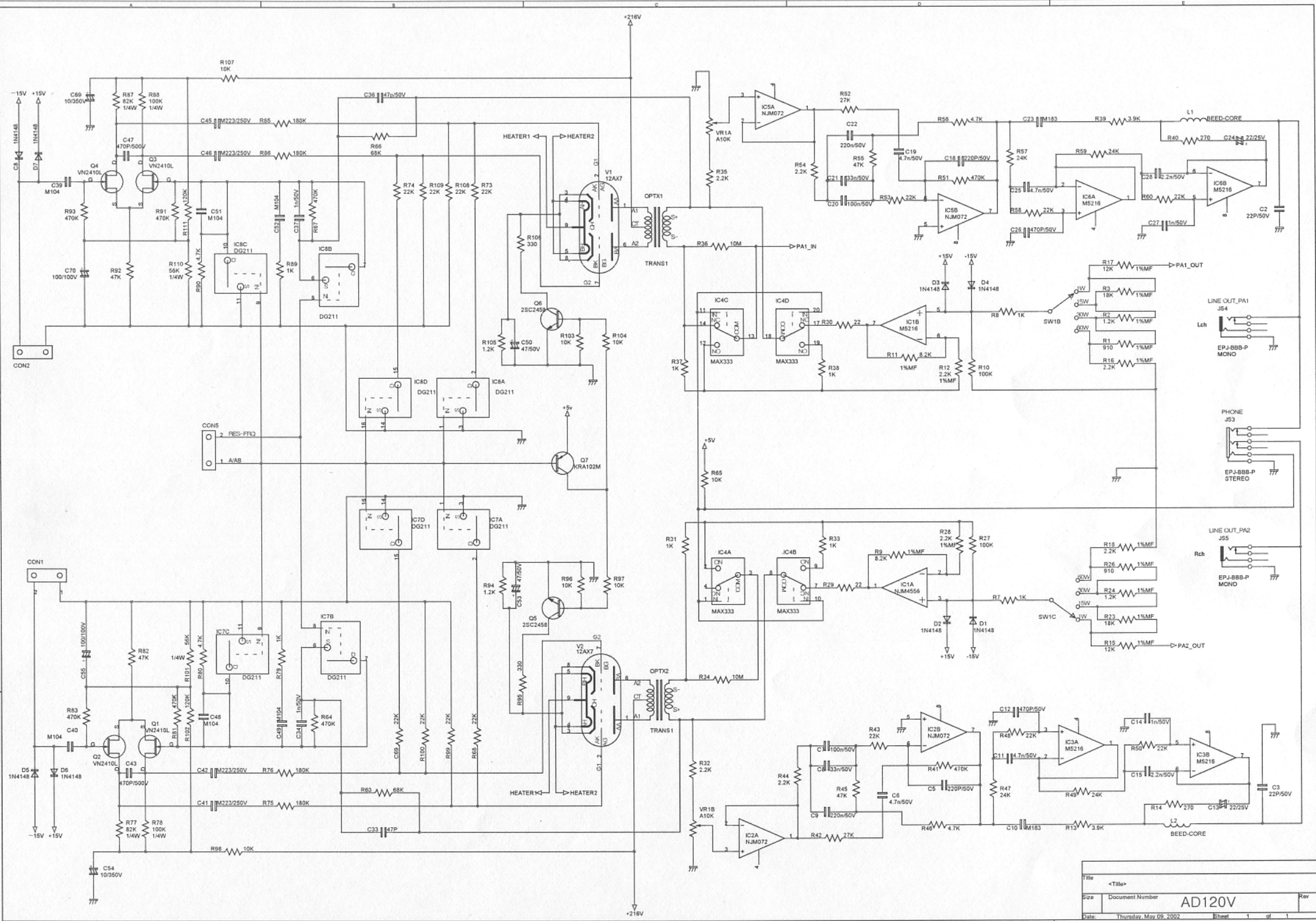
KLM-2228

DRAWN BY	DESIGNED BY	CHECKED BY	MODEL KKM-AD60/120	X-9861,X-9862
			TITLE	
			CLOCK	
KORG		DRAWING NO.	KOD-A30419	DATE '2000.09.28

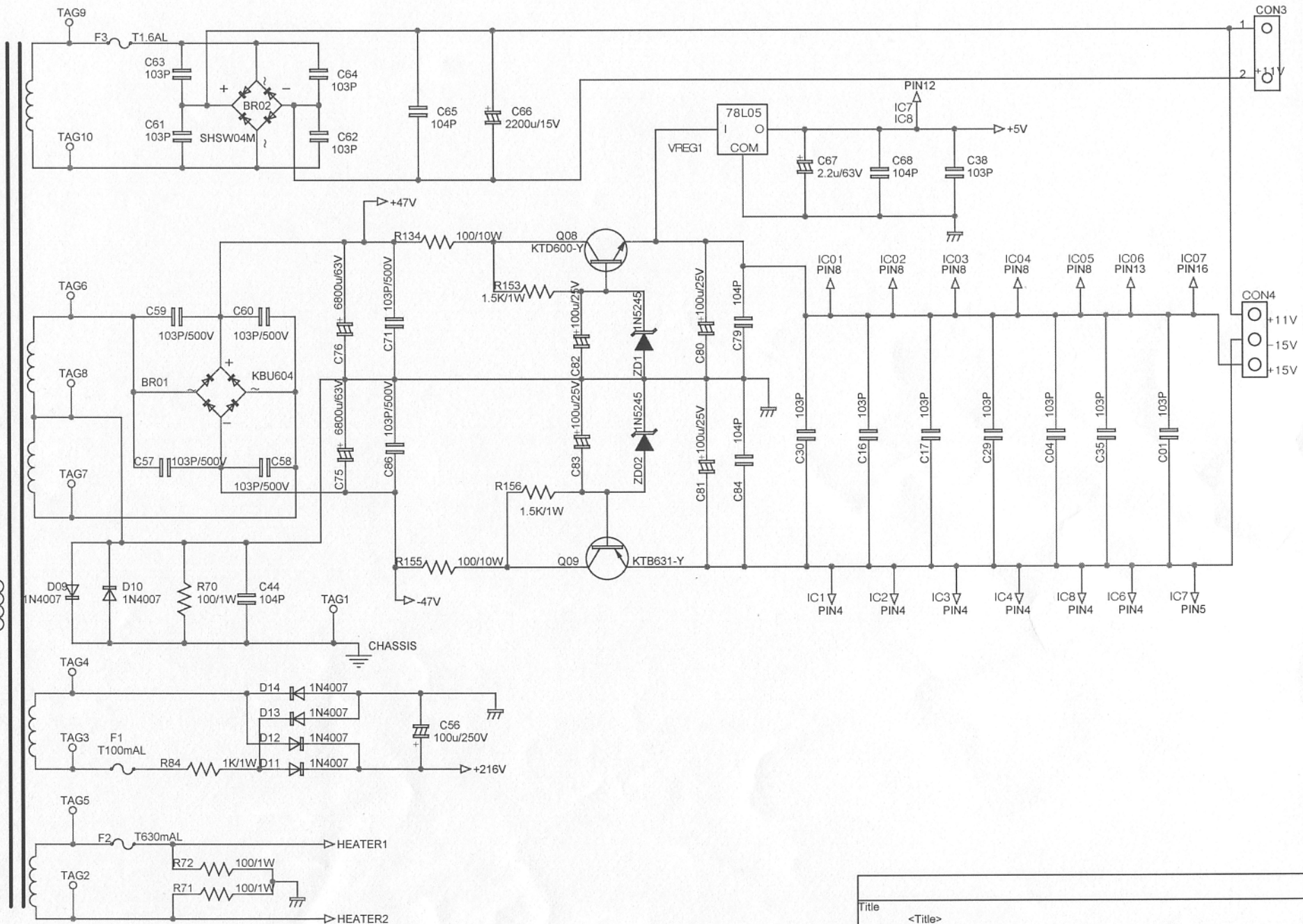
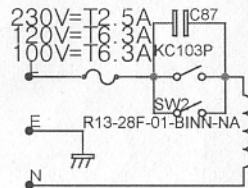


