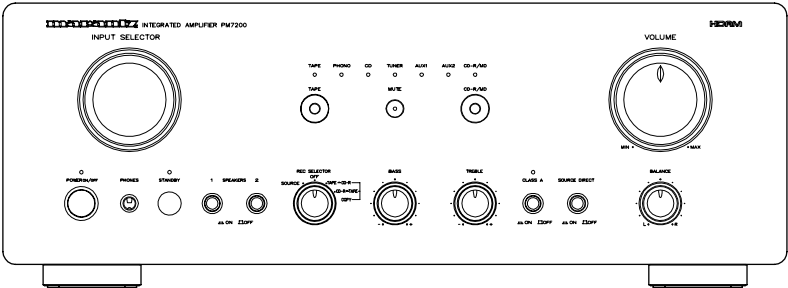


Service Manual

PM7200 / N1B/N1G

Integrated Amplifier



PM7200

The changed parts are listed below. Not listed parts are the same to the model PM8000.

POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART. NO. (MJI)
200	/N1B	20AW248010	FRONT PANEL BLACK 3120 201 60420	20AW248010
200	/N1G	20AW248020	FRONT PANEL GOLD 3120 201 60430	20AW248020
387		20AW851310	USER GUIDE 3120 205 20390	20AW851310

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

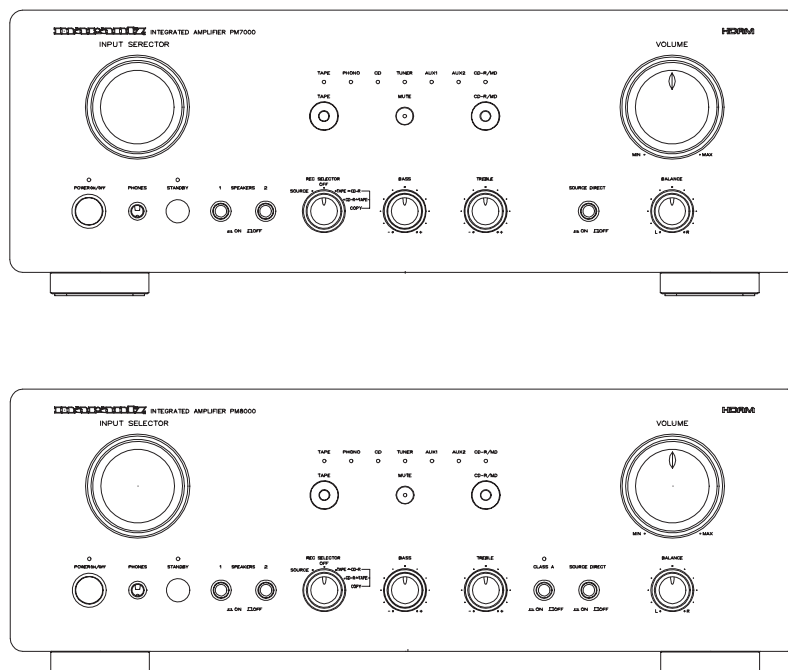
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

PM7200

Service Manual

PM7000 /N1B, /N1G, /U1B
PM8000 /N1B, /N1G, /F1B, /F1N
Integrated amplifier



PM7000/8000

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Please use this service manual with referring to the user guide (D.F.U) without fail.

修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行って下さい。

marantz®

- PM7000 / PM8000 -

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

USA

MARANTZ AMERICA, INC.
440 MEDINAH ROAD
ROSELLE, ILLINOIS 60172
USA
PHONE : 630 - 307 - 3100
FAX : 630 - 307 - 2687

EUROPE / TRADING

MARANTZ EUROPE B.V.
P.O.BOX 80002, BUILDING SFF2
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THE NETHERLANDS
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FAX : +31 - 40 - 2735578

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MARANTZ BRAZIL
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CEP 04698-970
SAO PAULO, SP, BRAZIL
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FAX : +55 11 534. 8988

