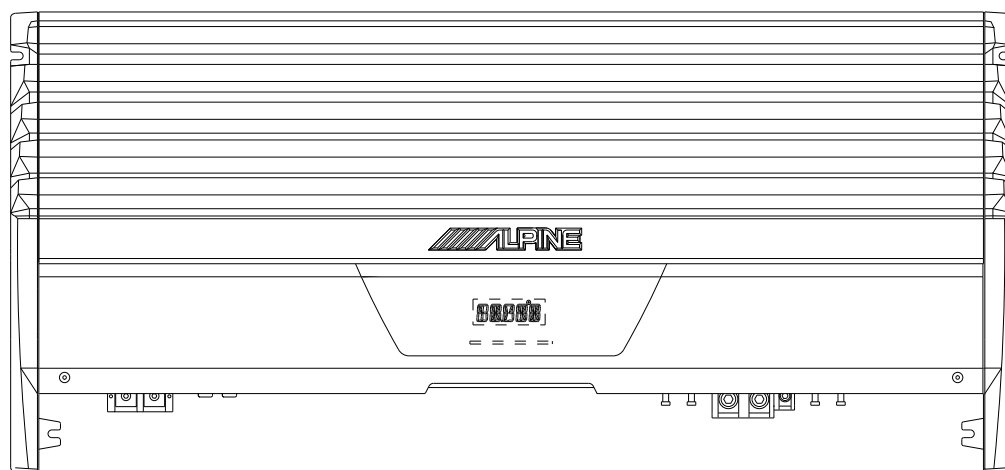


ALPINE

SERVICE MANUAL

MONO POWER AMPLIFIER

Caution : The part marked with ! is generating a high voltage, so care will be necessary when working.



6 / 04-A
68E36341S01



MRD-M1001

<Cautions for Safe Repair Work>



The following cautions will prevent accidents in the workplace and will ensure safe products.

*The symbols indicate caution is needed to prevent injuries and damage to property.



The symbols and their meanings follow.

 Warning	If you ignore this symbol and handle the product incorrectly or unsafely, serious injury or death may result.
 Caution	If you ignore this symbol and handle the product incorrectly or unsafely, injury or only material damage may result.



*The following symbols indicate two levels of cautions.



 When you see this symbol, you have to be very careful.	
 When you see this symbol, you have to follow the instructions there.	



Warning

 Do not look squarely into the laser light coming from the pickup. You may lose your sight.	 Fuse Caution Always use a designated fuse. Use of an incorrect fuse may result in a fire.
--	--

Caution

 Do not allow wiring to be caught in the screw/chassis. If wiring is caught in the screw/chassis, it may cause a short circuit, resulting in a fire.	 Battery Caution Use the designated battery. Confirm the correct polarity and seat of the battery. An incorrect battery or an improperly connected or seated battery may result in a fire.
---	---

 High Temperature Caution Touching the heat sink may cause severe burns.	 Designated Parts Caution Look up the part list and ensure that only designated parts are used to prevent problems or accidents.
---	---

 Reverse Power Supply Connections or Misconnections Caution Reverse power supply connections or misconnections may cause ignition problems and smoke may result.	 Wiring Caution Ensure that the wiring is correct when rewiring to prevent problems with ignition/breakdown.
---	---

 Soldering Caution Hot solder from solder splash may cause severe burns.	 Wear Gloves Wear gloves to prevent electrical shocks or injury from the end face of the metal.
---	--

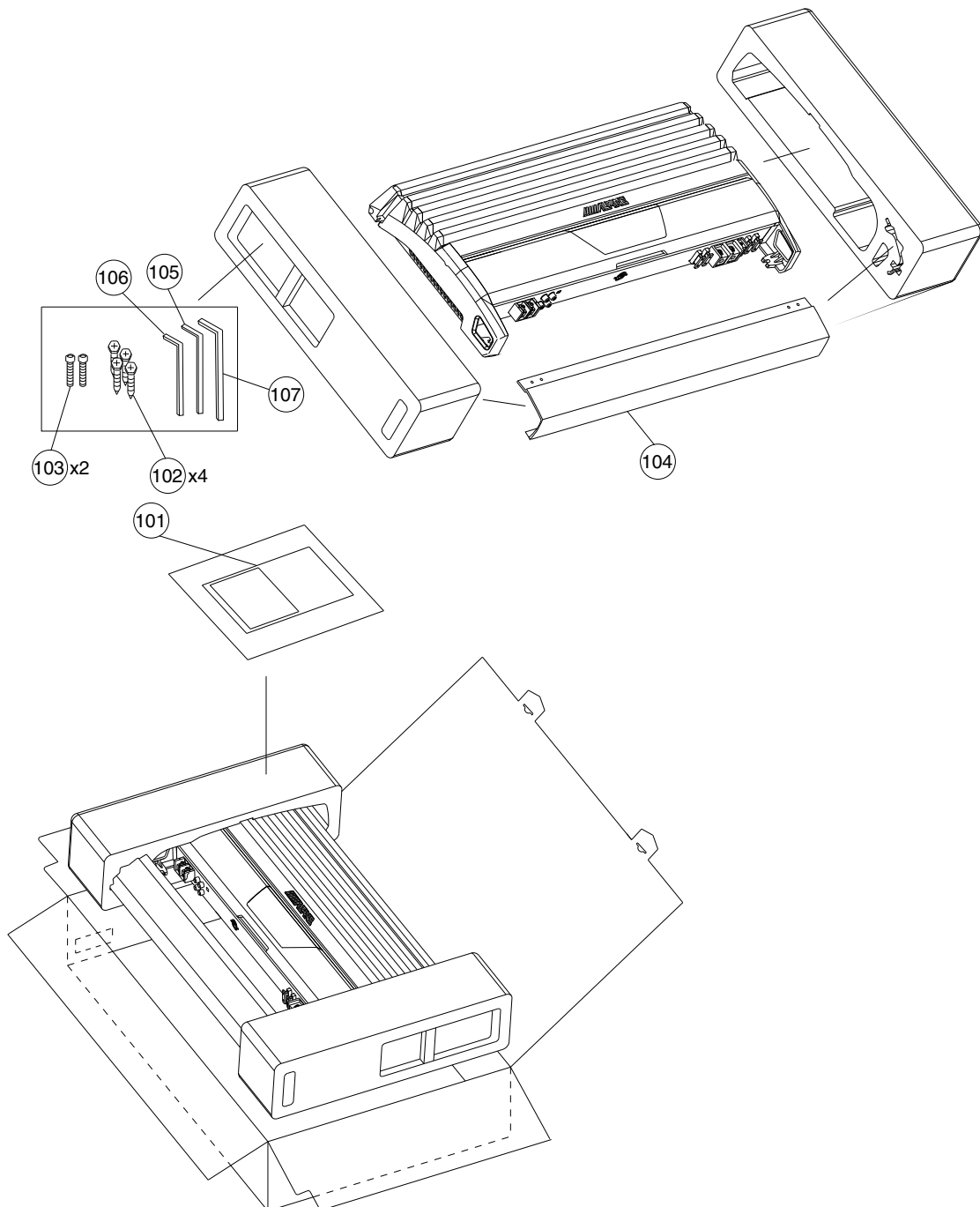
Packing Assembly Parts List

Symbol No.	Part No.	Description
#1	101	68-00493Z18 MANUAL,OWNER'S
\$1	101-1	68-00493Z19 MANUAL,OWNER'S(GE)
\$1	101-2	68-00493Z20 MANUAL,OWNER'S(I.G.S)
	102	03E36238S01 SCR,M4X20 TPG1
	103	03E36208S01 SCR,WRENCH M3X12(BOLT)

Symbol No.	Part No.	Description
	104	15E36689S01 COVER,TERMINAL-C
	105	03E36690S01 WRENCH,HEX. 2.5X2.9
	106	03E36691S01 WRENCH,HEX. 2X2.3
	107	03E36692S01 WRENCH,HEX. 4X4.6

NOTE : #1 : For North American Model Only, \$1 : For General Foreign Model Only, Others : Common.

Packing Method View



Specifications

Power Output	20Hz/100Hz, 4ohm, 1.0% T.H.D., 14.4V : 500W 20Hz, 2ohm, 1.0% T.H.D., 14.4V : 900W 100Hz, 2ohm, 1.0% T.H.D., 14.4V : 1,000W
T.H.D. (100Hz)	400W/4ohm, 14.4V, Input Level : 0.5 to 8.0V : 1.0% 400W/4ohm, 14.4V, Input Level : 0.1 to 2.0V : 1.0%
Residual Noise (Input Short, Level Position : 0dB)	40mV
S/N Ratio (Ref. Output 500W/4ohm, Input short, Level Position : 0dB)	80dB
Frequency Response (Ref. 100Hz, 0dB)	20Hz : -0.5±2dB 350Hz : -6.0±2dB
Input Sensitivity	RCA Input Level : 0.5 to 8.0V, Level Position : -6dB : 1.0V ±2dB (Power Gain at 500W/4ohm Output) RCA Input Level : 0.1-2.0V, Level Position -18dB : 0.8V ±2dB
Remote on Voltage (1W Output)	6.5±1V
Current Drain	No Signal : 2.7A 10% T.H.D., 2ohm Load : 170A Remote Current Drain : 0.53±0.2mA Back-Up Current Drain : 1.2mA
Input Impedance (Ref.)	100k ohm±10%
Fuse Requirement	20A(Peak) x 4 (For Battery Line)
Power Source	DC14.4V (11 to 16V)
Dimensions (W x H x D)	582.8 x 276 x 65.1mm
Weight	7.02kg

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.

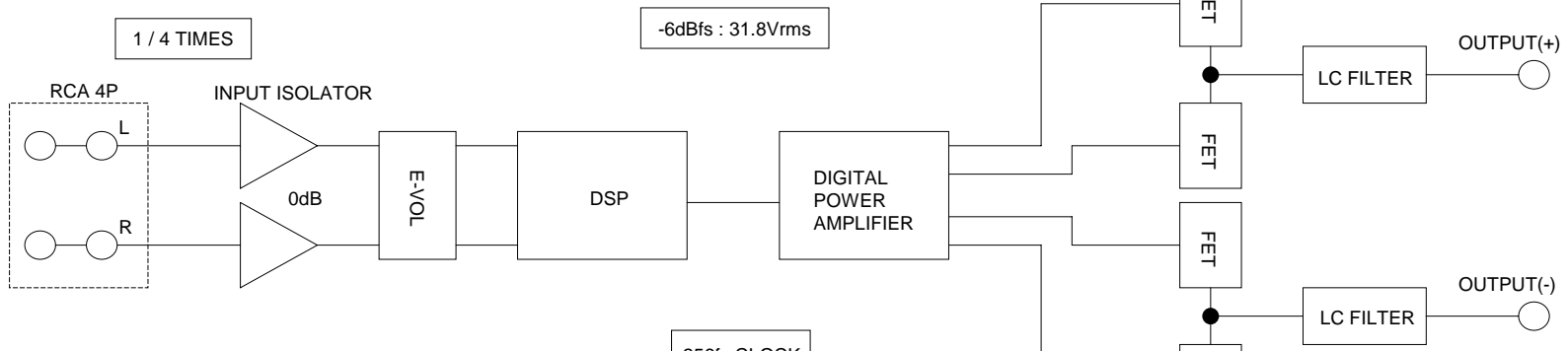
Block Diagram

MRD-M1001

MONO1 (Signal)