Title	<Title>
Size	Document Number
Date	Thursday, May 09, 2002
Sheet	1 of 1

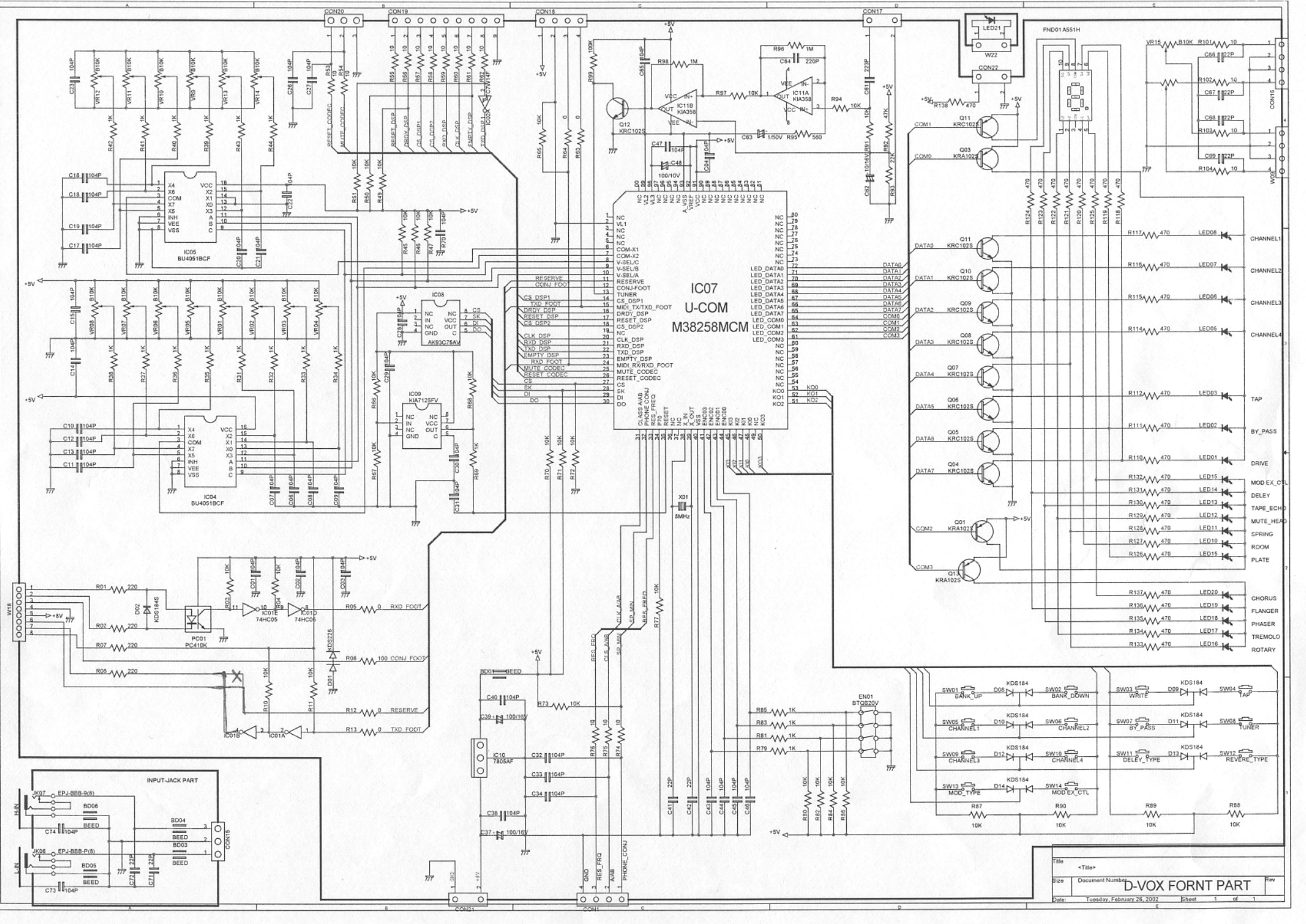
AD120V



Title	<Title>	
Size	Document Number	AD120V
Date	Thursday, May 09, 2002	Sheet 1 of 1



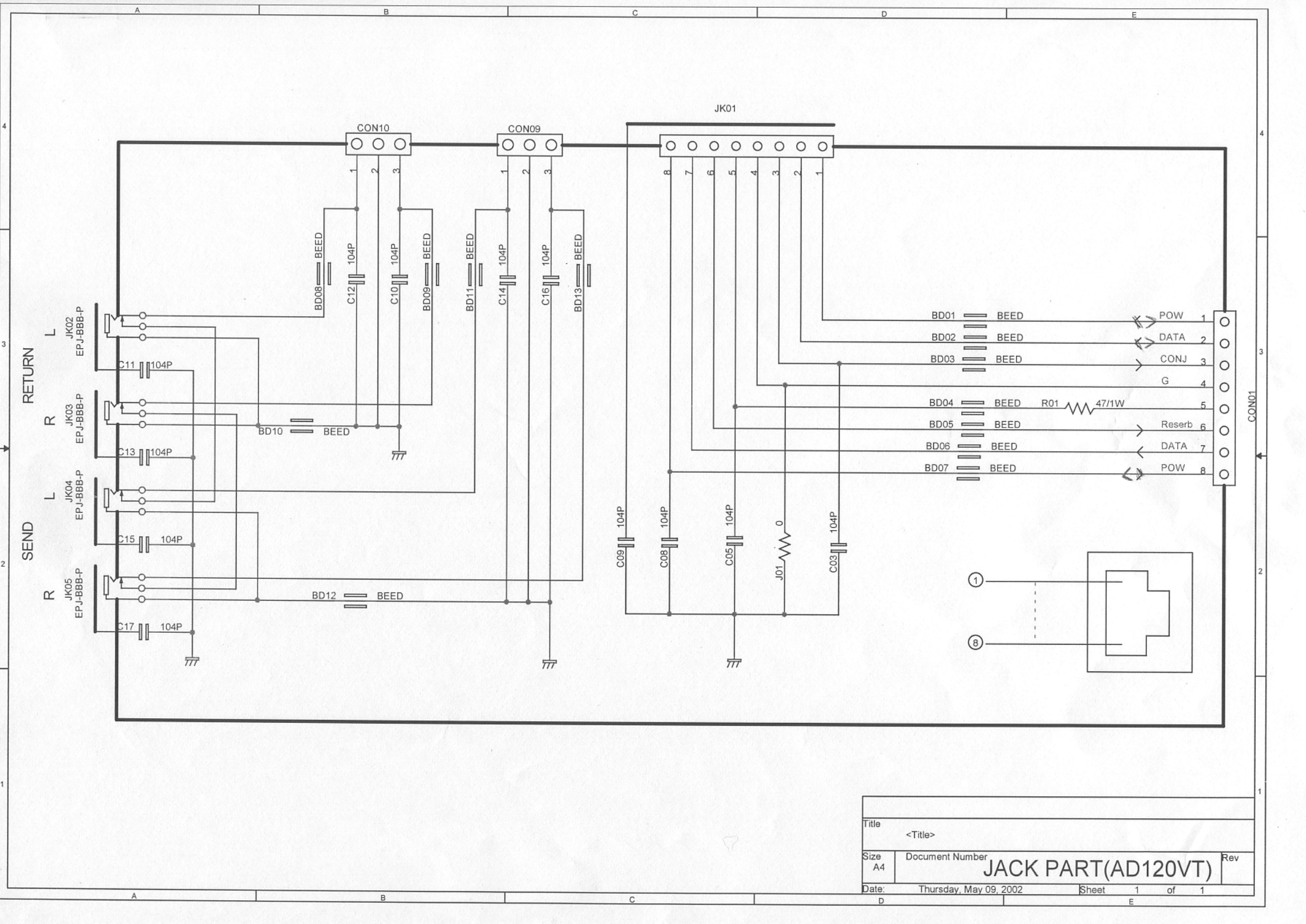
Title		<Title>	
Size	Document Number	AD120V	Rev
Date:	Thursday, May 09, 2002	Sheet	1 of 1



IC07
U-COM
M38258MCM

D-VOX FRONT PART

Title	<Title>	Rev
Size	Document Number	
Date	Tuesday, February 26, 2002	Sheet 1 of 1



Title		<Title>	
Size	Document Number	JACK PART(AD120VT)	
A4		Date:	Thursday, May 09, 2002
		Sheet	1 of 1
		Rev	