PROFESSIONAL AMERICAS

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MARANTZ PROFESSIONAL PRODUCTS
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AURORA, ILLINOIS 60504 USA
PHONE : 630 - 820 - 4800
FAX : 630 - 820 - 8103

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PICKERING, ONTARIO L1W 3K1
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FAX : 905 - 831 - 6936

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AUSTRALIA
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WANGBURAPAPIROM, PHRANAKORN,
BANGKOK, 10200 THAILAND
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FAX : +66 - 2 - 224 6795

SINGAPORE

WO KEE HONG (S) PTE LTD
WO KEE HONG CENTRE
NO.23, LORONG 8, TOA PAYOH
SINGAPORE 319257
PHONE : +65 2544555
FAX : +65 2502213

TAIWAN

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TAIPEI, 10429, TAIWAN R.O.C.
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FAX : +886 - 2 - 25630415

MALAYSIA

WO KEE HONG ELECTRONICS SDN. BHD.
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NO. 33, JALAN SULTAN ISMAIL,
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営業本部 〒150-0022
東京都渋谷区恵比寿南1-11-9

KOREA

MK ENTERPRISES LTD.
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. SPECIFICATIONS

Power output (class AB operation)

RMS 8ohms (20 Hz - 20 kHz)	95W
DIN 8 ohms	105W
THD at 8 ohms RMS rated output	0.03%
Damping factor	150

Power out put (PM8000 classA operation)

RMS 8 ohms (20 Hz - 20 kHz)	25 W
DIN 8 ohms	28 W
THD at 8 ohms RMS. rated output	0.03%
Damping factor	130

IHF dynamic power (class AB operation)

8 ohms	120 W
--------------	-------

IHF dynamic power (PM8000 class A operation)

8 ohms	35 W
--------------	------

Magnetic cartridge input (MM)

input sensitivity impedance	2.5 mV/47 kOhms
Accuracy of frequency response to IEC RIAA	0.5 dB
Signal to noise ratio	85 dB

Tuner/CD/Aux/Tape inputs

input sensitivity impedance	150 mV/40 kOhms
Signal to noise ratio	109dB
Frequency response	
(-1 dB limits, Source Direct)	10 Hz - 50 kHz
Tone characteristic (100 Hz and 10 kHz)	±8 dB
Channel separation	
(1 kHz/10 kHz, Source direct)	>80 / >70 dB

General

Power Requirements

/N versions	230 V AC, 50 Hz
/U versions	120 V AC, 60 Hz

Dimensions

Width	440 mm
Height	159 mm
Depth	370.5 mm

Weight

Unit alone	12.3 kg
------------------	---------

Specifications subject to change without prior notice

定格出力(20 Hz - 20 kHz 両チャンネル同時駆動)

クラスAB.....95 W × 2 (8 Ω 負荷)

クラスA.....25 W × 2 (8 Ω 負荷)

全高周波歪率(20 Hz - 20 kHz, 10 W出力時8 Ω負荷)

クラスAB.....0.015%

クラスA.....0.010%

混変調歪率 (SMPTE).....0.015%

出力帯域幅 (8Ω負荷,0.08%歪率).....10 Hz - 80 kHz

周波数特性

(CD,ソースダイレクト).....10 Hz - 50 kHz +0 dB -1 dB

ダンピングファクター (8 Ω負荷,100 Hz - 10 kHz)130

入力感度／入力インピーダンス

PHONO (MM).....2.5 mV/47 kΩ

HIGH LEVEL

PHONO最大許容入力 (1 kHz)

(MM)

RIAA偏差 (20 Hz).....-2 dB

(40 Hz - 20 kHz).....±0.5 dB

S/N比 (IHF,Aネットワーク,入力ショート)