ANALOG SIGNAL

DIGITAL SIGNAL



1 / 4 TIMES

-6dBfs : 31.8Vrms

COMMANDER

DISPLAY

KEY

CURRENT DETECT

THERMAL DETECT-1

VOLTAGE DETECT-1

THERMAL DETECT-2

EEP-ROM

u-COM

256fs CLOCK PROCESSOR

RESET

VOLTAGE DETECT

VOLTAGE DETECT-2

ANALOG +5V
DIGITAL +5V
DISP +8V

POWER +36V/-36V
ANALOG +15V/-15V
ANALOG +9V

BATT-DET

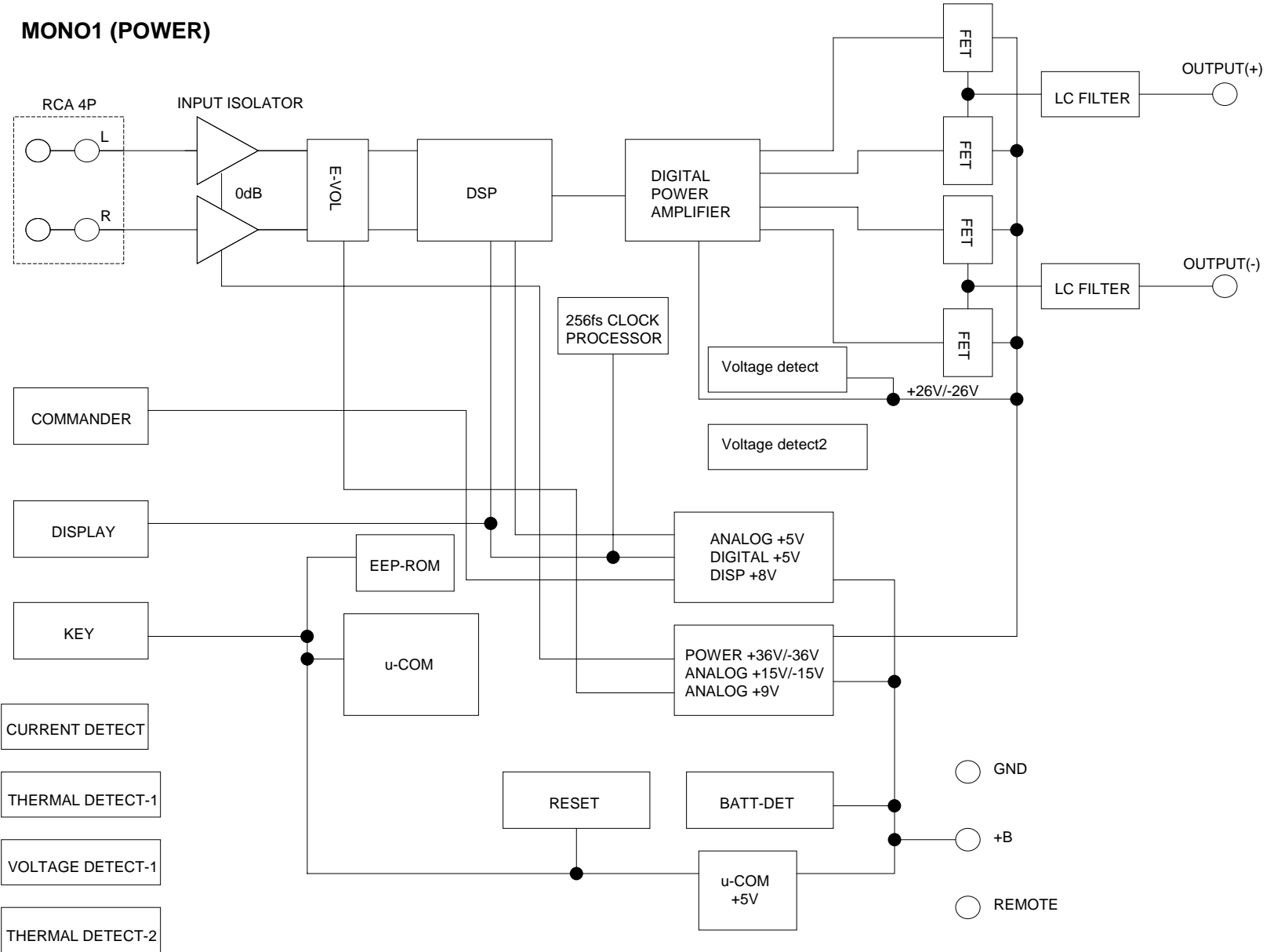
u-COM +5V

GND

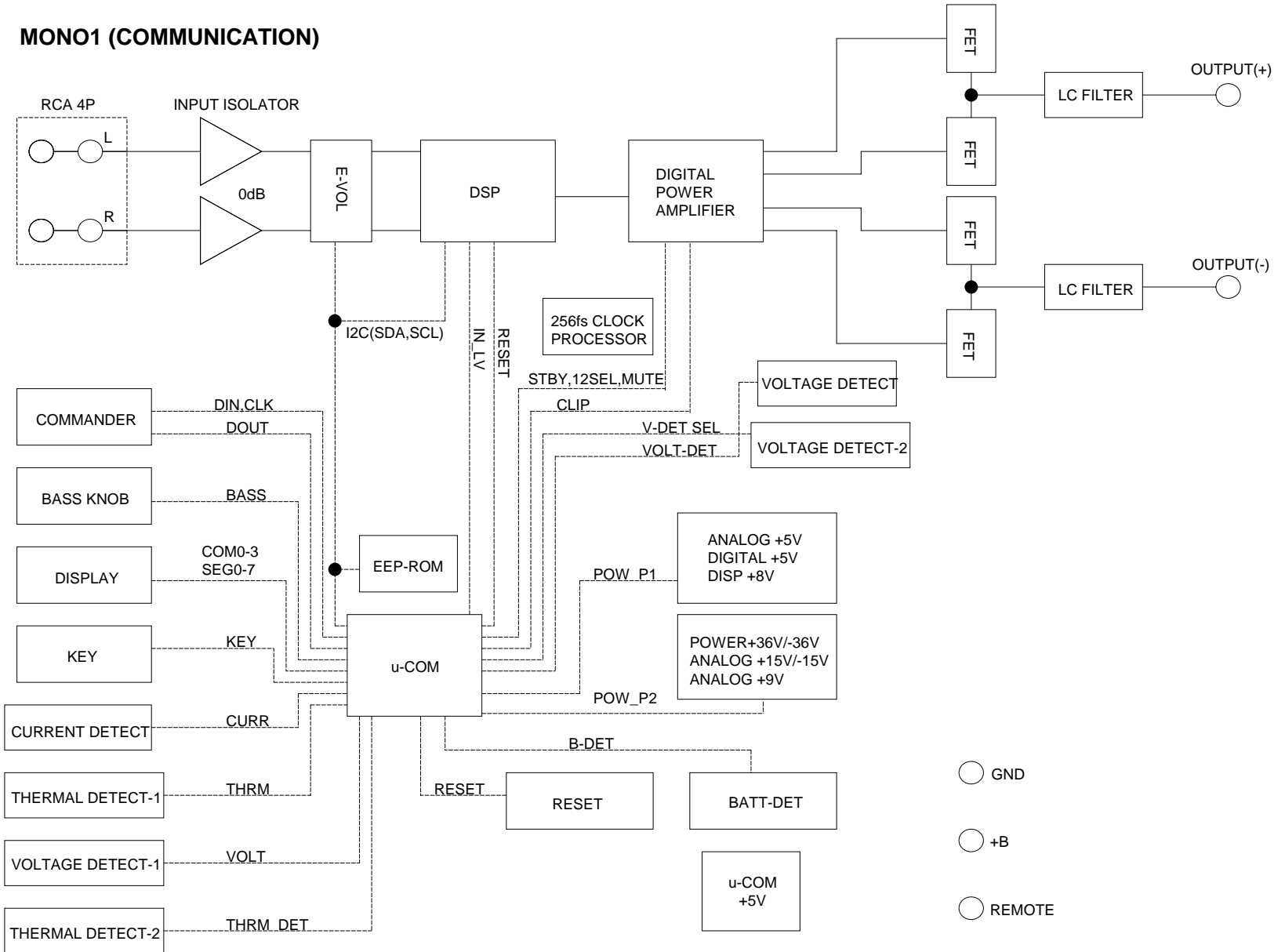
+B

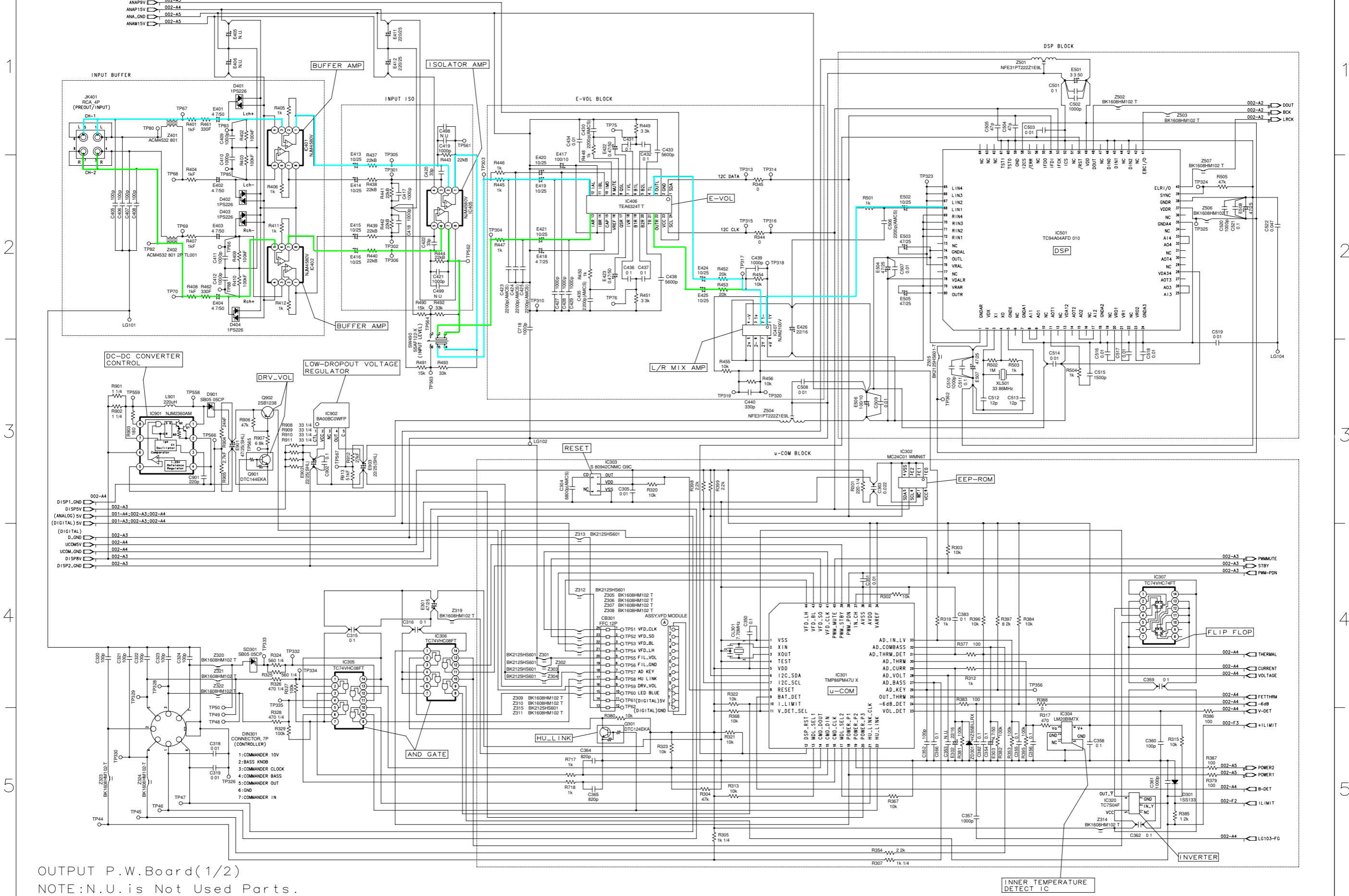
REMOTE

MONO1 (POWER)



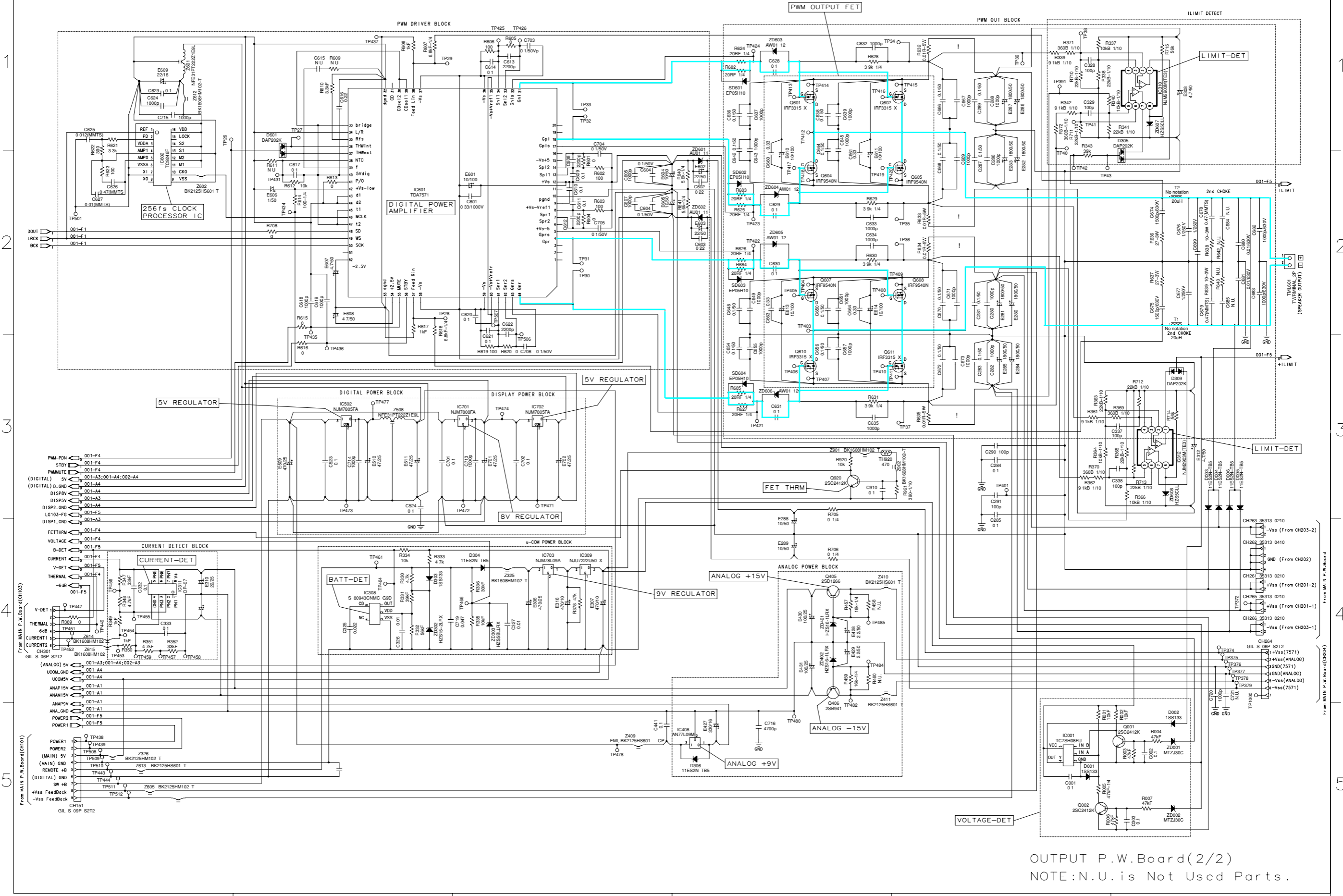
MONO1 (COMMUNICATION)





OUTPUT P.W.Board(1/2)
 NOTE:N.U. is Not Used Parts.