FRONT PCB

KC103P

LED PCB

9862

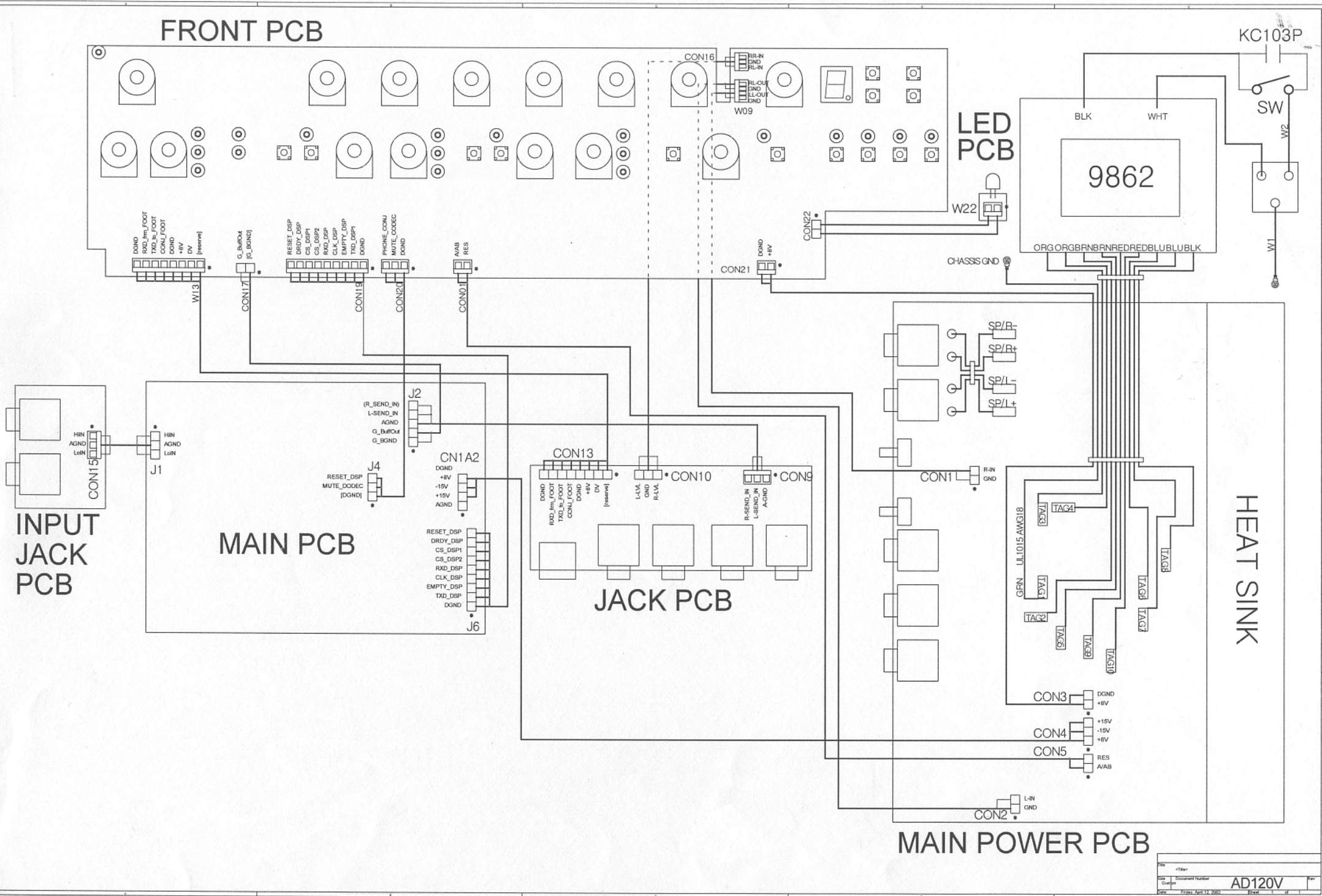
HEAT SINK

INPUT JACK PCB

MAIN PCB

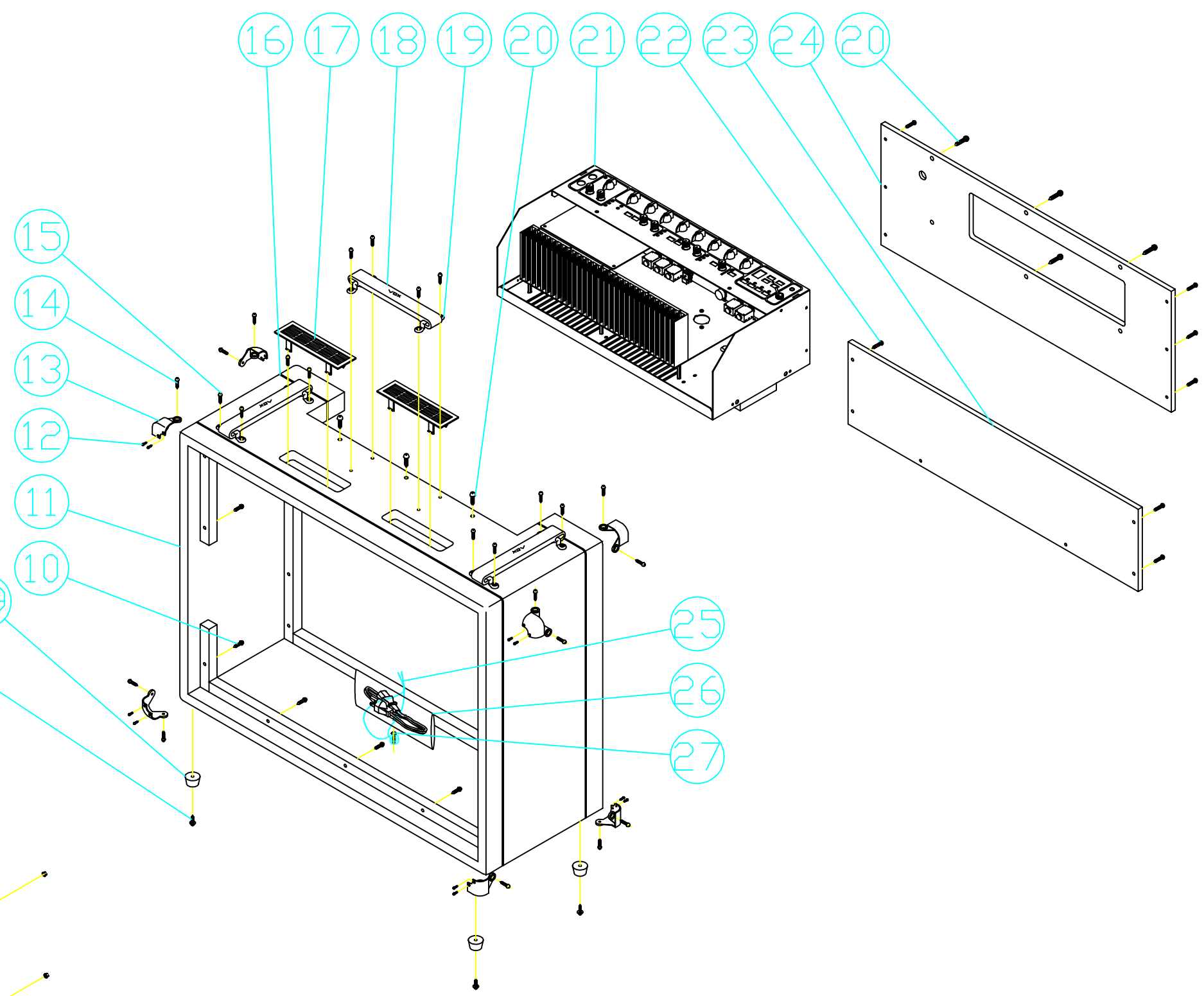
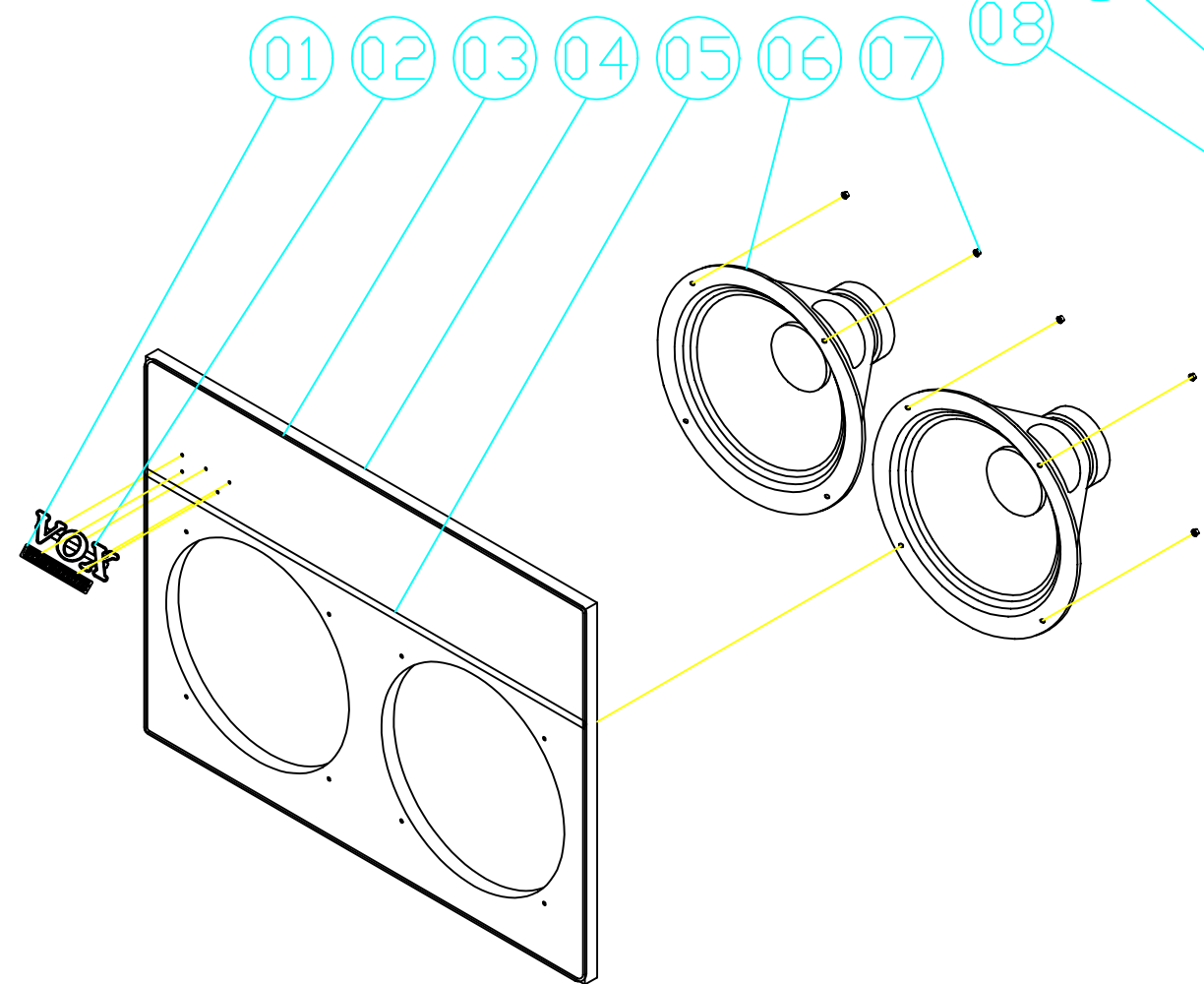
JACK PCB