PHONO (MM).....85 dB

HIGH LEVEL

トーンコントロール

BASS (100 Hz).....±8 dB

TREBLE (10 kHz).....±8 dB

電源電圧

消費電力 (電気用品取締法).....160 W

最大外形寸法

幅

高さ

奥行き

質量

付属品

リモートコントロール送信機(RC8000PM).....1台

本機の規格および外観は改良のため予告なく変更することがあります。

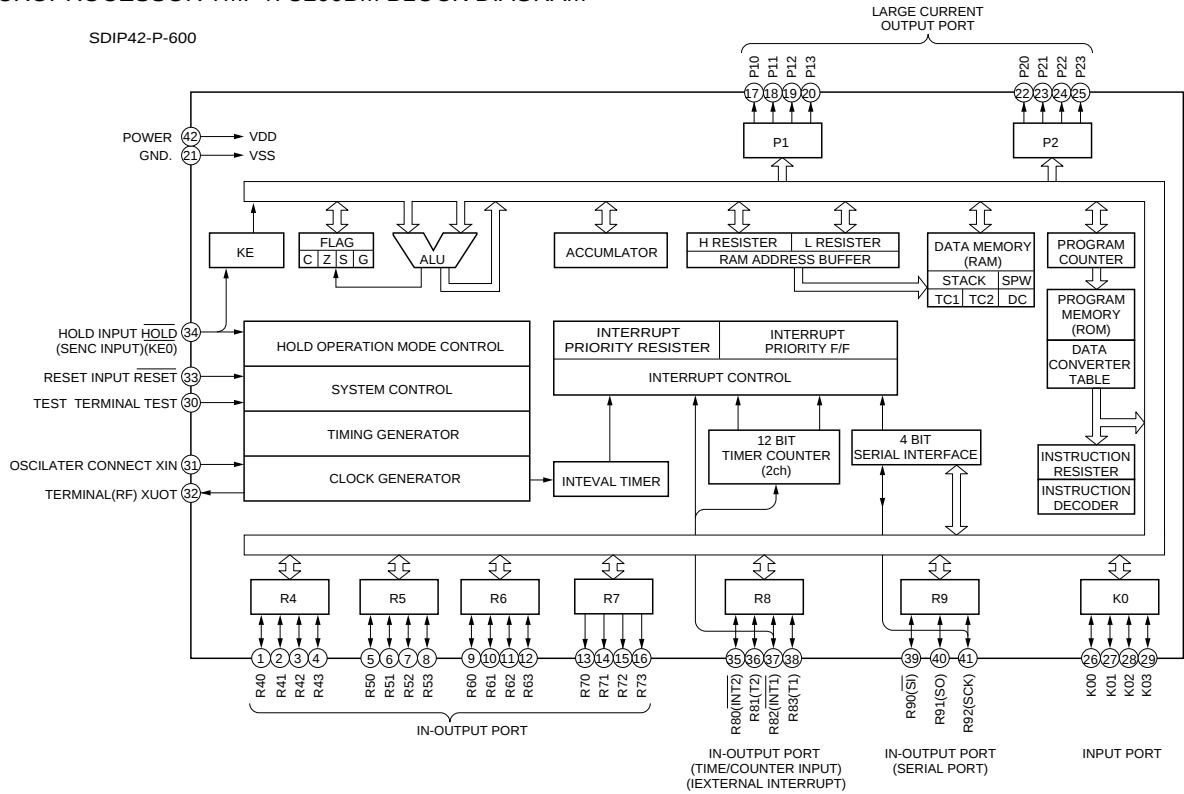
2.TEST EQUIPMENT REQUIRED FOR SERVICING

Item	Use
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
AC VTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
DC VTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to amplifier
Line Voltmeter	Monitors of primary voltage to amplifier
Variable Autotransformer	Adjust level of primary voltage to amplifier
Circuit Tester	Trouble shooting
Shorting Plug	Shorts amplifier input to eliminate noise pickup