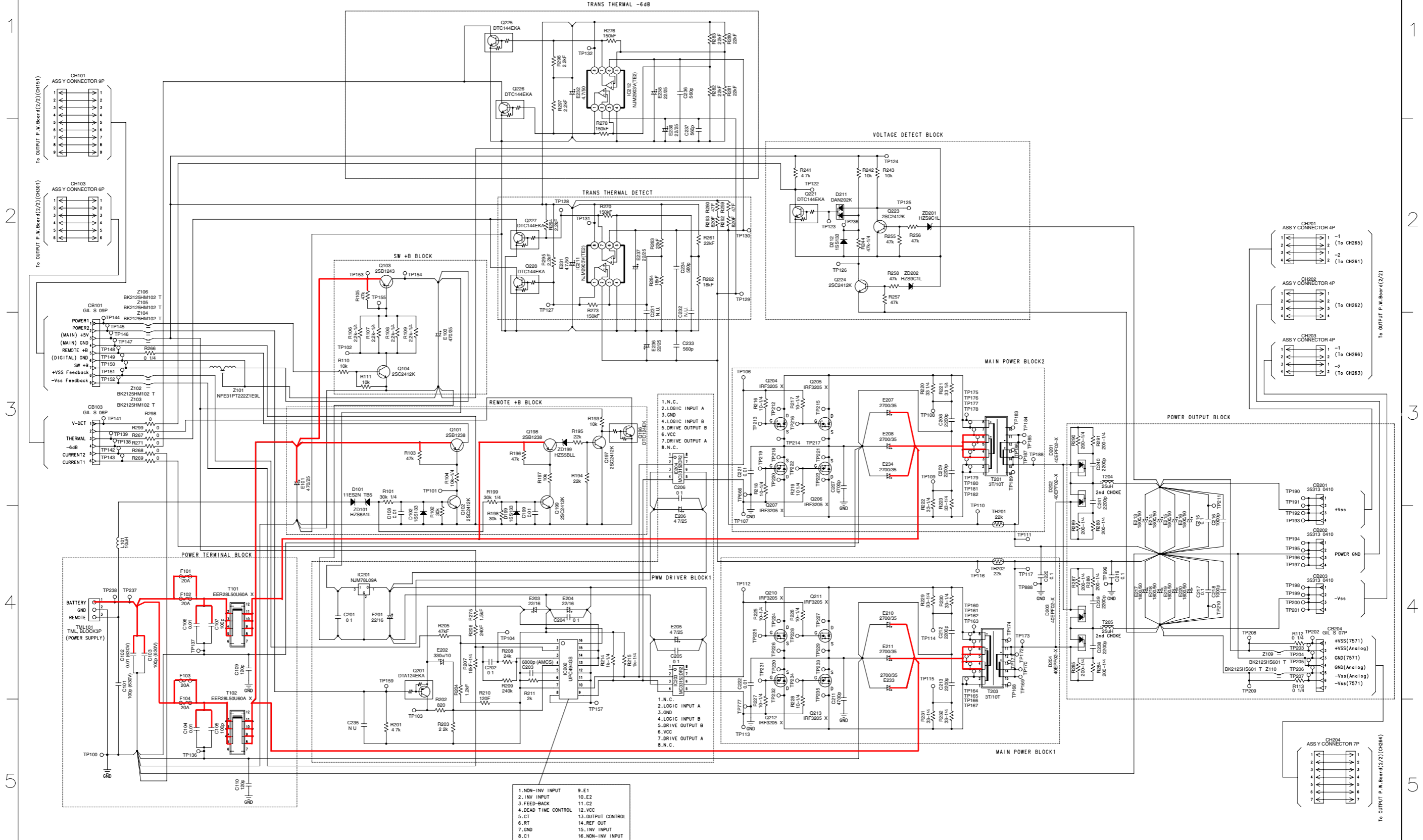
INNER TEMPERATURE
 DETECT IC



OUTPUT P.W. Board(2/2)
NOTE:N.U. is Not Used Parts.

Schematic Diagram(3/3)

MRD-M1001



- | | |
|----------------------|--------------------|
| 1. NON-INV INPUT | 9. E1 |
| 2. INV INPUT | 10. E2 |
| 3. FEED-BACK | 11. C2 |
| 4. DEAD TIME CONTROL | 12. VCC |
| 5. CT | 13. OUTPUT CONTROL |
| 6. RT | 14. REF OUT |
| 7. GND | 15. INV INPUT |
| 8. C1 | 16. NON-INV INPUT |

MAIN P.W. Board
NOTE: N.U. is Not Used Parts.

Terminal Voltage of IC/TR

IC001	
1	4.6V
2	4.6V
3	0V
4	4.6V
5	4.6V

IC201	
1	5.3mV
2	5.3mV
3	5.3mV

IC202			
1	0.37V	9	2.53V
2	21.2mV	10	2.52V
3	5.8mV	11	22.2mV
4	4.0mV	12	16.5mV
5	0.91V	13	4.0mV
6	4.7mV	14	4.0mV
7	4.0mV	15	4.0mV
8	3.5mV	16	4.0mV

IC203	
1	0.33V
2	2.5V
3	4.2mV
4	2.54V
5	0.79V
6	16.9mV
7	2.78V
8	0.33V

IC204	
1	0.42V
2	2.54V
3	3.9mV
4	0.4V
5	2.8V
6	20mV
7	2.8V
8	0.54V

IC211	
1	3.1mV
2	14.7mV
3	2.5mV
4	2.6mV
5	2.6mV
6	17.9mV
7	3.3mV
8	2.5mV

IC212	
1	0.41mV
2	16.4mV
3	3.2mV
4	3.2mV
5	3.5mV
6	19.3mV
7	4.3mV
8	3.0mV

IC301							
1	3.0mV	12	2.13V	23	4.9mV	34	5.5mV
2	3.9mV	13	2.8mV	24	5.1mV	35	6.1mV
3	2.0V	14	33.5mV	25	5.1mV	36	5.1mV
4	2.0V	15	132mV	26	5.1mV	37	77mV
5	2.8mV	16	35.9mV	27	2.0V	38	66mV
6	2.4V	17	3.3mV	28	2.0V	39	66mV
7	2.0V	18	3.6mV	29	47mV	40	5.4mV
8	2.0V	19	84mV	30	61mV	41	11.6mV
9	2.0V	20	3.2mV	31	5.3mV	42	4.8mV
10	2.4V	21	5.1mV	32	5.6mV	43	5.6mV
11	2.4V	22	2.9mV	33	5.6mV	44	5.0mV

IC302	
1	3.5mV
2	3.0mV
3	2.8mV
4	2.7mV
5	131.9mV
6	133mV
7	2.7mV
8	2.7mV

IC303	
1	35.2mV
2	3.2mV
3	2.8mV
4	0.35V
5	4.1mV

IC304	
1	0.34V
2	3.4mV
3	7.3mV
4	4.2mV
5	3.7mV

IC305	
1	4.9mV
2	3.9mV
3	3.8mV
4	4.2mV
5	4.1mV

IC306	
1	137mV
2	3.5mV
3	3.5mV
4	3.9mV
5	3.7mV

IC307	
1	140mV
2	3.5mV
3	3.4mV
4	3.6mV
5	3.7mV

IC308	
1	147.8mV
2	9.2mV
3	5.2mV
4	0.45V
5	5.7mV

IC309	
1	3.6mV
2	3.3mV
3	3.3mV

IC310	
1	40mV
2	0.2V
3	30mV
4	5.2mV
5	30mV
6	80mV
7	39mV
8	0.45V

IC311	
1	98mV
2	10.7mV
3	10.5mV
4	9.1mV
5	0.35V
6	9.4mV
7	9.2mV
8	85.4mV

IC312	
1	0.32V
2	32.5mV
3	93.4mV
4	6.7mV
5	95.1mV
6	33mV
7	0.32V
8	5.0mV

IC320	
1	5.0mV
2	92.6mV
3	5.9mV
4	5.0mV
5	27.9mV

IC401	
1	11.0mV
2	13.1mV
3	116.8mV
4	4.7mV
5	112.6mV
6	12.7mV
7	9.3mV
8	4.8mV

IC402	
1	10.0mV
2	12.2mV
3	113.9mV
4	0.33V
5	122.3mV
6	15.5mV
7	13.7mV
8	4.8mV

IC405	
1	4.6mV
2	7.6mV
3	92mV
4	4.8mV
5	0.32V
6	7.0mV
7	4.5mV
8	4.7mV

IC406			
1	106mV	13	9.7mV
2	4.6mV	14	4.6mV
3	4.7mV	15	4.6mV
4	9.5mV	16	4.6mV
5	4.7mV	17	5.0mV
6	8.7V	18	11.9mV
7	13mV	19	7.8mV
8	5.1mV	20	4.7mV
9	6.3mV	21	8.4mV
10	10.5mV	22	4.8mV
11	4.6mV	23	4.6mV
12	10.5mV	24	0.32V

IC407	
1	11.9mV
2	12.1mV
3	11.8mV
4	11.7mV
5	12.4mV
6	12.6mV
7	14mV
8	10.1mV

IC408	
1	10.2mV
2	10.1mV
3	10.0mV

IC501							
1	5.6mV	21	7.3mV	41	1.05V	61	5.6mV
2	5.1mV	22	0.34V	42	0.34V	62	0.35V
3	0.18V	23	5.5mV	43	5.5mV	63	0.35V
4	6.7mV	24	5.6mV	44	0.34V	64	0.35V
5	5.6mV	25	5.3mV	45	5.6mV	65	5.5mV
6	0.35V	26	5.2mV	46	0.34V	66	5.5mV
7	5.6mV	27	10.8mV	47	0.34V	67	5.5mV
8	5.3mV	28	5.6mV	48	0.35V	68	13.0mV
9	5.3mV	29	0.3V	49	0.35V	69	5.5mV
10	5.3mV	30	10.4mV	50	0.35V	70	5.05mV
11	5.4mV	31	0.3V	51	0.34V	71	5.5mV
12	0.34V	32	5.2mV	52	0.34V	72	5.6mV
13	5.7mV	33	5.1mV	53	98.6mV	73	0.36V
14	5.5mV	34	0.3V	54	98.3mV	74	5.6mV
15	5.3mV	35	5.6mV	55	6.4mV	75	14.0mV
16	0.34V	36	0.3V	56	0.34V	76	5.6mV
17	5.3mV	37	5.9mV	57	0.35V	77	0.36V
18	5.6mV	38	9.1mV	58	5.7mV	78	5.6mV
19	0.34V	39	161mV	59	5.5mV	79	5.6mV
20	5.5mV	40	1.1V	60	5.6mV	80	14.0mV

IC502	
1	6.3mV
2	6.5mV
3	6.2mV

IC601							
1	0.31V	17	12.1mV	33	0.36V	49	1.1V
2	0.3V	18	12.0mV	34	0.36V	50	1.1V
3	0.31V	19	0.35V	35	72.0mV	51	0.36V
4	0.31V	20	0.35V	36	0.38V	52	5.7mV
5	10.7mV	21	13.0mV	37	60.0mV	53	0.35V
6	0.31V	22	12.8mV	38	0.37V	54	0.35V
7	6.8mV	23	5.7mV	39	0.35V	55	0.35V
8	6.8mV	24	5.8mV	40	89.0mV	56	28.7mV
9	10.2mV	25	0.5V	41	5.5mV	57	22.4mV
10	5.5mV	26	0.48V	42	5.5mV	58	5.4mV
11	0.4V	27	5.6mV	43	5.5mV	59	0.35V
12	5.5mV	28	24.5mV	44	5.5mV	60	5.6mV
13	5.6mV	29	12.3mV	45	0.39V	61	5.6mV
14	5.6mV	30	12.5mV	46	90.0mV	62	0.36V
15	180.2mV	31	0.38V	47	90.0mV	63	7.9mV
16	166.0mV	32	5.5mV	48	1.7V	64	11.9mV

IC602			
1	1.1V	9	0.33V
2	2.1V	10	12.4mV
3	4.7mV	11	4.7mV
4	52.9mV	12	4.7mV
5	30.4mV	13	4.6mV
6	0.34V	14	0.34V
7	4.7mV	15	4.9mV
8	0.35V	16	0.34V

IC701	
1	6.3mV
2	6.5mV
3	6.2mV

IC703	
1	5.3mV
2	5.3mV
3	5.3mV

IC901	
1	8.06V
2	4.16mV
3	406.5mV
4	4.16mV
5	1.32V
6	8.09V
7	8.08V
8	4.66V

IC902	
1	2.93V
2	2.93V
3	4.3mV
4	1.91V
5	1.25V

	E	C	B		E	C	B
Q001	0V	0V	4.6V	Q223	3.4mV	3.2mV	3.6mV
Q002	-23V	-23V	4.6V	Q224	2.3mV	2.3mV	2.7mV
Q101	5.9mV	5.8mV	5.9mV	Q225	3.2mV	5.1mV	4.3mV
Q102	5.9mV	5.9mV	6.5mV	Q226	3.2mV	5.1mV	0.41mV
Q103	5.9mV	6.0mV	6.0mV	Q227	2.6mV	5.3mV	3.3mV
Q104	5.9mV	6.0mV	6.1mV	Q228	2.6mV	5.3mV	3.1mV
Q196	5.9mV	147.8mV	5.9mV	Q901	4.1mV	50.6mV	5.06V
Q197	5.9mV	52.1mV	14.4V	Q902	12.53V	12.44V	12.42V
Q198	14.41V	14.4V	462.8mV	Q920	3.9mV	14.3mV	776.0mV
Q199	3.95mV	86.33mV	4.99V	Q301	4.93mV	5.07V	4.03mV
Q201	6.2mV	22.2mV	8.2mV	Q405	15.19V	28.44V	15.81V
Q221	3.4mV	52.1mV	2.1mV	Q406	-15.14V	-28.33V	-15.73V