MAIN POWER PCB



NO	DESCRIPTION	SPECIFICATION	Q'TY
01	EMBLEM	ABS(GOLD STAMPING)	1
02	BRAND MARK	ABS(GOLD VOX??)	1
03	WHITE STRIPER	∅5x2305mm	1
04	BAFFLE PANEL	PW 18t	1
05	GOLD FRONT PANEL	648mm	1
06	SPEAKER	12 inch 8 ohm	2
07	FRANGE NUT	M4	8
08	SCREW	∅3.5x18 WITH WASHER	4
09	RUBBER FOOT	SBR(??)	4
10	SCREW	∅4x35 TH BK 1	12
11	WOODEN CABINET	MDF 18t	1
12	SCREW	∅2x8 PH BK 1	16
13	CORNER	NYLON 6/6	8
14	SCREW	∅3.5x13 OH BK 1	16
15	SCREW	M4x0.7Px20 OH NI	12
16	GOLD BEADING	∅2.5x2480, ∅2.5x2092	2
17	VENT GRILL	ABS	2
18	HANDLE BAR	PVC	3
19	HANDLE EDGE	DIE CASTING	6
20	SCREW	M5x25 TH BK	9
21	CHASSIS ASS'Y		1
22	SCREW	∅4x30 TH BK 1	12
23	BACK PANEL "B"	MDF 15t	1
24	BACK PANEL "A"	PB 15t	1
25	CORD TIE	BLACK 150mm	1
26	AC POWER CORD		1
27	SCREW	∅3.5x15 WITH WASHER	1

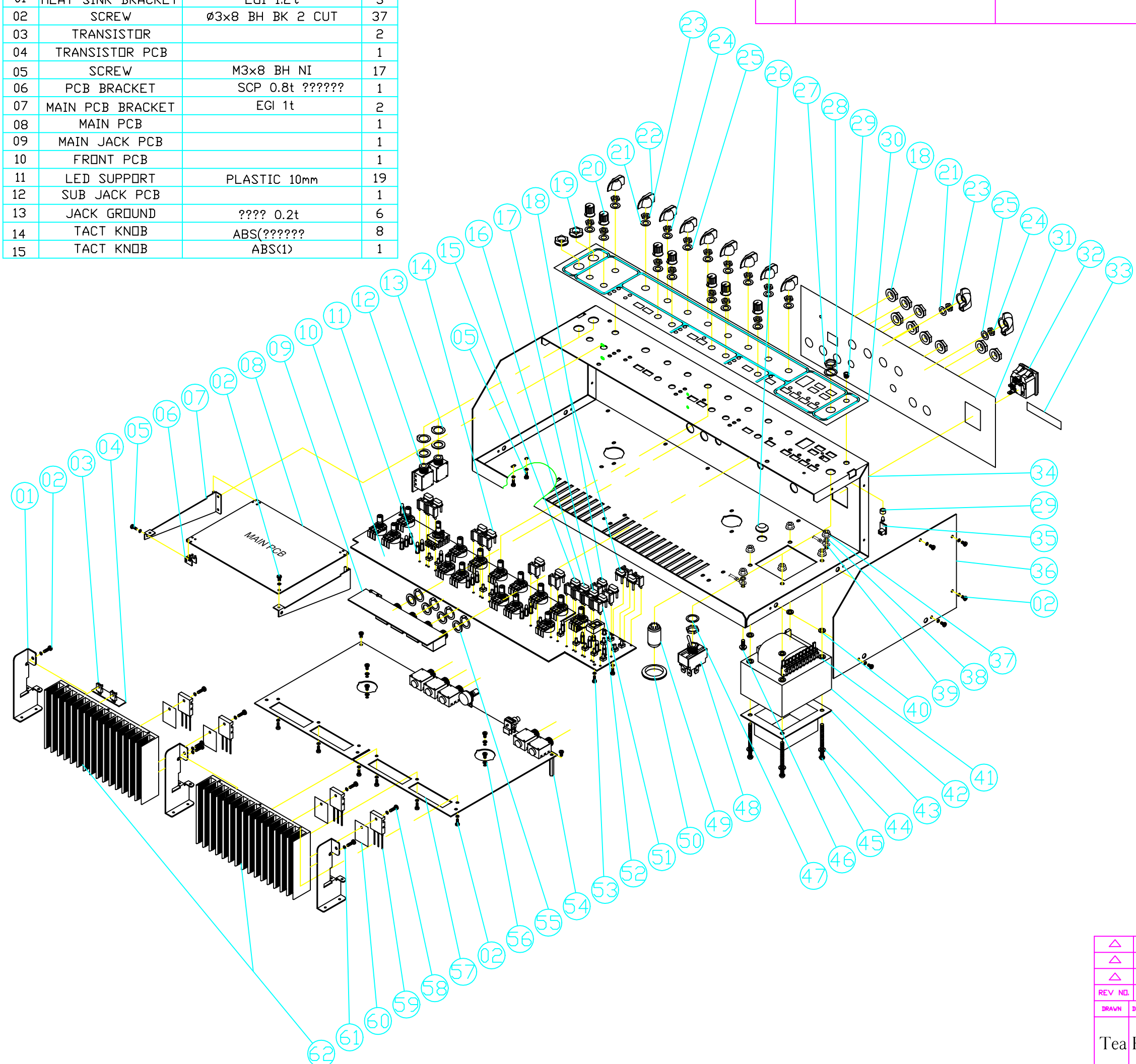
NO	PART NAME	MATERIAL	SIZE	FINISH	Q' TY	NOTE
----	-----------	----------	------	--------	-------	------



△				DATE	2001 . 9 . 21
△				TITLE	CABINET ASS'Y
△				MODEL	AD120V
REV NO.	REV DATE	DESCRIPTIONS OF REVISION		SIGN	
DRAWN	DESIGNED	CHECKED	APPROVED	3RD ANGLE	DIMENSION
Tea Hyun Kim				PROJECTION	M/M
				SCALE	
				DWG NO.	
				 KIMANSON Kimanson Instruments CO., Ltd.	