項 目	使 用 方 法
歪 率 計	歪の測定
低 周 波 発 振 器	正弦波および矩形波の信号源
A C V T V M	交流電圧の測定
オ シ ロ ス コ ー プ	波計分析、トラブルシューティングおよびASOの調整
D C V T V M	直流電圧の測定
交流ワットメーター	アンプの一次側消費電力のモニター
電 源 電 圧 計	アンプの一次側電圧のモニター
ス ラ イ ダ ッ ク	アンプの一次側電圧の調整
テ ス タ ー	トラブルシューティング
ショート用プラグ	雑音を拾わないようにアンプ入力を短絡する

3. IC INFORMATION

MICROPROCESSOR TMP47C200BM BLOCK DIAGRAM

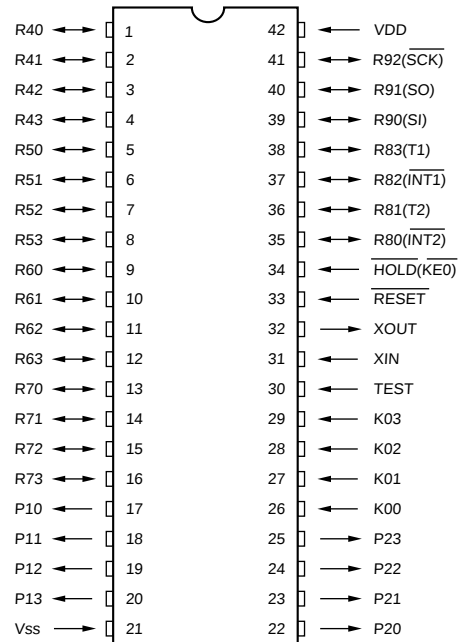


PIN no.	PORT NAME	ACT	FUNCTION
1	R40	MMUT	H MANUAL MUTE SIGNAL MUTE
2	R41	FMUT	L SIGNAL(SOURCE/MONITOR SWITCH)
3	R42	VOUP	L MOTOR DRIVE VOLUME UP
4	R43	VODW	L MOTOR DRIVE VOLUME DOWN
5	R50	T3K	L MONITOR INPUT SWITCH (TAPE3)
6	R51	T2K	L MONITOR INPUT SWITCH (TAPE2)
7	R52	T1K	L MONITOR INPUT SWITCH (TAPE1)
8	R53	AX2K	L SOURCE INPUT SWITCH (AUX2)
9	R60	AX1K	L SOURCE INPUT SWITCH (AUX1)
10	R61	TUNK	L SOURCE INPUT SWITCH (TUNER)
11	R62	CDK	L SOURCE INPUT SWITCH (CD)
12	R63	PHOK	L SOURCE INPUT SWITCH (PHONO)
13	R70	LSTB	L LED INDICATOR STAND BY DISPLAY
14	R71	LMUT	L LED INDICATOR MUTE DISPLAY
15	R72	LPRO	L LED INDICATOR PROCESSOR DISPLAY
16	R73	LTP3	L LED INDICATOR TAPE3 DISPLAY
17	P10	LTP2	L LED INDICATOR TAPE2 DISPLAY
18	P11	LTP1	L LED INDICATOR TAPE1 DISPLAY
19	P12	LSOU	L LED INDICATOR SOURCE DISPLAY
20	P13	LAX2	L LED INDICATOR AUX2 DISPLAY
21	VSS		GND.
22	P20	LAX1	L LED INDICATOR AUX1 DISPLAY
23	P21	LTUN	L LED INDICATOR TUNER DISPLAY
24	P22	LECD	L LED INDICATOR CD DISPLAY
25	P23	LPHO	L LED INDICATOR PHONO DISPLAY
26	K00	1RS	L SOURCE INPUT SWITCH(ROTARY ENCODER) bit1
27	K01	2RS	L SOURCE INPUT SWITCH(ROTARY ENCODER) bit2
28	K02	PRK	L PROCESSOR IN-OUT SWITCH
29	K03	MUK	L MANUAL MUTE
30	TEST		NOT USED (GND)
31	XIN		CLOCK 4.00 MHz (IN)
32	XOUT		CLOCK 4.00 MHz (OUT)
33	RESET	RES	L SYSTEM RESET
34	HOLD	PDW	L POWER DOWN CHECK
35	R80	RXRC	L REMOTE CONTROL INPUT (RC-5)
36	R81	EN1	MODEL SELECT 1
37	R82	EN2	MODEL SELECT 2
38	R83	EN3	MODEL SELECT 3
39	R90	TXRC	L SERIAL DATA(RC-5 REMOTE CONTROL)
40	R91	ENTX	L ENABLE (REMOTE CONTROL)
41	R92	RELY	L STAND-BY RELAY CONTROL
42	VDD		POWER SUPPLY