	G	D	S
Q204	2.8V	11.3V	5.3mV
Q205	2.8V	11.3V	3.0mV
Q206	2.8V	11.3V	5.3mV
Q207	2.8V	11.3V	5.5mV
Q210	2.8V	11.3V	3.6mV
Q211	2.8V	11.3V	3.7mV
Q212	2.8V	11.3V	2.9mV
Q213	2.8V	11.3V	3.0mV
Q601	2.3V	37 V	5.9mV
Q602	2.3V	37 V	6.8mV
Q604	2.3V	37 V	7.9mV
Q605	2.3V	37 V	10.0mV
Q607	2.3V	37 V	8.6mV
Q608	2.3V	37 V	10.0mV
Q610	2.3V	37 V	7.0mV
Q611	2.3V	37 V	7.9mV

[Measuring Conditions]

- 1.Power Supply Voltage : DC14.4V
- 2.Measuring Meter : Digital Multi Meter
- 3.Measuring Point Reference : Between GND
- 3.Measuring Condition : No Signal Input

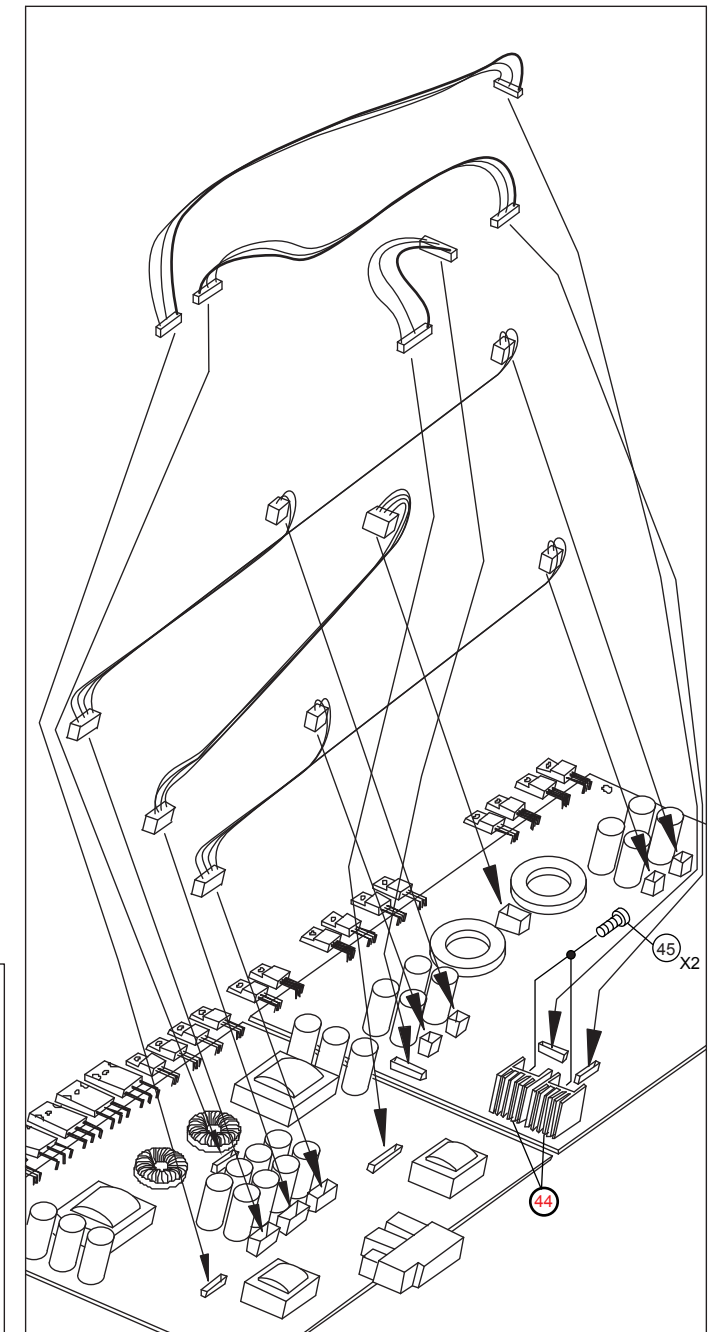
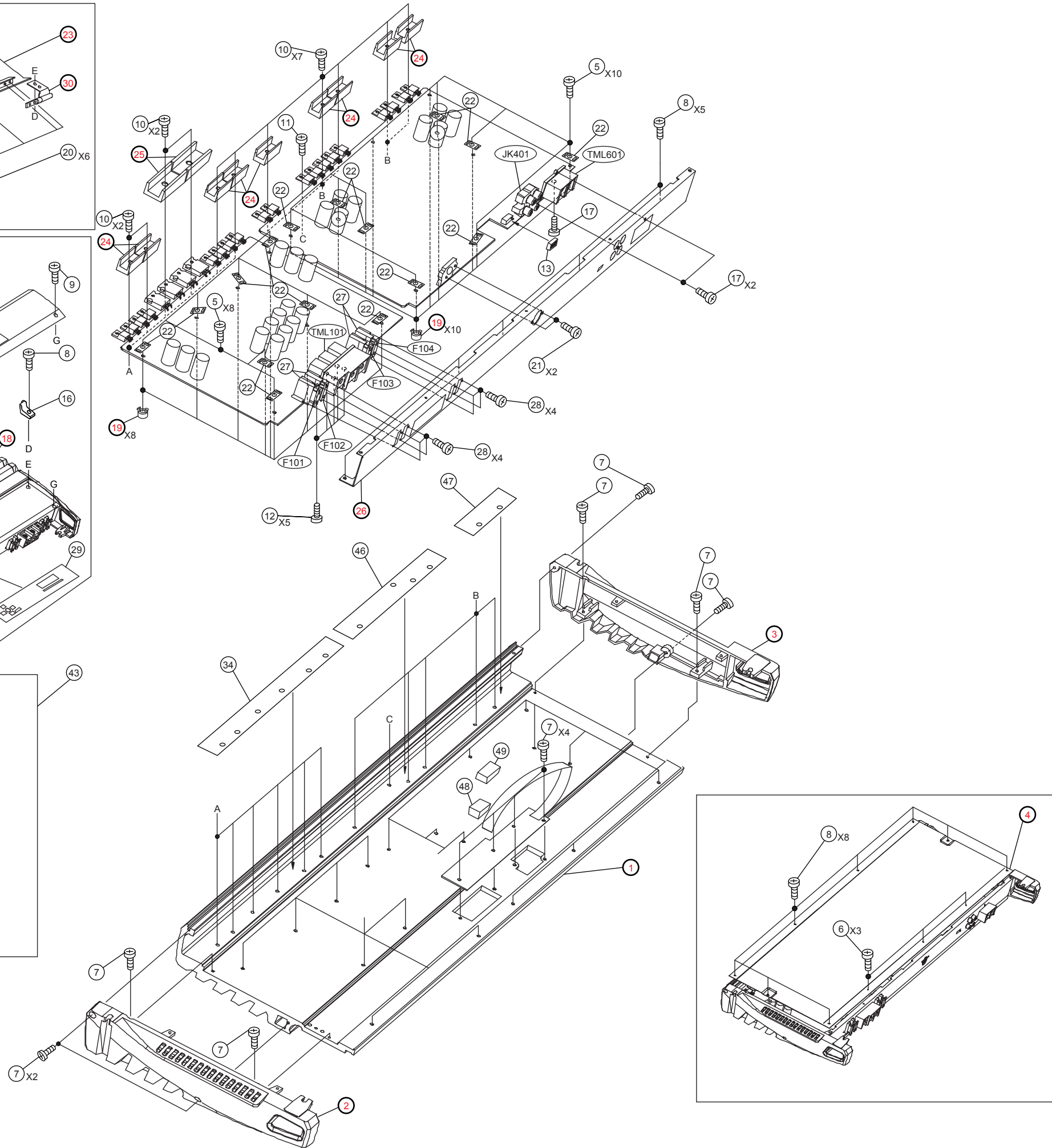
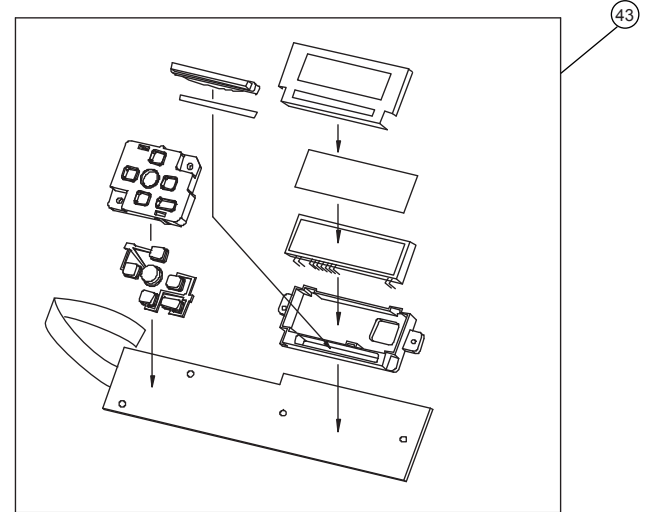
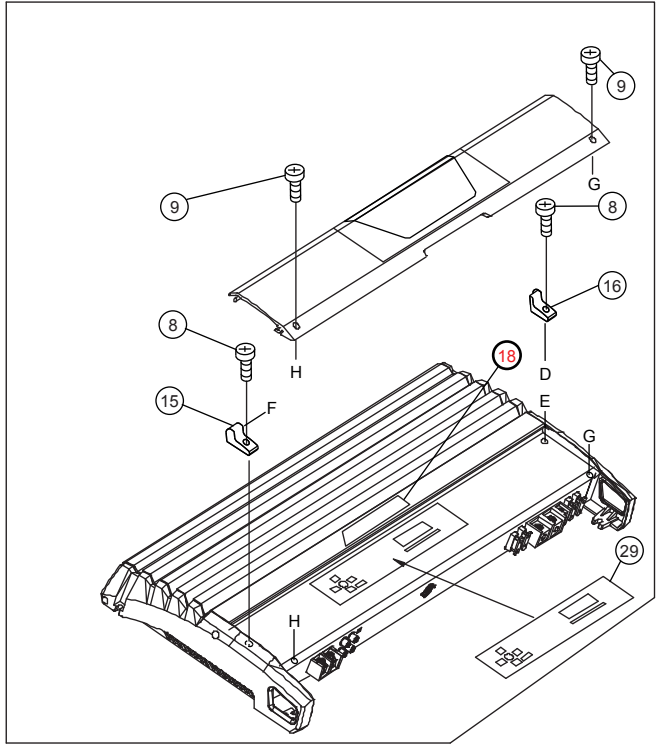
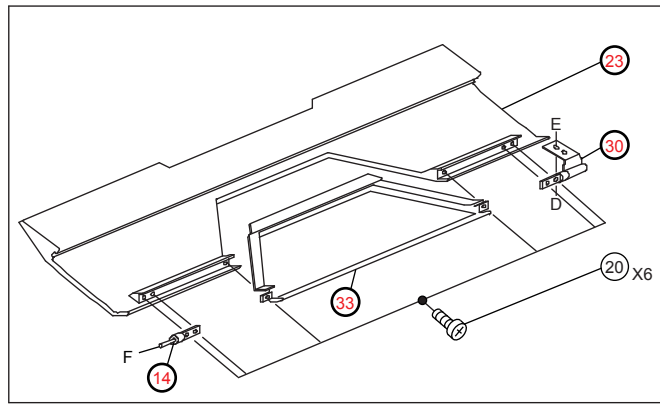
Description of IC Terminal

TMP86PM47U : IC301

No.	Symbol	I/O	Terminal Description
1	VSS	I	GND connect terminal of A/D converter.
2	XIN	I	Crystal OSC connect terminal.
3	XOUT	O	
4	TEST	I	TEST terminal.
5	VDD	I	Power supply terminal. (4.5 to 5.5V)
6	I2C_SDA	O	I2C-SDA output terminal.
7	I2C_SCL	O	I2C-SCL output terminal.
8	RESET	I	RESET terminal.
9	BAT_DET	I	BAT-DET terminal.
10	I_LIMIT	I	I_LIMIT input terminal.
11	V_DET_SEL	O	VOLT-DET circuit ON/OFF terminal.
12	DSP_RST	O	DSP-RESET output terminal.
13	MDL_SEL1	I	Model distinction input terminal.
14	CMD_DOUT	O	Outer commander data output terminal.
15	CMD_DIN	I	Outer commander data input terminal.
16	CMD_CLK	I	Outer commander clock terminal.
17	MDL_SEL2	I	Model distinction input terminal.
18	POWER_P1	O	Power supply circuit control signal output terminal.
19	POWER_P2		
20	POWER_P3		
21	HU_LINK_CLK	O	HU LINK indicator clock output terminal.
22	HU_LINK	O	HU LINK indicator output terminal.
23	VOLT_DET	I	VOLT-DET terminal.
24	-6dB_DET	I	-6dB-DET terminal.
25	OUT_THRM	I	Output Thermal detect1
26	AD_KEY	I	KEY level input terminal.
27	AD_BASS	I	Gain level input terminal. (Bass Knob)
28	AD_VOLT	I	Voltage signal input terminal.
29	AD_CURR	I	Current signal input terminal.
30	AD_THRM	I	Temperature signal input terminal.
31	AD_THRM_DET	I	Temperature detect input terminal.
32	AD_COMBASS	O	Gain level input terminal. (Commander)
33	AD_IN_LV	I	Input level signal input terminal.
34	VAREF	I	Analog standard voltage terminal.
35	AVDD	-	Analog power supply terminal of A/D converter.
36	AVSS	-	GND connect terminal of A/D converter.
37	IN_CH	O	PWM-1/1+2 select output terminal.
38	PWM_PDN	I	PWM-PDN input terminal.
39	PWM_STBY	O	PWM-STAND-BY output terminal.
40	PWM_MUTE	O	PWM-MUTE output terminal.
41	VFD_CLK	O	VFD driver synchronous clock output terminal.
42	VFD_SD	O	VFD driver transmission data output terminal.
43	VFD_BL	O	VFD driver blank output output terminal.
44	VFD_LH	O	VFD driver latch & hold output terminal.