NO	DESCRIPTION	SPECIFICATION	Q'TY
01	HEAT SINK BRACKET	EGI 1.2t	3
02	SCREW	ø3x8 BH BK 2 CUT	37
03	TRANSISTOR		2
04	TRANSISTOR PCB		1
05	SCREW	M3x8 BH NI	17
06	PCB BRACKET	SCP 0.8t ?????	1
07	MAIN PCB BRACKET	EGI 1t	2
08	MAIN PCB		1
09	MAIN JACK PCB		1
10	FRONT PCB		1
11	LED SUPPORT	PLASTIC 10mm	19
12	SUB JACK PCB		1
13	JACK GROUND	???? 0.2t	6
14	TACT KNOB	ABS(??????)	8
15	TACT KNOB	ABS(1)	1

NO	PART NAME	MATERIAL	SIZE	FINISH	Q'TY	NOTE
----	-----------	----------	------	--------	------	------



NO	DESCRIPTION	SPECIFICATION	Q'TY
16	TACT KNOB	ABS(2)	1
17	TACT KNOB	ABS(3)	1
18	TACT KNOB	ABS(?)	2
19	JACK NUT	ABS ø11	11
20	ROUND KNOB	ABS	7
21	VOLUME WASHER	ø9	2
22	KNOB	ABS(CHICKEN HEAD)	11
23	VOLUME NUT	M9	2
24	VOLUME NUT	M7	16
25	VOLUME WASHER	ø7	16
26	RUBBER BUSHING	ø12	1
27	JACK NUT	M11	2
28	JACK WASHER	ø11	1
29	LED BUSHING	ø5	1
30	FRONT PANEL	PVC 0.5t ???	1
31	REAR PANEL	PVC 0.5t BLACK	1
32	AC CONNECTOR	SC-8F-21	1
33	SERIAL NO	STICKER	1
34	MAIN CHASSIS	EGI 1.2t	1
35	LED PCB		1
36	CHASSIS COVER	EGI 1.2t	2
37	FLANGE NUT	M4	6
38	TOOS WASHER	ø4 INTERNAL	2
39	EARTH TERMINAL		2
40	FIBER WASHER	ø4	4
41	WASHER	ø4	7
42	POWER TRANS		1
43	TRANS COVER		1
44	PLATE WASHER	ø4	4
45	SCREW	M4x75 WITH WASHER	4
46	SCREW	M4x10 WITH WASHER	2
47	SPRING WASHER	ø11	1
48	POWER SWITCH		1
49	VACCUM TUBE	12AX7	2
50	TUBE COVER	NBR	2
51	TACT KNOB	ABS(4)	1
52	SEGMENT SPACER	PLASTIC 6mm	2
53	SCREW	M3x6 BH NI	2
54	PCB SPACER	BRASS 30mm	7
55	JACK WASHER	ø11	6
56	PLATE WASHER	ø3 BLACK	8
57	POWER PCB		1
58	SCREW	M3x10 BH NI	4
59	TRANSISTOR		4
60	INSULATE SPACER	MICA	4
61	SPRING WASHER	ø3	51
62	HEAT SINK	AL EXRTUSION	2

△				DATE	2001 . 9 . 21
△				TITLE	CHASSIS ASS'Y
△				MODEL	AD120V
REV NO.	REV DATE	DESCRIPTIONS OF REVISION		SIGN	
DRAWN	DESIGNED	CHECKED	APPROVED	3RD ANGLE	DIMENSION
Tea Hyun Kim				PROJECTION	M/H
				SCALE	DWG NO.
				 Kimanson Instruments CO., Ltd.	

AD60VT/AD120VT

How to start and operate the test mode

1) AD60VT:

REV CH1:	FULL TEST
REV CH1 DWN:	FULL TEST (LEVEL, TUNER, FC I/F SKIP)
REV CH1 UP:	EXTERNAL TEST ONLY

2) AD120VT:

REV CH2:	FULL TEST
REV CH1 DWN:	FULL TEST (LEVEL, TUNER, FC I/F SKIP)
REV CH2 UP:	EXTERNAL TEST ONLY
BYP CH4:	AUDIO TEST (A/D, D/A, THRU)

Operations during the test mode:

*Internal test

CH1+CH3:	RE-CHECKING OF THE STEPS IN ERROR
CH1+CH4:	ERROR SKIP
CH1+DWN:	RE-CHECKING THE N.G. ITEMS
CH1+UP:	SKIP THE N.G. ITEMS AND PROCEED TO THE NEXT ITEM.

*External test:

CH4:	STEP UP
CH3:	RE-CHECKING THE STEPS IN ERROR
UP:	ITEM UP

*Conditions when starting the test mode:

-Loop the following jacks with cables respectively.

AD60VT: SEND L – INPUT HI, SEND R – INPUT LO

AD120VT: SEND L – INPUT HI/LO

-Connect a VC-4 (foot controller) to the product respectively.

PART LIST

MODEL: AD120V(POWER PART)

PAGE :1-7

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
NO SUPPLY	1	1	PWB010602A	PCB 350x190x1.6t FR-1 PWB010602A		
*V903200015	2	2	NJM072	OP AMP NJM072		
*V903200013	3	3	NJM4556	OPAMP NJM4556 or M5216		M5216
*V904530005	4	2	DG211	ANALOGUE SWITCH DG211		
*V904530006	5	1	MAX333	ANALOGUE SWITCH MAX333		
*V903020003	6	4	VN2410L			
*V903010002	7	1	2SA1359-Y	TRANSISTOR PNP 2SA1359-Y		KTB631-Y
*V903010003	8	4	2SA1837	TRANSISTOR PNP 2SA1837		
*V903010004	9	2	2SC2458-Y	TRANSISTOR NPN 2SC2458 or KTC3198-Y		KTC3198-Y
*V903010005	10	1	2SC3422-Y	TRANSISTOR NPN 2SC3422 or KTD600-Y		KTD600-Y
*V903010006	11	4	2SC4793	TRANSISTOR NPN 2SC4793		
*V903010007	12	4	KTA1024-Y	TRANSISTOR PNP KTA1024-Y		
*V903010008	13	2	2SA1943-O	TRANSISTOR PNP 2SA1943-O		KTA1943-O
*V903010009	14	4	KTC3206-Y	TRANSISTOR NPN KTC3206-Y		
*V903010010	15	2	2SC5200-O	TRANSISTOR NPN 2SC5200-O		KTC5200-O
*V903010011	16	1	KRA102M	PNP-DIGITAL TRANSISTOR TYPE KRA 102M		
*V903210002	17	1	78L05	VOLTAGE REGULATOR 78L05		
*V903111001	18	6	1N4007	SILICON RECTIFIRE DIODE 1N4007	T	
*V903111002	19	8	1N4148	SILICON SWITCHING DIODE 1N4148	T	
*V903111008	20	1	KBU604	BRIDGE RECTIFIER DIODE KBU604		
*V903111009	21	1	SHSW04M	BRIDGE RECTIFIER DIODE SHSW04M		
*V903111003	22	2	1N5245	ZENER DIODE 15V 0.5W 1N5245	T	
*V905000002	23	2	12AX7	TUBE, VACUUME TUBE 12AX7		

PART LIST

MODEL: AD120V(POWER PART)

PAGE :2-7

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
*V905000001	24	2	VT9-PT-2	TUBE SOCKET VT9-PT-2		
*V903300010	25	1	250V T125mA	FUSE TIME LAG 250V T125mA		
*V903300011	26	1	250V T1.6A	FUSE TIME LAG 250V T1.6A		
*V903300012	27	1	250V T1A	FUSE TIME LAG 250V T1A		
*V903300009	28	6	0751-0110	FUSE CLIP 0751-0110(OG TYPE)	T	
*V904020001	29	2	BEED	AXIAL BEED CORE	T	
*V904540002	30	4	EPJ-BBB-P(8)	PHONE JACK EPJ-BBB-P(8) MONO		
*V904540003	31	1	EPJ-BBB-P(8)	PHONE JACK EPJ-BBB-P(8) STEREO		
*V903620008	32	1	RS1620-20-15S-A10K-C0	POTENTIOMETER RS1620-20-15S-A10K-C0 STEREO		
*V903630004	33	4	B10K	SEMI POTENTIOMETER 10m/m B10K		
*V904530004	34	1	RS4401-15S-20	ROTARY SWITCH 4C4P RS-4401-15S-20		
*V904050013	35	2	OPT48	OUTPUT TRANS		
SEE BELOW	36	1	9862-DJ,DU,DE	POWER TRANS(100V/120V/230V/240V)		
*V904050010						
*V904050011						
*V904050012						
*V904530003	37	1	R13-28F-01-BINN-NA	POWER SWITCH R13-28F-01-BINN-NA		
*V904100105	38	2		8 ohm		
*V904700000	39	1	SC-8F-21	AC CONNECTOR SC-8F-21		
*V906000108	40	1	KKP253-16A	AC POWER CORD 100V = KKP253-16A		
*V906000109			KKP30(SVT)-16A	AC POWER CORD 120V = KKP30(SVT)-16A		
*V906000110			KKP4819R-16A	AC POWER CORD 230V = KKP4819R-16A		
*V903300013	41	1	FUSE	FUSE 100V = 250/T6.3A		
*V903300013				FUSE 120V = 250V/T6.3A		
*V903300014				FUSE 230V = 250V/T2.5A		
NO SUPPLY	42	1	220P	CERAMIC CAPACITOR 50V J 22 _	T	