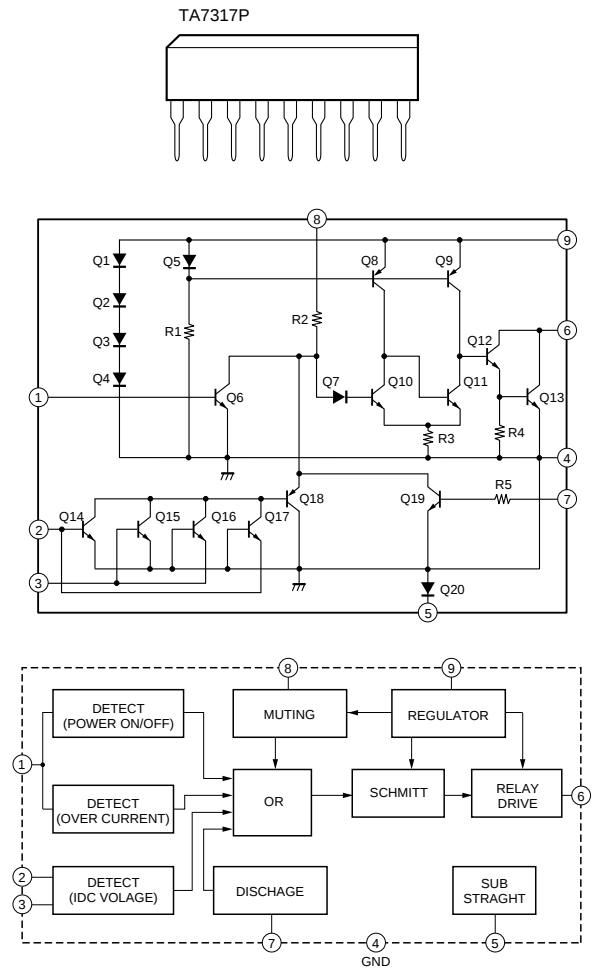
MICROPROCESSOR TMP47C200BM

Position NO.7401

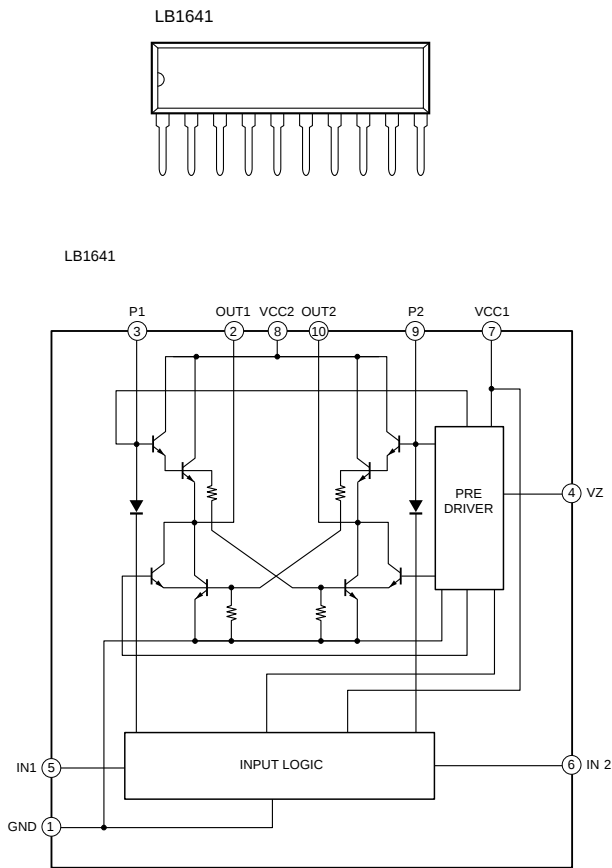
SDIP42-P-600



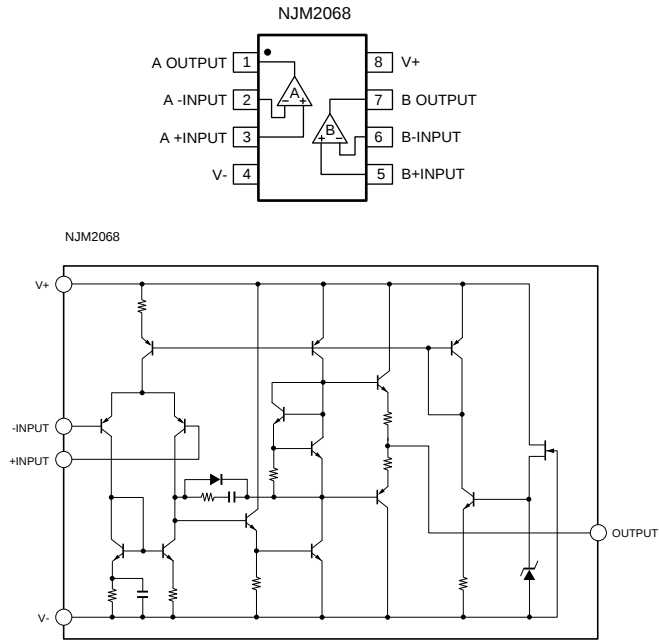