Exploded View (Cabinet)

MRD-M1001



Electrical Parts List

*Each parts on P.W.Board are described in order of the reference number.

=====OUTPUT P.W.Board

C001	08E36472S01	CAP,CER. CP 0.1uF
C002	08E36472S01	CAP,CER. CP 0.1uF
C003	08E36472S01	CAP,CER. CP 0.1uF
C280	08E36596S01	CAP,CER. CP 1000pF
C281	08E36593S01	CAP,CER. CP 0.1uF
C282	08E36596S01	CAP,CER. CP 1000pF
C283	08E36593S01	CAP,CER. CP 0.1uF
C284	08E36472S01	CAP,CER. CP 0.1uF
C285	08E36472S01	CAP,CER. CP 0.1uF
C286	08E36596S01	CAP,CER. CP 1000pF
C287	08E36593S01	CAP,CER. CP 0.1uF
C288	08E36596S01	CAP,CER. CP 1000pF
C289	08E36593S01	CAP,CER. CP 0.1uF
C290	08E36470S01	CAP,CER. CP 100pF
C291	08E36470S01	CAP,CER. CP 100pF
C304	08E36574S01	CAP,FILM 6800pF
C305	08E36567S01	CAP,CER. CP 0.01uF
C315	08E36472S01	CAP,CER. CP 0.1uF
C316	08E36472S01	CAP,CER. CP 0.1uF
C318	08E36567S01	CAP,CER. CP 0.01uF
C319	08E36567S01	CAP,CER. CP 0.01uF
C320	08E36470S01	CAP,CER. CP 100pF
C321	08E36470S01	CAP,CER. CP 100pF
C322	08E36470S01	CAP,CER. CP 100pF
C323	08E36470S01	CAP,CER. CP 100pF
C324	08E36470S01	CAP,CER. CP 100pF
C325	08E36627S01	CAP,CER. CP 0.022uF
C326	08E36567S01	CAP,CER. CP 0.01uF
C327	08E36567S01	CAP,CER. CP 0.01uF
C328	08E36470S01	CAP,CER. CP 100pF
C329	08E36470S01	CAP,CER. CP 100pF
C332	08E36472S01	CAP,CER. CP 0.1uF
C333	08E36472S01	CAP,CER. CP 0.1uF
C337	08E36470S01	CAP,CER. CP 100pF
C338	08E36470S01	CAP,CER. CP 100pF
C350	08E36472S01	CAP,CER. CP 0.1uF
C351	08E36567S01	CAP,CER. CP 0.01uF
C352	08E36632S01	CAP,CER. CP 100pF
C354	08E36472S01	CAP,CER. CP 0.1uF
C355	08E36472S01	CAP,CER. CP 0.1uF
C356	08E36472S01	CAP,CER. CP 0.1uF
C357	08E36681S01	CAP,CER. CP 1000pF
C358	08E36472S01	CAP,CER. CP 0.1uF
C359	08E36472S01	CAP,CER. CP 0.1uF
C360	08E36632S01	CAP,CER. CP 100pF
C361	08E36680S01	CAP,CER. CP 1000pF
C362	08E36472S01	CAP,CER. CP 0.1uF
C363	08E36627S01	CAP,CER. CP 0.022uF
C364	08E36628S01	CAP,CER. CP 820pF
C365	08E36628S01	CAP,CER. CP 820pF
C366	08E36472S01	CAP,CER. CP 0.1uF

C382	08E36472S01	CAP,CER. CP 0.1uF
C383	08E36472S01	CAP,CER. CP 0.1uF
C405	08E36470S01	CAP,CER. CP 100pF
C406	08E36470S01	CAP,CER. CP 100pF
C407	08E36470S01	CAP,CER. CP 100pF
C408	08E36470S01	CAP,CER. CP 100pF
C409	08E36596S01	CAP,CER. CP 1000pF
C410	08E36596S01	CAP,CER. CP 1000pF
C411	08E36596S01	CAP,CER. CP 1000pF
C412	08E36596S01	CAP,CER. CP 1000pF
C417	08E36596S01	CAP,CER. CP 1000pF
C418	08E36596S01	CAP,CER. CP 1000pF
C419	08E36596S01	CAP,CER. CP 1000pF
C420	08E36675S01	CAP,CER. CP 33pF
C421	08E36596S01	CAP,CER. CP 1000pF
C422	08E36675S01	CAP,CER. CP 33pF
C423	08E36647S01	CAP,FILM 2200pF
C424	08E36647S01	CAP,FILM 2200pF
C425	08E36647S01	CAP,FILM 2200pF
C427	08E36596S01	CAP,CER. CP 1000pF
C428	08E36596S01	CAP,CER. CP 1000pF
C429	08E36596S01	CAP,CER. CP 1000pF
C430	08E36647S01	CAP,FILM 2200pF
C431	08E36472S01	CAP,CER. CP 0.1uF
C432	08E36472S01	CAP,CER. CP 0.1uF
C433	08E36677S01	CAP,CER. CP 5600pF
C434	08E36567S01	CAP,CER. CP 0.01uF
C435	08E36647S01	CAP,FILM 2200pF
C436	08E36472S01	CAP,CER. CP 0.1uF
C437	08E36472S01	CAP,CER. CP 0.1uF
C438	08E36677S01	CAP,CER. CP 5600pF
C439	08E36596S01	CAP,CER. CP 1000pF
C440	08E36678S01	CAP,CER. CP 330pF
C441	08E36472S01	CAP,CER. CP 0.1uF
C501	08E36472S01	CAP,CER. CP 0.1uF
C502	08E36596S01	CAP,CER. CP 1000pF
C503	08E36567S01	CAP,CER. CP 0.01uF
C504	08E36676S01	CAP,CER. CP 47pF
C505	08E36676S01	CAP,CER. CP 47pF
C506	08E36647S01	CAP,FILM 2200pF
C507	08E36567S01	CAP,CER. CP 0.01uF
C508	08E36567S01	CAP,CER. CP 0.01uF
C509	08E36567S01	CAP,CER. CP 0.01uF
C510	08E36596S01	CAP,CER. CP 1000pF
C511	08E36472S01	CAP,CER. CP 0.1uF
C512	08E36631S01	CAP,CER. CP 12pF
C513	08E36631S01	CAP,CER. CP 12pF
C514	08E36567S01	CAP,CER. CP 0.01uF
C515	08E36625S01	CAP,CER. CP 1500pF
C516	08E36567S01	CAP,CER. CP 0.01uF
C517	08E36567S01	CAP,CER. CP 0.01uF
C518	08E36567S01	CAP,CER. CP 0.01uF
C519	08E36567S01	CAP,CER. CP 0.01uF
C520	08E36596S01	CAP,CER. CP 1000pF
C521	08E36472S01	CAP,CER. CP 0.1uF
C522	08E36629S01	CAP,CER. CP 0.047uF
C523	08E36472S01	CAP,CER. CP 0.1uF

C524	08E36472S01	CAP,CER. CP 0.1uF
C601	08S55504Y01	CAP,CER. CP 0.33uF
C602	08E36630S01	CAP,CER. CP 0.22uF
C603	08E36630S01	CAP,CER. CP 0.22uF
C604	08E36593S01	CAP,CER. CP 0.1uF
C605	08E36596S01	CAP,CER. CP 1000pF
C606	08E36593S01	CAP,CER. CP 0.1uF
C607	08E36596S01	CAP,CER. CP 1000pF
C608	08E36626S01	CAP,CER. CP 2200pF
C609	08E36472S01	CAP,CER. CP 0.1uF
C610	08E36472S01	CAP,CER. CP 0.1uF
C611	08E36472S01	CAP,CER. CP 0.1uF
C612	08E36626S01	CAP,CER. CP 2200pF
C613	08E36626S01	CAP,CER. CP 2200pF
C614	08E36472S01	CAP,CER. CP 0.1uF
C616	08E36630S01	CAP,CER. CP 0.22uF
C617	08E36472S01	CAP,CER. CP 0.1uF
C618	08E36596S01	CAP,CER. CP 1000pF
C619	08E36596S01	CAP,CER. CP 1000pF
C620	08E36472S01	CAP,CER. CP 0.1uF
C621	08E36472S01	CAP,CER. CP 0.1uF
C622	08E36626S01	CAP,CER. CP 2200pF
C623	08E36472S01	CAP,CER. CP 0.1uF
C624	08E36596S01	CAP,CER. CP 1000pF
C625	08E36645S01	CAP,FILM 0.012uF
C626	08E36646S01	CAP,FILM 0.47uF
C627	08E36644S01	CAP,FILM 0.01uF
C628	08E36472S01	CAP,CER. CP 0.1uF
C629	08E36472S01	CAP,CER. CP 0.1uF
C630	08E36472S01	CAP,CER. CP 0.1uF
C631	08E36472S01	CAP,CER. CP 0.1uF
C632	08E36596S01	CAP,CER. CP 1000pF
C633	08E36596S01	CAP,CER. CP 1000pF
C634	08E36596S01	CAP,CER. CP 1000pF
C635	08E36596S01	CAP,CER. CP 1000pF
C636	08E36593S01	CAP,CER. CP 0.1uF
C637	08E36596S01	CAP,CER. CP 1000pF
C638	08E36593S01	CAP,CER. CP 0.1uF
C639	08E36596S01	CAP,CER. CP 1000pF
C642	08E36593S01	CAP,CER. CP 0.1uF
C643	08E36596S01	CAP,CER. CP 1000pF
C644	08E36593S01	CAP,CER. CP 0.1uF
C645	08E36596S01	CAP,CER. CP 1000pF
C648	08E36593S01	CAP,CER. CP 0.1uF
C649	08E36596S01	CAP,CER. CP 1000pF
C650	08E36593S01	CAP,CER. CP 0.1uF
C651	08E36596S01	CAP,CER. CP 1000pF
C654	08E36593S01	CAP,CER. CP 0.1uF
C655	08E36596S01	CAP,CER. CP 1000pF
C656	08E36593S01	CAP,CER. CP 0.1uF
C657	08E36596S01	CAP,CER. CP 1000pF
C660	08S55504Y01	CAP,CER. CP 0.33uF
C661	08S55504Y01	CAP,CER. CP 0.33uF
C663	08S55504Y01	CAP,CER. CP 0.33uF
C664	08S55504Y01	CAP,CER. CP 0.33uF
C666	08E36593S01	CAP,CER. CP 0.1uF
C667	08E36596S01	CAP,CER. CP 1000pF

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C668	08E36593S01	CAP,CER. CP 0.1uF
C669	08E36596S01	CAP,CER. CP 1000pF
C670	08E36593S01	CAP,CER. CP 0.1uF
C671	08E36596S01	CAP,CER. CP 1000pF
C672	08E36593S01	CAP,CER. CP 0.1uF
C673	08E36596S01	CAP,CER. CP 1000pF
C674	08S45539Y05	CAP,CER. CP 1500pF
C675	08S45539Y05	CAP,CER. CP 1500pF
C676	08T55494Y01	CAP,FILM 1uF
C677	08T55494Y01	CAP,FILM 1uF
C678	08E36646S01	CAP,FILM 0.47uF
C679	08E36646S01	CAP,FILM 0.47uF
C680	08S45539Y04	CAP,CER. CP 0.01uF
C681	08S45539Y04	CAP,CER. CP 0.01uF
C682	08S45539Y01	CAP,CER. CP 1000pF
C683	08S45539Y01	CAP,CER. CP 1000pF
C699	08T55494Y01	CAP,FILM 1uF
C701	08E36472S01	CAP,CER. CP 0.1uF
C702	08E36472S01	CAP,CER. CP 0.1uF
C703	08E36593S01	CAP,CER. CP 0.1uF
C704	08E36593S01	CAP,CER. CP 0.1uF
C705	08E36593S01	CAP,CER. CP 0.1uF
C706	08E36593S01	CAP,CER. CP 0.1uF
C713	08E36596S01	CAP,CER. CP 1000pF
C714	08E36596S01	CAP,CER. CP 1000pF
C715	08E36596S01	CAP,CER. CP 1000pF
C716	08E36566S01	CAP,CER. CP 4700pF
C718	08E36596S01	CAP,CER. CP 1000pF
C719	08E36629S01	CAP,CER. CP 0.047uF
C720	08E36596S01	CAP,CER. CP 1000pF
C722	08E36567S01	CAP,CER. CP 0.01uF
C901	08E36679S01	CAP,CER. CP 220pF
C902	08E36472S01	CAP,CER. CP 0.1uF
C910	08E36472S01	CAP,CER. CP 0.1uF
CB301	09T15373Y12	FFC,12P
CH151	09E36549S01	WTB,9P GIL-S-09P-S2T2
CH261	09E36604S01	WTB,2P 35313-0210
CH262	09E36551S01	WTB,8P 35313-0410
CH263	09E36604S01	WTB,2P 35313-0210
CH264	09E36698S01	WTB,7P GIL-S-07P-S2T2
CH265	09E36604S01	WTB,2P 35313-0210
CH266	09E36604S01	WTB,2P 35313-0210
CH301	09E36697S01	WTB,6P GIL-S-06P-S2T2
CL301	91T45281Y04	CRYSTAL,7.7MHz
D001	48T68828F11	DIODE,1SS133
D002	48T68828F11	DIODE,1SS133
D003	48T84052F11	DIODE,11ES2
D004	48T84052F11	DIODE,11ES2
D005	48T84052F11	DIODE,11ES2
D006	48T84052F11	DIODE,11ES2
D301	48T68828F11	DIODE,1SS133
D303	48T68828F11	DIODE,1SS133
D304	48T84052F11	DIODE,11ES2
D305	48E36633S01	DIODE,ARRAY DAP202K
D306	48T84052F11	DIODE,11ES2
D309	48E36633S01	DIODE,ARRAY DAP202K
D401	48T85357W01	DIODE,ARRAY 1PS226