PART LIST

MODEL: AD120V(POWER PART)

PAGE :3-7

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
NO SUPPLY	43	1	220P	CERAMIC CAPACITOR 50V J 22 _ T		
NO SUPPLY	44	2	470P	CERAMIC CAPACITOR 50V J 47 _ T		
NO SUPPLY	45	2	221P	CERAMIC CAPACITOR 50V J 220 _ T		
NO SUPPLY	46	2	221P	CERAMIC CAPACITOR 50V J 470 _ T		
NO SUPPLY	47	2	471P	CERAMIC CAPACITOR 500V J 470 _ T		
NO SUPPLY	48	6	471P/500V	CERAMIC CAPACITOR 500V J 0.01 _ T		
NO SUPPLY	49	1	103P/500V	CERAMIC CAPACITOR AC 400V J 0.01 _ T		
NO SUPPLY	50	3	KC103P	PLASTIC FILM CAPACITOR 100V PP 0.001 _ T		
NO SUPPLY	51	1	M102	PLASTIC FILM CAPACITOR 100V PP 0.001 _ T		
NO SUPPLY	52	2	M102	PLASTIC FILM CAPACITOR 100V PP 0.0022 _ T		
NO SUPPLY	53	6	M472	PLASTIC FILM CAPACITOR 100V PP 0.0047 _ T		
NO SUPPLY	54	12	M103	PLASTIC FILM CAPACITOR 100V PP 0.01 _ T		
NO SUPPLY	55	2	M333	PLASTIC FILM CAPACITOR 100V PP 0.033 _ T		
NO SUPPLY	56	2	M393	PLASTIC FILM CAPACITOR 100V PP 0.039 _ T		
NO SUPPLY	57	2	M473	PLASTIC FILM CAPACITOR 100V PP 0.047 _ T		
NO SUPPLY	58	13	M104	PLASTIC FILM CAPACITOR 100V PP 0.1 _ T		
NO SUPPLY	59	2	M224	PLASTIC FILM CAPACITOR 100V PD 0.22 _ T		
NO SUPPLY	60	4	M223/250V	METALLIZED POLYPROPYLENE FILM 250V MP 0.022 _ T		
NO SUPPLY	61	5	2.2/63V	CHEMICAL CONDENSOR 63V SG 2.2 _ T		
NO SUPPLY	62	2	10/350V	CHEMICAL CONDENSOR 350V SG 10 _ T		
NO SUPPLY	63	1	22/25V	CHEMICAL CONDENSOR 25V SG 22 _ T		

PART LIST**MODEL: AD120V(POWER PART)**

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
NO SUPPLY	64	1	22/25V	CHEMICAL CONDENSOR 25V SG 22 _		
NO SUPPLY	65	2	47/50V	CHEMICAL CONDENSOR 50V SG 47 _ T		
NO SUPPLY	66	4	100/25V	CHEMICAL CONDENSOR 25V SG 100 _ T		
NO SUPPLY	67	2	100/100V	CHEMICAL CONDENSOR 100V SG 100 _		
NO SUPPLY	68	1	100/250V	CHEMICAL CONDENSOR 250V SG 100 _		
NO SUPPLY	69	1	2200/16V	CHEMICAL CONDENSOR 16V SG 2200 _		
NO SUPPLY	70	2	2200/16V	CHEMICAL CONDENSOR 63V SG 6800 _		
NO SUPPLY	71	2	6800/63V	CARBON RESISTOR 1/6 WATT J 22 ohm		T
NO SUPPLY	72	8	47 ohm	CARBON RESISTOR 1/6 WATT J 47 ohm		T
NO SUPPLY	73	2	120 ohm	CARBON RESISTOR 1/6 WATT J 120 ohm		T
NO SUPPLY	74	2	330 ohm	CARBON RESISTOR 1/6 WATT J 330 ohm		T
NO SUPPLY	75	2	560 ohm	CARBON RESISTOR 1/6 WATT J 560 ohm		T
NO SUPPLY	76	14	1K ohm	CARBON RESISTOR 1/6 WATT J 1K ohm		T
NO SUPPLY	77	2	1.2K ohm	CARBON RESISTOR 1/6 WATT J 1.2K ohm		T
NO SUPPLY	78	2	1.8K ohm	CARBON RESISTOR 1/6 WATT J 1.8K ohm		T
NO SUPPLY	79	4	2.2K ohm	CARBON RESISTOR 1/6 WATT J 2.2K ohm		T
NO SUPPLY	80	4	4.7K ohm	CARBON RESISTOR 1/6 WATT J 4.7K ohm		T
NO SUPPLY	81	7	10K ohm	CARBON RESISTOR 1/6 WATT J 10K ohm		T
NO SUPPLY	82	18	22K ohm	CARBON RESISTOR 1/6 WATT J 22K ohm		T

PART LIST

MODEL: AD120V(POWER PART)

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
NO SUPPLY	83	4	24K ohm	CARBON RESISTOR 1/6 WATT J 24K ohm		T
NO SUPPLY	84	2	27K ohm	CARBON RESISTOR 1/6 WATT J 27K ohm		T
NO SUPPLY	85	4	47K ohm	CARBON RESISTOR 1/6 WATT J 47K ohm		T
NO SUPPLY	86	2	68K ohm	CARBON RESISTOR 1/6 WATT J 68K ohm		T
NO SUPPLY	87	2	100K ohm	CARBON RESISTOR 1/6 WATT J 100K ohm		T
NO SUPPLY	88	2	120K ohm	CARBON RESISTOR 1/6 WATT J 120K ohm		T
NO SUPPLY	89	4	150K ohm	CARBON RESISTOR 1/6 WATT J 150K ohm		T
NO SUPPLY	90	4	180K ohm	CARBON RESISTOR 1/6 WATT J 180K ohm		T
NO SUPPLY	91	8	470K ohm	CARBON RESISTOR 1/6 WATT J 470K ohm		T
NO SUPPLY	92	4	2.2M ohm	CARBON RESISTOR 1/6 WATT J 2.2M ohm		T
NO SUPPLY	93	2	10M ohm	CARBON RESISTOR 1/6 WATT J 10M ohm		T
NO SUPPLY	94	2	10 ohm	1% METAL FILM RESISTOR 1/6 WATT F 10 ohm		T
NO SUPPLY	95	2	24 ohm	1% METAL FILM RESISTOR 1/6 WATT F 24 ohm		T
NO SUPPLY	96	2	30 ohm	1% METAL FILM RESISTOR 1/6 WATT F 30 ohm		T
NO SUPPLY	97	2	43 ohm	1% METAL FILM RESISTOR 1/6 WATT F 43 ohm		T
NO SUPPLY	98	2	62 ohm	1% METAL FILM RESISTOR 1/6 WATT F 62 ohm		T
NO SUPPLY	99	4	330 ohm	1% METAL FILM RESISTOR 1/6 WATT F 330 ohm		T
NO SUPPLY	100	2	910 ohm	1% METAL FILM RESISTOR 1/6 WATT F 910 ohm		T
NO SUPPLY	101	2	1.2K ohm	1% METAL FILM RESISTOR 1/6 WATT F 1.2K ohm		T
NO SUPPLY	102	4	2.2K ohm	1% METAL FILM RESISTOR 1/6 WATT F 2.2K ohm		T
NO SUPPLY	103	2	8.2K ohm	1% METAL FILM RESISTOR 1/6 WATT F 8.2K ohm		T
NO SUPPLY	104	2	12K ohm	1% METAL FILM RESISTOR 1/6 WATT F 12K ohm		T
NO SUPPLY	105	2	18K ohm	1% METAL FILM RESISTOR 1/6 WATT F 18K ohm		T

PART LIST

MODEL: AD120V(POWER PART)