TA7317P (Position NO.7290)



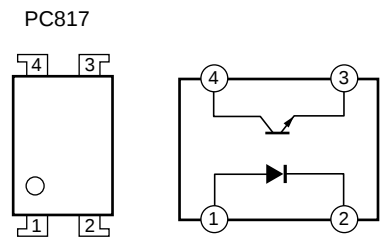
LB1641(Position NO.7402)



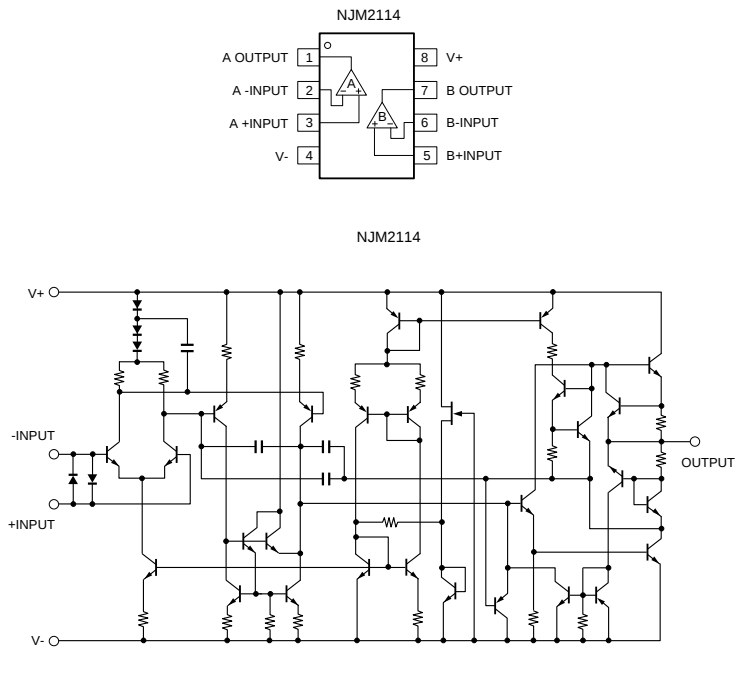
NJM2068 (Position NO.7501,7502,7503)