D402	48T85357W01	DIODE,ARRAY 1PS226
D403	48T85357W01	DIODE,ARRAY 1PS226
D404	48T85357W01	DIODE,ARRAY 1PS226
D601	48E36633S01	DIODE,ARRAY DAP202K
D901	48T15702W01	DIODE,SB05-05CP
E280	23T25139Y17	CAP,ELEC 1800uF/50V
E281	23T25139Y17	CAP,ELEC 1800uF/50V
E282	23T25139Y17	CAP,ELEC 1800uF/50V
E283	23T25139Y17	CAP,ELEC 1800uF/50V
E284	23T25139Y17	CAP,ELEC 1800uF/50V
E285	23T25139Y17	CAP,ELEC 1800uF/50V
E286	23T25139Y17	CAP,ELEC 1800uF/50V
E287	23T25139Y17	CAP,ELEC 1800uF/50V
E288	23S95415W21	CAP,ELEC 10uF/50V
E289	23S95415W21	CAP,ELEC 10uF/50V
E301	23T00149L35	CAP,ELEC 47uF/25V
E302	23S75373W03	CAP,ELEC 22uF/16V
E303	23S75373W07	CAP,ELEC 4.7uF/25V
E306	23T75480W54	CAP,ELEC 470uF/25V
E307	23T00149L16	CAP,ELEC 470uF/10V
E308	23S95415W20	CAP,ELEC 4.7uF/50V
E310	23S75372W20	CAP,ELEC 22uF/25V
E311	23S75372W20	CAP,ELEC 22uF/25V
E312	23S95415W20	CAP,ELEC 4.7uF/50V
E316	23T00149L16	CAP,ELEC 470uF/10V
E401	23S82372F07	CAP,ELEC 47uF/50V
E402	23S82372F07	CAP,ELEC 47uF/50V
E403	23S82372F07	CAP,ELEC 47uF/50V
E404	23S82372F07	CAP,ELEC 47uF/50V
E411	23T00149L37	CAP,ELEC 220uF/25V
E412	23T00149L37	CAP,ELEC 220uF/25V
E413	23S75372W19	CAP,ELEC 10uF/25V
E414	23S75372W19	CAP,ELEC 10uF/25V
E415	23S75372W19	CAP,ELEC 10uF/25V
E416	23S75372W19	CAP,ELEC 10uF/25V
E417	23T00149L13	CAP,ELEC 100uF/10V
E418	23S75373W07	CAP,ELEC 4.7uF/25V
E419	23S75372W19	CAP,ELEC 10uF/25V
E420	23S75372W19	CAP,ELEC 10uF/25V
E421	23S75372W19	CAP,ELEC 10uF/25V
E422	23S75373W11	CAP,ELEC 0.47uF/50V
E423	23S75373W11	CAP,ELEC 0.47uF/50V
E424	23S75372W19	CAP,ELEC 10uF/25V
E425	23S75372W19	CAP,ELEC 10uF/25V
E426	23S75373W03	CAP,ELEC 22uF/16V
E427	23T65742Y01	CAP,ELEC 330uF/16V
E428	23S75373W14	CAP,ELEC 2.2uF/50V
E429	23S75373W14	CAP,ELEC 2.2uF/50V
E430	23T00149L36	CAP,ELEC 100uF/25V
E431	23T00149L36	CAP,ELEC 100uF/25V
E501	23T00149L54	CAP,ELEC 3.3uF/50V
E502	23S75372W19	CAP,ELEC 10uF/25V
E503	23T00149L35	CAP,ELEC 47uF/25V
E504	23T00149L35	CAP,ELEC 47uF/25V
E505	23T00149L35	CAP,ELEC 47uF/25V
E506	23T00149L13	CAP,ELEC 100uF/10V
E507	23T00149L35	CAP,ELEC 47uF/25V

E508	23T00149L35	CAP,ELEC 47uF/25V
E509	23T75480W54	CAP,ELEC 470uF/25V
E510	23T75478W25	CAP,ELEC 47uF/25V
E511	23T75478W25	CAP,ELEC 47uF/25V
E601	23T65093Y01	CAP,ELEC 10uF/100V
E602	23T45365W16	CAP,ELEC 22uF/50V
E603	23T45365W16	CAP,ELEC 22uF/50V
E604	23S95415W21	CAP,ELEC 10uF/50V
E605	23S95415W21	CAP,ELEC 10uF/50V
E606	23S95415W17	CAP,ELEC 1uF/50V
E607	23S95415W20	CAP,ELEC 4.7uF/50V
E608	23S95415W20	CAP,ELEC 4.7uF/50V
E609	23S75373W03	CAP,ELEC 22uF/16V
E610	23T65093Y01	CAP,ELEC 10uF/100V
E611	23T65093Y01	CAP,ELEC 10uF/100V
E613	23T65093Y01	CAP,ELEC 10uF/100V
E614	23T65093Y01	CAP,ELEC 10uF/100V
E701	23T75478W25	CAP,ELEC 47uF/25V
E702	23T00149L35	CAP,ELEC 47uF/25V
E901	23T00149L35	CAP,ELEC 47uF/25V
E902	23S75372W20	CAP,ELEC 22uF/25V
E903	23S75372W20	CAP,ELEC 22uF/25V
IC001	51T15185Y01	IC,TC7SH08FU
IC301	53-01213Z65	IC,TMP86PM47U
IC302	51E36639S01	IC,MC24C01-WMN6T
IC303	51T65016Y30	IC,S80942CNMC
IC304	51T55129Y01	IC,LM20BIM7
IC305	51T15191Y01	IC,TC74VHC08FT
IC306	51T15191Y01	IC,TC74VHC08FT
IC307	51T25084Y01	IC,TC74VHC74FT
IC308	51T65016Y31	IC,S80943CNMC
IC309	51E36635S01	IC,NJU7222U50
IC310	51E36636S01	IC,NJM2903M
IC311	51E36638S01	IC,NJMOP-07M
IC312	51E36636S01	IC,NJM2903M
IC320	51T15731W05	IC,TC7S04F
IC401	51E36634S01	IC,NJM4580V
IC402	51E36634S01	IC,NJM4580V
IC405	51E36634S01	IC,NJM4580V
IC406	51T15168Y01	IC,TEA6324T
IC407	51E36637S01	IC,NJM2100V
IC408	51T75197W09	IC,AN77L09M
IC501	51T45654Y03	IC,TC94A04AFD
IC502	51E36602S01	IC,NJM7805FA
IC601	51E36641S01	IC,TDA7571
IC602	51T35012Y01	IC,9246F-EL
IC701	51E36601S01	IC,NJM7808FA
IC702	51E36602S01	IC,NJM7805FA
IC703	51E36575S01	IC,NJM78L09A
IC901	51E36642S01	IC,NJM2360AM
IC902	51E36640S01	IC,BA00BC0WFP
L901	24T15313Y17	INDUCTOR,220uH
Q001	48E36571S01	TR,CP 2SC2412K
Q002	48E36571S01	TR,CP 2SC2412K
Q301	48E36572S01	TR,CP DTC124EK
Q405	48T56031F01	TR,2SD1266-P,Q
Q406	48T56030F04	TR,2SB941-P

Q601	48T65665Y01	FET,IRF3315
Q602	48T65665Y01	FET,IRF3315
Q604	48T25536Y01	FET,IRF9540N
Q605	48T25536Y01	FET,IRF9540N
Q607	48T25536Y01	FET,IRF9540N
Q608	48T25536Y01	FET,IRF9540N
Q610	48T65665Y01	FET,IRF3315
Q611	48T65665Y01	FET,IRF3315
Q901	48E36573S01	TR,CP DTC144EK
Q902	48E36648S01	TR,CP 2SB1238P
Q920	48E36571S01	TR,CP 2SC2412K
R001	06E36668S01	RES,CARBON 10K-1/16
R002	06E36668S01	RES,CARBON 10K-1/16
R003	06E36563S01	RES,CARBON 47K-1/16
R004	06E36563S01	RES,CARBON 47K-1/16
R005	06E36655S01	RES,CARBON 47K-1/4
R006	06E36563S01	RES,CARBON 47K-1/16
R007	06E36563S01	RES,CARBON 47K-1/16
R301	06E36484S01	RES,CARBON 220-1/4
R302	06E36463S01	RES,CARBON 10K-1/16
R303	06E36463S01	RES,CARBON 10K-1/16
R304	06E36559S01	RES,CARBON 47K-1/16
R305	06E36579S01	RES,CARBON 1K-1/4
R307	06E36579S01	RES,CARBON 1K-1/4
R312	06E36618S01	RES,CARBON 1K-1/16
R313	06E36463S01	RES,CARBON 10K-1/16
R315	06E36463S01	RES,CARBON 10K-1/16
R317	06E36657S01	RES,CARBON 470-1/16
R319	06E36618S01	RES,CARBON 1K-1/16
R320	06E36463S01	RES,CARBON 10K-1/16
R321	06E36463S01	RES,CARBON 10K-1/16
R322	06E36463S01	RES,CARBON 10K-1/16
R323	06E36463S01	RES,CARBON 10K-1/16
R324	06E36650S01	RES,CARBON 560-1/4
R325	06E36650S01	RES,CARBON 560-1/4
R326	06E36485S01	RES,CARBON 470-1/4
R327	06E36622S01	RES,CARBON 100K-1/16
R328	06E36485S01	RES,CARBON 470-1/4
R329	06E36622S01	RES,CARBON 100K-1/16
R330	06E36462S01	RES,CARBON 4.7K-1/16
R331	06E36672S01	RES,CARBON 39K-1/16
R332	06E36624S01	RES,CARBON 56K-1/16
R333	06E36462S01	RES,CARBON 4.7K-1/16
R334	06E36463S01	RES,CARBON 10K-1/16
R335	06E36668S01	RES,CARBON 10K-1/16
R336	06E36671S01	RES,CARBON 30K-1/16
R337	06E36611S01	RES,CARBON 10K-1/10
R338	06E36612S01	RES,CARBON 22K-1/10
R339	06E36610S01	RES,CARBON 9.1K-1/10
R340	06E36611S01	RES,CARBON 10K-1/10
R341	06E36612S01	RES,CARBON 22K-1/10
R342	06E36610S01	RES,CARBON 9.1K-1/10
R343	06E36662S01	RES,CARBON 39K-1/16
R344	06E36464S01	RES,CARBON 0-1/16
R345	06E36464S01	RES,CARBON 0-1/16
R347	06E36477S01	RES,CARBON 33K-1/16
R348	06E36667S01	RES,CARBON 4.7K-1/16

R349	06E36665S01	RES,CARBON 1K-1/16
R350	06E36665S01	RES,CARBON 1K-1/16
R351	06E36667S01	RES,CARBON 4.7K-1/16
R352	06E36477S01	RES,CARBON 33K-1/16
R353	06E36622S01	RES,CARBON 100K-1/16
R354	06E36585S01	RES,CARBON 2.2K-1/16
R361	06E36610S01	RES,CARBON 9.1K-1/10
R362	06E36610S01	RES,CARBON 9.1K-1/10
R363	06E36612S01	RES,CARBON 22K-1/10
R364	06E36611S01	RES,CARBON 10K-1/10
R365	06E36612S01	RES,CARBON 22K-1/10
R366	06E36611S01	RES,CARBON 10K-1/10
R367	06E36463S01	RES,CARBON 10K-1/16
R368	06E36463S01	RES,CARBON 10K-1/16
R369	06E36613S01	RES,CARBON 360-1/10
R370	06E36613S01	RES,CARBON 360-1/10
R371	06E36613S01	RES,CARBON 360-1/10
R372	06E36613S01	RES,CARBON 360-1/10
R377	06E36616S01	RES,CARBON 100-1/16
R378	06E36559S01	RES,CARBON 47K-1/16
R379	06E36616S01	RES,CARBON 100-1/16
R380	06E36463S01	RES,CARBON 10K-1/16
R381	06E36622S01	RES,CARBON 100K-1/16
R382	06E36622S01	RES,CARBON 100K-1/16
R383	06E36616S01	RES,CARBON 100-1/16
R384	06E36463S01	RES,CARBON 10K-1/16
R385	06E36619S01	RES,CARBON 1.2K-1/16
R386	06E36616S01	RES,CARBON 100-1/16
R387	06E36616S01	RES,CARBON 100-1/16
R388	06E36464S01	RES,CARBON 0-1/16
R389	06E36464S01	RES,CARBON 0-1/16
R395	06E36622S01	RES,CARBON 100K-1/16
R396	06E36463S01	RES,CARBON 10K-1/16
R397	06E36658S01	RES,CARBON 8.2K-1/16
R398	06E36585S01	RES,CARBON 2.2K-1/16
R399	06E36585S01	RES,CARBON 2.2K-1/16
R401	06E36665S01	RES,CARBON 1K-1/16
R402	06E36674S01	RES,CARBON 100K-1/16
R403	06E36674S01	RES,CARBON 100K-1/16
R404	06E36665S01	RES,CARBON 1K-1/16
R405	06E36618S01	RES,CARBON 1K-1/16
R406	06E36618S01	RES,CARBON 1K-1/16
R407	06E36665S01	RES,CARBON 1K-1/16
R408	06E36665S01	RES,CARBON 1K-1/16
R409	06E36674S01	RES,CARBON 100K-1/16
R410	06E36674S01	RES,CARBON 100K-1/16
R411	06E36618S01	RES,CARBON 1K-1/16
R412	06E36618S01	RES,CARBON 1K-1/16
R437	06E36612S01	RES,CARBON 22K-1/10
R438	06E36612S01	RES,CARBON 22K-1/10
R439	06E36612S01	RES,CARBON 22K-1/10
R440	06E36612S01	RES,CARBON 22K-1/10
R441	06E36612S01	RES,CARBON 22K-1/10
R442	06E36612S01	RES,CARBON 22K-1/10
R443	06E36612S01	RES,CARBON 22K-1/10
R444	06E36612S01	RES,CARBON 22K-1/10
R445	06E36618S01	RES,CARBON 1K-1/16