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
NO SUPPLY	106	4	5.1K ohm	CARBON RESISTOR 1/4 WATT J 5.1K ohm		T
NO SUPPLY	107	4	10K ohm	CARBON RESISTOR 1/4 WATT J 10K ohm		T
NO SUPPLY	108	2	56K ohm	CARBON RESISTOR 1/4 WATT J 56K ohm		T
NO SUPPLY	109	2	82K ohm	CARBON RESISTOR 1/4 WATT J 82K ohm		T
NO SUPPLY	110	2	100K ohm	CARBON RESISTOR 1/4 WATT J 100K ohm		T
NO SUPPLY	111	2	10/1W	CARBON RESISTOR 1 WATT J 10 ohm		
NO SUPPLY	112	3	100/1W	CARBON RESISTOR 1 WATT J 100 ohm		
NO SUPPLY	113	1	1K/1W	CARBON RESISTOR 1 WATT J 1K ohm		
NO SUPPLY	114	2	1.5K/1W	CARBON RESISTOR 1 WATT J 1.5K ohm		
NO SUPPLY	115	4	0.33/3W	WIRE WOUND RESITOR 3WATT J 0.33 ohm		
NO SUPPLY	116	4	0.68/5W	WIRE WOUND RESITOR 5WATT J 0.68 ohm		
NO SUPPLY	117	2	100/10W	WIRE WOUND RESITOR 10WATT J 100 ohm		
NO SUPPLY	118	9	GP881191-2	POWER TERMINAL GP881191-2		
*V904700001	119	4	2P WAFER	2P WAFER 2mm PICH		
*V904752001	120	1	3P CONNECTOR	FLAT WIRE UL1007 AWG26 BLK,WHT,WHT 150m/m		
*V904752010	121	2	170 m/m	3P FLAT WIRE UL2877 BLACK 170 m/m		
*V904753001	122	1	360 m/m	RING/TER WIRE UL1015 AWG18 GRN 360m/m		
*V904751003	123	1	380 m/m	205/TER WIRE UL1015 AWG18 RED 380m/m		
*V904751002	124	1	380 m/m	205/TER WIRE UL1015 AWG18 BRN 380m/m		
*V904751004	125	1	480 m/m	205/TER WIRE UL1015 AWG18 WHT 480m/m		
*V904751001	126	1	480 m/m	205/TER WIRE UL1015 AWG18 BLK 480m/m		
NO ENTRY	127	1	150 m/m			

PART LIST**MODEL: AD120V(POWER PART)**

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
*V904751005	128	1	150 m/m	250/TER WIRE UL1617 AWG22 BLK 150m/m		
NO ENTRY	129	2	17 m/m	JUMPER WIRE 0.6 pi 17 m/m	T	
NO ENTRY	130	1	15 m/m	JUMPER WIRE 0.6 pi 15 m/m	T	
NO ENTRY	131	7	12 m/m	JUMPER WIRE 0.6 pi 12 m/m	T	
NO ENTRY	132	39	10 m/m	JUMPER WIRE 0.6 pi 10 m/m	T	
NO ENTRY	133	60	8 m/m	JUMPER WIRE 0.6 pi 8 m/m	T	
NO ENTRY	134			BOND		
*V906430033	135	2	MICA	INSULATE SPACER MICA		
*V906430034	136	4	P-520-02	RESISTOR SUPPORT P-520-02		
NO ENTRY	137	8		CABLE TIE		

PART LIST

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
*V909000008	1	1	PWB010601C	PCB 140x32x1.6t FR-1 PWB010601C		
*V904540002	2	4	EPJ-BBB-P(8)	PHONE JACK EPJ-BBB-P(8) MONO		
*V904540012	3	1	R13-28F-SG	MODULAR JACK R13-28F-SG		
*V904540011	3	1	BEED	AXIAL BEED CORE		
*V904020001	4	13	BEED	AXIAL BEED CORE	T	
NO ENTRY	5	4	220P	CERAMIC CAPACITOR 50V J 22 _	T	
NO ENTRY	6	8	104P	CERAMIC CAPACITOR 50V J 0.1 _	T	
NO ENTRY	7	1	47/1W	CARBON RESISTOR 1 WATT 47 OHM		
NO ENTRY	8	1		JUMPER WIRE 0.6 pi 10 m/m	T	
*V904700002	9	1	3P WAFER	3P WAFER 2mm PICH		
*V904700003	10	1	8P WAFER	8P WAFER 2mm PICH		
*V904753002	11	1	3P ANGLE CONNECTOR	SHIELD WIRE UL2547 AWG26 GRY 240m/m		

PART LIST

DATE : 2002, 2, 28.

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
*V909000004	1	1	PWB010601D	PCB 420x99x1.6t FR-4 PWB010601D		
*V909000007	2	1	PWB010601E	PCB 56x30x1.6t FR-4 PWB010601E		
*V903200005	3	2	BU4051BCF	8-CHANNEL ANALOG MULTIPLEXER BU4051BCF		T
320011223	4	1	M38258MCM	M-COM M38258MCM		T
*V903200007	5	1	BA10358	DUAL GROUND SENSE AP-AMP BA10358		T
*V903200008	6	1	KIA7805AF	VOLTAGE REGULATOR KIA7805AF		T
*V903200009	7	1	AK93C75AV	8KBIT SERIAL C-MOS EEFROM AK93C75AV		T
*V903200010	8	1	KIA7125FV	SYSTEM RESETTNG KIA7125FV		T
*V903200011	9	1	74HC05	HEX INVERTER 74HC05		T
*V903200012	10	1	TC7S14FU	SCHMITT INVERTER TC7S14FU		T
*V903010012	11	4	KRA102S	DIGITAL TRANSISTOR PNP KRA102S		T
*V903010013	12	9	KRC102S	DIGITAL TRANSISTOR NPN KRC102S		T
*V903010014	13	1	KDS226S	HIGH SPEED SWITCHING DIODE KDS226S		T
*V903010015	14	8	KDS184S	HIGH SPEED SWITCHING DIODE KDS184S		T
*V903120007	15	1	A551H	LED DISPLAY A551H		
*V903350001	16	1	8 MHZ	CRYSTAL 8 MHz		
*V904020002	17	2	BEED	CHIP BEED CORE		T
*V904020001	18	4	BEED	AXIAL BEED CORE		
334000600	19	1	PC410K	PHOTO COUPLERS PC410K		T
*V904530007	20	1	BTQS20V	ENCORD SWITCH BTQS20V		
*V903620009	21	13	RV1620-40-15S-B10K-C0	POTENTIOMETER RV1620-40-15S-B10K-C0 MONO		
*V903620010	22	1	RV1620-40-15S-A10K-C0	POTENTIOMETER RV1620-40-15S-A10K-C0 STEREO		

PART LIST

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
*V903620011	23	1	RV1600-40-15S-B10K-C11	11 CLICK VOLUME RV1600-20-15S-B10K-C11		
*V904540002	24	2	EPJ-BBB-P(8)	PHONE JACK EPJ-BBB-P(8) MONO		
*V904530008	25	14	ST-1101B	TACT SWITCH ST-1101B 9.5 m/m		
*V903120001	26	19	KLR124	LED RED 3 pi KLR124		
*V903120003	27	1	KLR114	LED RED 5 pi KLR114		
NO ENTRY	28	1	1/50V	CHEMICAL CONDENSOR 50V SS 1 _		
NO ENTRY	29	1	10/16V	CHEMICAL CONDENSOR 16V SS 10 _		
NO ENTRY	30	1	100/10V	CHEMICAL CONDENSOR 10V SS 100 _		
NO ENTRY	31	2	100/16V	CHEMICAL CONDENSOR 16V SS 100 _		
NO ENTRY	32	6	220P	CHIP CERAMIC CAPACITOR 1608 J 22 _		T
NO ENTRY	33	1	221P	CHIP CERAMIC CAPACITOR 1608 J 220 _		T
NO ENTRY	34	1	223P	CHIP CERAMIC CAPACITOR 1608 J 0.022 _		T
NO ENTRY	35	39	104P	CHIP CERAMIC CAPACITOR 1608 J 0.1 _		T
NO ENTRY	36	2	220P	CERAMIC CAPACITOR 50V 22 _		
NO ENTRY	37	3	104P	CERAMIC CAPACITOR 50V 0.1 _		
NO ENTRY	38	5	000 ohm	CHIP RESISTOR 1608 1/16 WATT J 0 ohm		T

PART LIST

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
NO ENTRY	39	17	10 ohm	CHIP RESISTOR 1608 1/16 WATT J 10 ohm		T
NO ENTRY	40	1	100 ohm	CHIP RESISTOR 1608 1/16 WATT J 100 ohm		T
NO ENTRY	41	4	220 ohm	CHIP RESISTOR 1608 1/16 WATT J 220 ohm		T
NO ENTRY	42	28	470 ohm	CHIP RESISTOR 1608 1/16 WATT J 470 ohm		T
NO ENTRY	43	1	560 ohm	CHIP RESISTOR 1608 1/16 WATT J 560 ohm		T
NO ENTRY	44	19	1K ohm	CHIP RESISTOR 1608 1/16 WATT J 1K ohm		T
NO ENTRY	45	30	10K ohm	CHIP RESISTOR 1608 1/16 WATT J 10K ohm		T
NO ENTRY	46	1	22K ohm	CHIP RESISTOR 1608 1/16 WATT J 22K ohm		T
NO ENTRY	47	1	47K ohm	CHIP RESISTOR 1608 1/16 WATT J 47K ohm		T
NO ENTRY	48	1	100K ohm	CHIP RESISTOR 1608 1/16 WATT J 100K ohm		T
NO ENTRY	49	2	1M ohm	CHIP RESISTOR 1608 1/16 WATT J 1M ohm		T
*V904700004	50	2	2P ANGLE WAFER	2P ANGLE WAFER 2mm PICH		
*V904752003	51	1	2P ANGLE CONNECTOR	FLAT WIRE UL1007 AWG26 BLK,RED 250mm		
*V904752004	52	1	2P ANGLE CONNECTOR	FLAT WIRE UL1007 AWG26 BLK,RED 380mm		

PART LIST

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
*V904752002	53	1	2P ANGLE CONNECTOR	FLAT WIRE UL1007 AWG26 BLK,RED 120mm		
*V904753005	54	1	3P ANGLE CONNECTOR	SHIELD WIRE UL2547 AWG26 GLY 190mm		
*V904753006	55	1	3P ANGLE CONNECTOR	SHIELD WIRE UL2547 AWG26 GLY 90mm		
*V904752006	56	1	3P ANGLE CONNECTOR	FLAT WIRE UL1007 AWG26 BLK,WHT,WHT 160mm		
*V904753003	57	1	4P ANGLE CONNECTOR	SHIELD WIRE UL1533 AWG26 GRY 240mm : CON1		
*V904753004				SHIELD WIRE UL1533 AWG26 GRY 400mm : CON2		
*V904752009	58	1	8P ANGLE CONNECTOR	FLAT WIRE UL1007 AWG26 BLK,WHT,WHT 180mm		
*V904752005	59	1	9P ANGLE CONNECTOR	FLAT WIRE UL1007 AWG26 BLK,WHT,WHT 110mm		

PART LIST

MODEL: AD-120VT

PAGE :1-3

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
*V906410001	1	1	MDF 18t	WOODEN CABINET		
*V906430017	1-1	3	(2510 x 323,664 x 157,664 x 287,664 x 90)	LEATHER		
*V906440005			(690 x 354)	NET		
*V906440001			654m/m	GOLD FRONT PANEL		
*V906440003			Phi 2.5 x 2431, Phi2.5 x 2051	GOLD BEADING		
*V906440002			Phi5 x 2290m/m	WHITE STRIPER		
*V906400001	2	3	PVC	HANDLE BAR		
*V906400002	3	6	DIE CASTING	HANDLE EDGE		
*V906400018	4	2	ABS	VENT GRILL		
*V906400009	5	8	NYLON6	CORNER		
*V906400008	6	1	ABS(GOLD) VOX (Large)	BRAND MARK		
*V906400007	7	1	ABS(GOLD STAMPING) VALVETRON	EMBLEM		
*V906420001	8	4	SBR (Large)	RUBBER FOOT		
*V906420003	9	1	40 x 10 x 1t	SPEAKER RUBBER		
*V906430010	10	1	EGI 1.2t	MAIN CHASSIS		
*V906430012	11	2	EGI 1.2t	CHASSIS COVER		
*V906430005	12	1	P.V.C 0.5t HAIRLINE	FRONT PANEL		
SEE BELOW	13	1	P.V.C 0.5t BK	REAR PANEL		
*V906430008						
*V906430027						
*V906430028						
*V906430029						
*V906430030						
*V906400003	14	11	ABS (CHICKEN HEAD)	KNOB		
*V906400017	15	7	ABS	ROUND KNOB		
*V906400016	16	8	ABS	TACT KNOB		
*V906400010	17	1	ABS	TACT KNOB(1)		
*V906400011	18	1	ABS	TACT KNOB(2)		
*V906400012	19	1	ABS	TACT KNOB(3)		
*V906400013	20	1	ABS	TACT KNOB(4)		
*V906400014	21	1	ABS	TACT KNOB(Upper)		
*V906400015	22	1	ABS	TACT KNOB(Lower)		
*V906430035	23	7	BRASS 30m/m	PCB SPACER		

PART LIST

MODEL: AD-120VT

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
*V906430013	24	2	SPC1 1t	MAIN PCB BRACKET		
*V906440006	25	3	EGI 1.2t	HEAT SINK BRACKET		
*V906430031	26	1	SPC1 0.8t TIN	PCB BRACKET		
*V906430015	27	1	Phi 5	LED BUSHING		
*V906430016	28	19	PLASTIC 10m/m	LED SUPPORT		
*V906430017	29	2	NBR	TUBE COVER		
*V906430018	30	1	Phi 12	RUBBER BUSHING		
*V906430020	31	2	PLASTIC 6m/m	SEGMENT SPACER		
*V906430021	32	1	SI 0.35t	TRANS SHIELD COVER		
*V906440006	33	2	AL EXTRUD	HEAT SINK		
*V906440007	34	1	EGI 1.2t	HEAT SINK FIX PLATE		
*V906430032	35	6	TIN 0.2t	JACK GROUND		
*V906440008	36	2	440 x 10 x 2t	RUBBER SPONGE		SIDE
*V906440009	37	2	30 x 10 x 2t	RUBBER SPONGE		
*V906440011	38	4	70 x 18 x 3t	BATTERY SPONGE		
*V906440013	39	1	RUBBER 100 x 40 x 2t	SHIELD SPONGE A		TRANS PCB BRACKET
*V906440014	40	1	RUBBER 40 x 25 x 5t	SHIELD SPONGE B		TRANS PCB BRACKET
*V906440015	41	1	RUBBER 64 x 10 x 2t	SHIELD SPONGE C		TRANS PCB BRACKET
*V906440016	42	3	20 x 20 x 4t	FELT		
*V906450001	43	12	M4 x 0.7P x 20 OH NI	SCREW		
*V906450002	44	8	M5 x 25 TH BK 1	SCREW		
*V906450003	45	6	Phi4 x 30 TH BK 1	SCREW		
*V906450006	46	4	Phi3.5 x 18 WITH WASHER	SCREW		
*V906450007	47	1	Phi3.5 x 15 WITH WASHER	SCREW		
*V906450004	48	16	Phi3.5 x 13 OH BK 1	SCREW		
*V906450005	49	16	Phi2 x 8 PH BK 1	SCREW		
*V906460001	50	8	M4	FLANGE NUT		
*V906460003	51	8	Phi12 x Phi5 x 0.5t BK	PLATE WASHER		
*V906460004	52	6	Phi12 x Phi4 x 0.5t BK	PLATE WASHER		

PART LIST

MODEL: AD-120VT

	N0	Q'TY	SPECIFICATION	DESCRIPTION		REMARK
*V906450008	52	2	M4 x 10 WITH WASHER	SCREW		
*V906450009	53	6	M3 x 10 BH NI	SCREW		
*V906450010	54	4	M3 x 8 BH NI	SCREW		
*V906450011	55	2	M3 x 6 BH NI	SCREW		
*V906450012	56	14	M3 x 8 BH BK	SCREW		
*V906450013	57	34	Phi3 x 8 BAH BK 2 CUT	SCREW		
*V906460001	58	2	FLANGE NUT	M4		
*V906460006	59	2	TOOS WASHER	Phi4 INTERNAL		
*V906460005	60	17	PLATE WASHER	Phi3		
*V906460007	62	56	SPRING WASHER	Phi3		
*V907000103	63	1	DW2	INNER CARTON		
*V907000104	64	4		INSTA PACKING		
SEE BELOW	65	1	PAPER	MANUAL		
OMADVTE						
OMADVTF						
OMADV TG						
OMADV TJ						
NO ENTRY	66	1	PAPER	WRRANTY CARD		USA
NO ENTRY	67	1	PE 0.05t (1050 x 900)	POLY BAG(SET)		
NO ENTRY	68	1	PE 0.05t (200 x 290)	POLY BAG(MANUAL)		
NO ENTRY	69	1	STICKER	BAR CORD		
NO ENTRY	70	1	STICKER	SERIAL NO		

PART CODE	SPECIFICATION	DESCRIPTION	REMARK
001222800	KLM-2228	PCB ACC'Y 166x126.5x1.6f FR-4	DSP BOARD