R446	06E36618S01	RES,CARBON 1K-1/16
R447	06E36618S01	RES,CARBON 1K-1/16
R448	06E36618S01	RES,CARBON 1K-1/16
R449	06E36620S01	RES,CARBON 3.3K-1/16
R450	06E36618S01	RES,CARBON 1K-1/16
R451	06E36620S01	RES,CARBON 3.3K-1/16
R452	06E36660S01	RES,CARBON 20K-1/16
R453	06E36660S01	RES,CARBON 20K-1/16
R454	06E36463S01	RES,CARBON 10K-1/16
R455	06E36463S01	RES,CARBON 10K-1/16
R456	06E36463S01	RES,CARBON 10K-1/16
R457	06E36652S01	RES,CARBON 16K-1/4
R459	06E36652S01	RES,CARBON 16K-1/4
R461	06E36664S01	RES,CARBON 330-1/16
R462	06E36664S01	RES,CARBON 330-1/16
R490	06E36659S01	RES,CARBON 15K-1/16
R491	06E36659S01	RES,CARBON 15K-1/16
R492	06E36661S01	RES,CARBON 33K-1/16
R493	06E36661S01	RES,CARBON 33K-1/16
R501	06E36618S01	RES,CARBON 1K-1/16
R502	06E36623S01	RES,CARBON 1M-1/16
R503	06E36618S01	RES,CARBON 1K-1/16
R504	06E36618S01	RES,CARBON 1K-1/16
R505	06E36559S01	RES,CARBON 47K-1/16
R601	06E36464S01	RES,CARBON 0-1/16
R602	06E36616S01	RES,CARBON 100-1/16
R603	06E36616S01	RES,CARBON 100-1/16
R604	06E36464S01	RES,CARBON 0-1/16
R605	06E36464S01	RES,CARBON 0-1/16
R606	06E36616S01	RES,CARBON 100-1/16
R607	06E36654S01	RES,CARBON 6.8K-1/4
R608	06E36665S01	RES,CARBON 1K-1/16
R610	06E36468S01	RES,CARBON 3.3K-1/16
R612	06E36463S01	RES,CARBON 10K-1/16
R613	06E36464S01	RES,CARBON 0-1/16
R614	06E36486S01	RES,CARBON 100-1/4
R615	06E36464S01	RES,CARBON 0-1/16
R616	06E36464S01	RES,CARBON 0-1/16
R617	06E36665S01	RES,CARBON 1K-1/16
R618	06E36654S01	RES,CARBON 6.8K-1/4
R619	06E36616S01	RES,CARBON 100-1/16
R620	06E36464S01	RES,CARBON 0-1/16
R621	06E36620S01	RES,CARBON 3.3K-1/16
R622	06E36656S01	RES,CARBON 390-1/16
R623	06E36616S01	RES,CARBON 100-1/16
R624	06E36653S01	RES,CARBON 20-1/4
R625	06E36653S01	RES,CARBON 20-1/4
R626	06E36653S01	RES,CARBON 20-1/4
R627	06E36653S01	RES,CARBON 20-1/4
R628	06E36651S01	RES,CARBON 3.9K-1/4
R629	06E36651S01	RES,CARBON 3.9K-1/4
R630	06E36651S01	RES,CARBON 3.9K-1/4
R631	06E36651S01	RES,CARBON 3.9K-1/4
R632	06E36600S01	RES,CEMENT 0.01-5W
R633	06E36600S01	RES,CEMENT 0.01-5W
R634	06E36600S01	RES,CEMENT 0.01-5W
R635	06E36600S01	RES,CEMENT 0.01-5W

R636	06E36599S01	RES,M.Oxide 27-3W
R637	06E36599S01	RES,M.Oxide 27-3W
R638	06E36598S01	RES,M.Oxide 10-3W
R639	06E36598S01	RES,M.Oxide 10-3W
R640	06E36615S01	RES,CARBON 5.6K-1/4
R641	06E36615S01	RES,CARBON 5.6K-1/4
R682	06E36653S01	RES,CARBON 20-1/4
R683	06E36653S01	RES,CARBON 20-1/4
R684	06E36653S01	RES,CARBON 20-1/4
R685	06E36653S01	RES,CARBON 20-1/4
R705	06E36583S01	RES,CARBON 0-1/4
R706	06E36583S01	RES,CARBON 0-1/4
R708	06E36464S01	RES,CARBON 0-1/16
R710	06E36612S01	RES,CARBON 22K-1/10
R711	06E36612S01	RES,CARBON 22K-1/10
R712	06E36612S01	RES,CARBON 22K-1/10
R713	06E36612S01	RES,CARBON 22K-1/10
R714	06E36663S01	RES,CARBON 56K-1/16
R715	06E36663S01	RES,CARBON 56K-1/16
R717	06E36618S01	RES,CARBON 1K-1/16
R718	06E36618S01	RES,CARBON 1K-1/16
R901	06E36614S01	RES,CARBON 1-1/4
R902	06E36614S01	RES,CARBON 1-1/4
R903	06E36617S01	RES,CARBON 180-1/16
R904	06E36669S01	RES,CARBON 24K-1/16
R905	06E36666S01	RES,CARBON 2.7K-1/16
R906	06E36559S01	RES,CARBON 47K-1/16
R907	06E36621S01	RES,CARBON 6.8K-1/16
R908	06E36555S01	RES,CARBON 33-1/4
R909	06E36555S01	RES,CARBON 33-1/4
R910	06E36555S01	RES,CARBON 33-1/4
R911	06E36555S01	RES,CARBON 33-1/4
R912	06E36670S01	RES,CARBON 27K-1/16
R913	06E36673S01	RES,CARBON 51K-1/16
R920	06E36463S01	RES,CARBON 10K-1/16
R921	06E36649S01	RES,CARBON 390-1/10
SD301	48T15702W01	DIODE,SB05-05CP
SD601	48T65242Y01	DIODE,EP05H10
SD602	48T65242Y01	DIODE,EP05H10
SD603	48T65242Y01	DIODE,EP05H10
SD604	48T65242Y01	DIODE,EP05H10
SW490	40E36607S01	SW,SLIDE 2C-2P
T1	24E36603S01	COIL,CHOKE 20uH
T2	24E36603S01	COIL,CHOKE 20uH
TH920	48E36609S01	THERMISTOR,470
XL501	91T55217Y02	CRYSTAL,33.8MHZ
Z301	91T65112W04	FILTER,EMI BK2125 HS601-T
Z302	91T65112W04	FILTER,EMI BK2125 HS601-T
Z303	91T65112W04	FILTER,EMI BK2125 HS601-T
Z304	91T65112W04	FILTER,EMI BK2125 HS601-T
Z305	91T15509Y08	FILTER,EMI BK1608 HM102
Z306	91T15509Y08	FILTER,EMI BK1608 HM102
Z307	91T15509Y08	FILTER,EMI BK1608 HM102
Z308	91T15509Y08	FILTER,EMI BK1608 HM102
Z309	91T15509Y08	FILTER,EMI BK1608 HM102
Z310	91T15509Y08	FILTER,EMI BK1608 HM102
Z311	91T15509Y08	FILTER,EMI BK1608 HM102

MRD-M1001

Z312	91T65112W04	FILTER,EMI BK2125 HS601-T
Z313	91T65112W04	FILTER,EMI BK2125 HS601-T
Z314	91T15509Y08	FILTER,EMI BK1608 HM102
Z315	91T65112W04	FILTER,EMI BK2125 HS601-T
Z319	91T15509Y08	FILTER,EMI BK1608 HM102
Z320	91T15509Y08	FILTER,EMI BK1608 HM102
Z321	91T15509Y08	FILTER,EMI BK1608 HM102
Z322	91T15509Y08	FILTER,EMI BK1608 HM102
Z323	91T15509Y08	FILTER,EMI BK1608 HM102
Z324	91T15509Y08	FILTER,EMI BK1608 HM102
Z325	91T15509Y08	FILTER,EMI BK1608 HM102
Z326	91T65112W06	FILTER,EMI BK2125 HM102-T
Z401	91T75197Y01	FILTER,EMI ACM4532-801
Z402	91T75197Y01	FILTER,EMI ACM4532-801
Z409	91T65112W04	FILTER,EMI BK2125 HS601-T
Z410	91T65112W04	FILTER,EMI BK2125 HS601-T
Z411	91T65112W04	FILTER,EMI BK2125 HS601-T
Z501	91T15058Y07	FILTER,EMI NFE31PT222Z1E
Z502	91T15509Y08	FILTER,EMI BK1608 HM102
Z503	91T15509Y08	FILTER,EMI BK1608 HM102
Z504	91T15058Y07	FILTER,EMI NFE31PT222Z1E
Z505	91T65112W04	FILTER,EMI BK2125 HS601-T
Z506	91T15509Y08	FILTER,EMI BK1608 HM102
Z507	91T15509Y08	FILTER,EMI BK1608 HM102
Z508	91T15058Y07	FILTER,EMI NFE31PT222Z1E
Z601	91T15058Y07	FILTER,EMI NFE31PT222Z1E
Z602	91T65112W04	FILTER,EMI BK2125 HS601-T
Z605	91T65112W06	FILTER,EMI BK2125 HM102-T
Z606	91T65112W06	FILTER,EMI BK2125 HM102-T
Z612	91T15509Y08	FILTER,EMI BK1608 HM102
Z613	91T65112W04	FILTER,EMI BK2125 HS601-T
Z614	91T15509Y08	FILTER,EMI BK1608 HM102
Z615	91T15509Y08	FILTER,EMI BK1608 HM102
Z901	91T15509Y08	FILTER,EMI BK1608 HM102
Z902	91T15509Y08	FILTER,EMI BK1608 HM102
ZD001	48E36643S01	DIODE,ZENER MTZ
ZD002	48E36643S01	DIODE,ZENER MTZ
ZD301	48T25801W11	DIODE,ZENER HZS5BLL
ZD302	48T25766W46	DIODE,ZENER HZS15-2L
ZD303	48T25801W11	DIODE,ZENER HZS5BLL
ZD401	48T25766W48	DIODE,ZENER HZS16-1L
ZD402	48T25766W48	DIODE,ZENER HZS16-1L
ZD601	48T65223Y02	DIODE,ZENER 11V
ZD602	48T65223Y02	DIODE,ZENER 11V
ZD603	48T65224Y02	DIODE,ZENER 12.2V
ZD604	48T65224Y02	DIODE,ZENER 12.2V
ZD605	48T65224Y02	DIODE,ZENER 12.2V
ZD606	48T65224Y02	DIODE,ZENER 12.2V
ZD607	48T25801W12	DIODE,ZENER HZS5CLL
ZD608	48T25801W12	DIODE,ZENER HZS5CLL

=====MAIN P.W.Board

C101	08T95420W01	CAP,CER. CP 100pF
C102	08S45539Y04	CAP,CER. CP 0.01uF
C103	08T95420W01	CAP,CER. CP 100pF
C104	08S45539Y04	CAP,CER. 0.01uF
C105	08T95420W01	CAP,CER. 100pF

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C106	08S45539Y04	CAP,CER. 0.01uF
C107	08T95420W01	CAP,CER. 100pF
C108	08E36567S01	CAP,CER. CP 0.01uF
C109	08E36565S01	CAP,CER. CP 120pF
C110	08E36565S01	CAP,CER. CP 120pF
C199	08E36567S01	CAP,CER. CP 0.01uF
C201	08E36472S01	CAP,CER. CP 0.1uF
C202	08E36594S01	CAP,CER. CP 0.1uF
C203	08E36574S01	CAP,FILM 6800pF
C204	08E36472S01	CAP,CER. CP 0.1uF
C205	08E36472S01	CAP,CER. CP 0.1uF
C206	08E36472S01	CAP,CER. CP 0.1uF
C207	08E36566S01	CAP,CER. CP 4700pF
C208	08S45539Y02	CAP,CER. CP 2200pF
C209	08S45539Y02	CAP,CER. CP 2200pF
C211	08E36566S01	CAP,CER. CP 4700pF
C212	08S45539Y02	CAP,CER. CP 2200pF
C213	08S45539Y02	CAP,CER. CP 2200pF
C215	08E36593S01	CAP,CER. CP 0.1uF
C216	08E36596S01	CAP,CER. CP 1000pF
C217	08E36593S01	CAP,CER. CP 0.1uF
C218	08E36596S01	CAP,CER. CP 1000pF
C219	08E36472S01	CAP,CER. CP 0.1uF
C220	08E36472S01	CAP,CER. CP 0.1uF
C221	08E36567S01	CAP,CER. CP 0.01uF
C222	08E36567S01	CAP,CER. CP 0.01uF
C233	08E36595S01	CAP,CER. CP 560pF
C234	08E36595S01	CAP,CER. CP 560pF
C236	08E36595S01	CAP,CER. CP 560pF
C237	08E36595S01	CAP,CER. CP 560pF
C238	08S45539Y02	CAP,CER. 2200pF
C239	08S45539Y02	CAP,CER. 2200pF
C240	08S45539Y02	CAP,CER. 2200pF
C241	08S45539Y02	CAP,CER. 2200pF
CB101	09E36549S01	WTB,9P GIL-S-09P-S2T2
CB103	09E36697S01	WTB,6P GIL-S-06P-S2T2
CB201	09E36551S01	WTB,8P 35313-0410
CB202	09E36551S01	WTB,8P 35313-0410
CB203	09E36551S01	WTB,8P 35313-0410
CB204	09E36698S01	WTB,7P GIL-S-07P-S2T2
CH101	01E36688S01	ASS'Y CONNECTOR 9P
CH103	01E36686S01	ASS'Y CONNECTOR 6P
CH201	01E36685S01	ASS'Y CONNECTOR 4P
CH202	01E36683S01	ASS'Y CONNECTOR 4P
CH203	01E36684S01	ASS'Y CONNECTOR 4P
CH204	01E36687S01	ASS'Y CONNECTOR 7P
D101	48T84052F11	DIODE,11ES2
D102	48T68828F11	DIODE,1SS133
D199	48T68828F11	DIODE,1SS133
D201	48E36693S01	DIODE RECTI 40EPF02
D202	48E36693S01	DIODE RECTI 40EPF02
D203	48E36693S01	DIODE RECTI 40EPF02
D204	48E36693S01	DIODE RECTI 40EPF02
D211	48E36568S01	DIODE,ARRAY DAN202K
D212	48T68828F11	DIODE,1SS133
E101	23T00149L39	CAP,ELEC 470uF/25V
E103	23T00149L39	CAP,ELEC 470uF/25V

E201	23S75373W03	CAP,ELEC 22uF/16V
E202	23T00149L15	CAP,ELEC 330uF/10V
E203	23S75373W03	CAP,ELEC 22uF/16V
E204	23S75373W03	CAP,ELEC 22uF/16V
E205	23S75373W07	CAP,ELEC 4.7uF/25V
E206	23S75373W07	CAP,ELEC 4.7uF/25V
E207	23T25139Y12	CAP,ELEC 2700uF/35V
E208	23T25139Y12	CAP,ELEC 2700uF/35V
E210	23T25139Y12	CAP,ELEC 2700uF/35V
E211	23T25139Y12	CAP,ELEC 2700uF/35V
E213	23T25139Y17	CAP,ELEC 1800uF/50V
E214	23T25139Y17	CAP,ELEC 1800uF/50V
E215	23T25139Y17	CAP,ELEC 1800uF/50V
E216	23T25139Y17	CAP,ELEC 1800uF/50V
E217	23T25139Y17	CAP,ELEC 1800uF/50V
E218	23T25139Y17	CAP,ELEC 1800uF/50V
E219	23T25139Y17	CAP,ELEC 1800uF/50V
E220	23T25139Y17	CAP,ELEC 1800uF/50V
E231	23S95415W20	CAP,ELEC 4.7uF/50V
E232	23S95415W20	CAP,ELEC 4.7uF/50V
E233	23T25139Y12	CAP,ELEC 2700uF/35V
E234	23T25139Y12	CAP,ELEC 2700uF/35V
E236	23S75372W20	CAP,ELEC 22uF/25V
E237	23S75372W20	CAP,ELEC 22uF/25V
E238	23S75372W20	CAP,ELEC 22uF/25V
E239	23S75372W20	CAP,ELEC 22uF/25V
IC201	51E36575S01	IC,NJM78L09A
IC202	51E36569S01	IC,uPC494GS
IC203	51E34504S01	IC,MC33152D
IC204	51E34504S01	IC,MC33152D
IC211	51E36570S01	IC,NJM2903V
IC212	51E36570S01	IC,NJM2903V
L101	24T93615F03	INDUCTOR,10uH
Q101	48E36577S01	TR,CP 2SB1238P
Q102	48E36571S01	TR,CP 2SC2412K
Q103	48E36576S01	TR,CP 2SB1243Q
Q104	48E36571S01	TR,CP 2SC2412K
Q196	48E36572S01	TR,CP DTC124EK
Q197	48E36571S01	TR,CP 2SC2412K
Q198	48E36577S01	TR,CP 2SB1238P
Q199	48E36571S01	TR,CP 2SC2412K
Q201	48E36597S01	TR,CP DTA124EK
Q204	48T75459Y02	FET,IRF3205
Q205	48T75459Y02	FET,IRF3205
Q206	48T75459Y02	FET,IRF3205
Q207	48T75459Y02	FET,IRF3205
Q210	48T75459Y02	FET,IRF3205
Q211	48T75459Y02	FET,IRF3205
Q212	48T75459Y02	FET,IRF3205
Q213	48T75459Y02	FET,IRF3205
Q221	48E36573S01	TR,CP DTC144EK
Q223	48E36571S01	TR,CP 2SC2412K
Q224	48E36571S01	TR,CP 2SC2412K
Q225	48E36573S01	TR,CP DTC144EK
Q226	48E36573S01	TR,CP DTC144EK
Q227	48E36573S01	TR,CP DTC144EK
Q228	48E36573S01	TR,CP DTC144EK

R101	06E36581S01	RES,CARBON 30K-1/4
R102	06E36588S01	RES,CARBON 30K-1/16
R103	06E36559S01	RES,CARBON 47K-1/16
R104	06E36556S01	RES,CARBON 10K-1/4
R105	06E36559S01	RES,CARBON 47K-1/16
R106	06E36580S01	RES,CARBON 2.2K-1/4
R107	06E36580S01	RES,CARBON 2.2K-1/4
R108	06E36580S01	RES,CARBON 2.2K-1/4
R109	06E36580S01	RES,CARBON 2.2K-1/4
R110	06E36463S01	RES,CARBON 10K-1/16
R111	06E36463S01	RES,CARBON 10K-1/16
R112	06E36583S01	RES,CARBON 0-1/4
R113	06E36583S01	RES,CARBON 0-1/4
R193	06E36463S01	RES,CARBON 10K-1/16
R194	06E36586S01	RES,CARBON 22K-1/16
R195	06E36586S01	RES,CARBON 22K-1/16
R196	06E36559S01	RES,CARBON 47K-1/16
R197	06E36463S01	RES,CARBON 10K-1/16
R198	06E36588S01	RES,CARBON 30K-1/16
R199	06E36581S01	RES,CARBON 30K-1/4
R201	06E36462S01	RES,CARBON 4.7K-1/16
R202	06E36584S01	RES,CARBON 820-1/16
R203	06E36585S01	RES,CARBON 2.2K-1/16
R204	06E36465S01	RES,CARBON 1.2K-1/16
R205	06E36563S01	RES,CARBON 47K-1/16
R206	06E36562S01	RES,CARBON 240-1/16
R207	06E36557S01	RES,CARBON 16K-1/4
R208	06E36587S01	RES,CARBON 24K-1/16
R209	06E36560S01	RES,CARBON 240K-1/16
R210	06E36561S01	RES,CARBON 120-1/16
R211	06E36558S01	RES,CARBON 2K-1/16
R214	06E36579S01	RES,CARBON 1K-1/4
R215	06E36579S01	RES,CARBON 1K-1/4
R216	06E36578S01	RES,CARBON 10-1/4
R217	06E36578S01	RES,CARBON 10-1/4
R218	06E36578S01	RES,CARBON 10-1/4
R219	06E36578S01	RES,CARBON 10-1/4
R220	06E36555S01	RES,CARBON 33-1/4
R221	06E36555S01	RES,CARBON 33-1/4
R222	06E36555S01	RES,CARBON 33-1/4
R223	06E36555S01	RES,CARBON 33-1/4
R225	06E36578S01	RES,CARBON 10-1/4
R226	06E36578S01	RES,CARBON 10-1/4
R227	06E36578S01	RES,CARBON 10-1/4
R228	06E36578S01	RES,CARBON 10-1/4
R229	06E36555S01	RES,CARBON 33-1/4
R230	06E36555S01	RES,CARBON 33-1/4
R231	06E36555S01	RES,CARBON 33-1/4
R232	06E36555S01	RES,CARBON 33-1/4
R241	06E36462S01	RES,CARBON 4.7K-1/16
R242	06E36463S01	RES,CARBON 10K-1/16
R243	06E36463S01	RES,CARBON 10K-1/16
R244	06E36582S01	RES,CARBON 47K-1/4
R255	06E36559S01	RES,CARBON 47K-1/16
R256	06E36559S01	RES,CARBON 47K-1/16
R257	06E36559S01	RES,CARBON 47K-1/16
R258	06E36559S01	RES,CARBON 47K-1/16

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R259	06E36589S01	RES,CARBON 47-1/16
R260	06E36589S01	RES,CARBON 47-1/16
R261	06E36592S01	RES,CARBON 22K-1/16
R262	06E36591S01	RES,CARBON 18K-1/16
R263	06E36592S01	RES,CARBON 22K-1/16
R264	06E36591S01	RES,CARBON 18K-1/16
R266	06E36583S01	RES,CARBON 0-1/4
R267	06E36464S01	RES,CARBON 0-1/16
R268	06E36464S01	RES,CARBON 0-1/16
R269	06E36464S01	RES,CARBON 0-1/16
R270	06E36564S01	RES,CARBON 150K-1/16
R271	06E36464S01	RES,CARBON 0-1/16
R273	06E36564S01	RES,CARBON 150K-1/16
R275	06E36466S01	RES,CARBON 1.5K-1/16
R276	06E36564S01	RES,CARBON 150K-1/16
R278	06E36564S01	RES,CARBON 150K-1/16
R280	06E36592S01	RES,CARBON 22K-1/16
R281	06E36592S01	RES,CARBON 22K-1/16
R282	06E36592S01	RES,CARBON 22K-1/16
R283	06E36592S01	RES,CARBON 22K-1/16
R284	06E36459S01	RES,CARBON 200-1/4
R285	06E36459S01	RES,CARBON 200-1/4
R286	06E36459S01	RES,CARBON 200-1/4
R287	06E36459S01	RES,CARBON 200-1/4
R288	06E36459S01	RES,CARBON 200-1/4
R289	06E36459S01	RES,CARBON 200-1/4
R290	06E36459S01	RES,CARBON 200-1/4
R291	06E36459S01	RES,CARBON 200-1/4
R292	06E36590S01	RES,CARBON 820-1/16
R293	06E36590S01	RES,CARBON 820-1/16
R294	06E36467S01	RES,CARBON 2.2K-1/16
R295	06E36467S01	RES,CARBON 2.2K-1/16
R296	06E36467S01	RES,CARBON 2.2K-1/16
R297	06E36467S01	RES,CARBON 2.2K-1/16
R298	06E36464S01	RES,CARBON 0-1/16
R299	06E36464S01	RES,CARBON 0-1/16
T101	25E36695S01	TRANS,POWER
T102	25E36695S01	TRANS,POWER
T201	25E36694S01	TRANS,POWER 3T/7T
T203	25E36694S01	TRANS,POWER 3T/7T
T204	24E36696S01	COIL,CHOKE 25uH
T205	24E36696S01	COIL,CHOKE 25uH
TH201	48T25250Y06	THERMISTOR,22K
TH202	48T25250Y06	THERMISTOR,22K
Z101	91T15058Y07	FILTER,EMI NFE31PT222Z1E
Z102	91T65112W06	FILTER,EMI BK2125 HM102-T
Z103	91T65112W06	FILTER,EMI BK2125 HM102-T
Z104	91T65112W06	FILTER,EMI BK2125 HM102-T
Z105	91T65112W06	FILTER,EMI BK2125 HM102-T
Z106	91T65112W06	FILTER,EMI BK2125 HM102-T
Z109	91T65112W04	FILTER,EMI BK2125 HS601-T
Z110	91T65112W04	FILTER,EMI BK2125 HS601-T
ZD101	48T25766W01	DIODE,ZENER HZS6A1L
ZD199	48T25801W11	DIODE,ZENER HZS5BLL
ZD201	48T25766W24	DIODE,ZENER HZS9C1L
ZD202	48T25766W24	DIODE,ZENER HZS9C1L

=====Miscellaneous

DIN301	09E36606S01	CONNECTOR,7P
F101	65E36552S01	FUSE,AUTO 20A(257020)
F102	65E36552S01	FUSE,AUTO 20A(257020)
F103	65E36552S01	FUSE,AUTO 20A(257020)
F104	65E36552S01	FUSE,AUTO 20A(257020)
JK401	09E36605S01	RCA,4P
TML101	09E36553S01	TERMINAL,3P DKPT-03300
TML601	09E36608S01	TERMINAL,2P

Cabinet Assembly Parts List

NOTE : The part that has not PART NUMBER will not be supplied.

1	-----	HEAT SINK,MAIN
2	-----	CAST,SIDE-R
3	-----	CAST,SIDE-L
4	-----	COVER,BOTTOM
5	03E36204S01	SCR,M3X11 TPG-TPT
6	03E36205S01	SCR,M2.6X5 B
7	03E36206S01	SCR,M3X8 TPG-TPT
8	03E36207S01	SCR,M3X6 TPG-TPT
9	03E36208S01	SCR,WRENCH M3X12 MCH
10	03E36209S01	SCR,M3X18 TPG-T
11	03E36210S01	SCR,M3X10 TPG-TPT
12	03E35144S01	SCR,M4X16(WS)MCH
13	15E11445S01	COVER,SWITCH
14	-----	SHAFT,HINGE
15	15E36211S01	COVER,SHAFT
16	15E36212S01	COVER,HINGE
17	03E36201S01	SCR,M3X10 TPG-TPT
18	-----	PLATE,BADGE
19	-----	SUPPORT,PWB
20	03E28022S01	SCR,M2.6X6 TPG-TPT
21	03E36203S01	SCR,M2.6X8 MCH
22	07E26525S01	BKT,PANEL(A)
23	-----	COVER,OPEN
24	-----	HEAT SINK,BAR
25	-----	HEAT SINK,BAR-B
26	-----	CHAS,FRONT-C
27	15E36550S01	FUSE HOLDER
28	03E36202S01	SCR,M2X10 TPG1
29	64E36242S01	SHEET,VFD-B
30	-----	HINGE,ASS'Y
33	-----	SCALE PLATE-B
34	75E36540S01	SIL PAD-A
43	01E36554S01	VFD MODULE ASS'Y
44	-----	HEAT SINK
45	03E20922S01	SCR,M3X11(WS)TPG-TPT
46	75E36541S01	SIL PAD-B
47	75E36542S01	SIL PAD-C
48	75T65628Y01	CUSHION,CONDVCTION
49	75T65628Y02	CUSHION,CONDVCTION