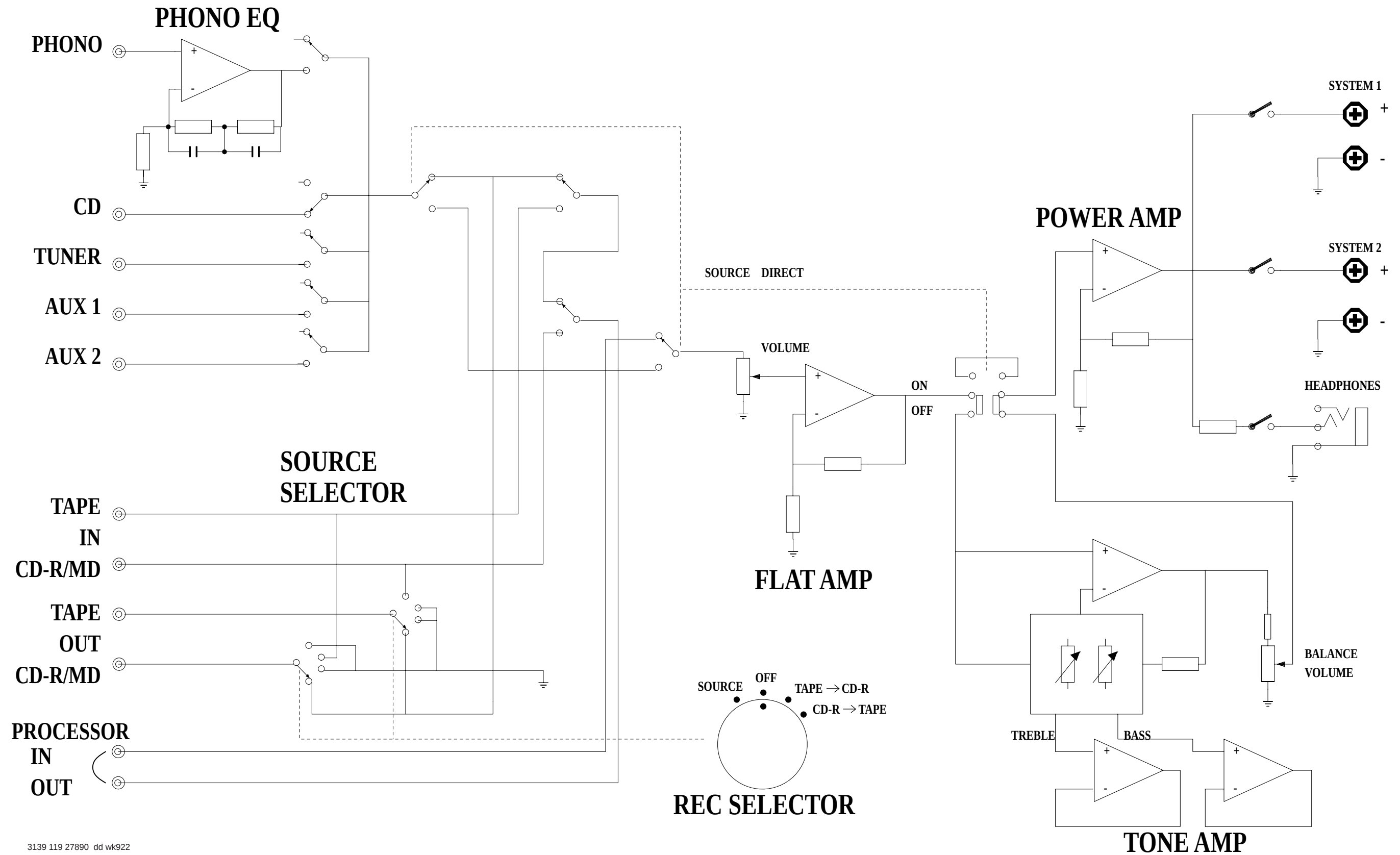
PC817 (Position NO.7269,7270)



NJM2114(Position NO.7555,7655)

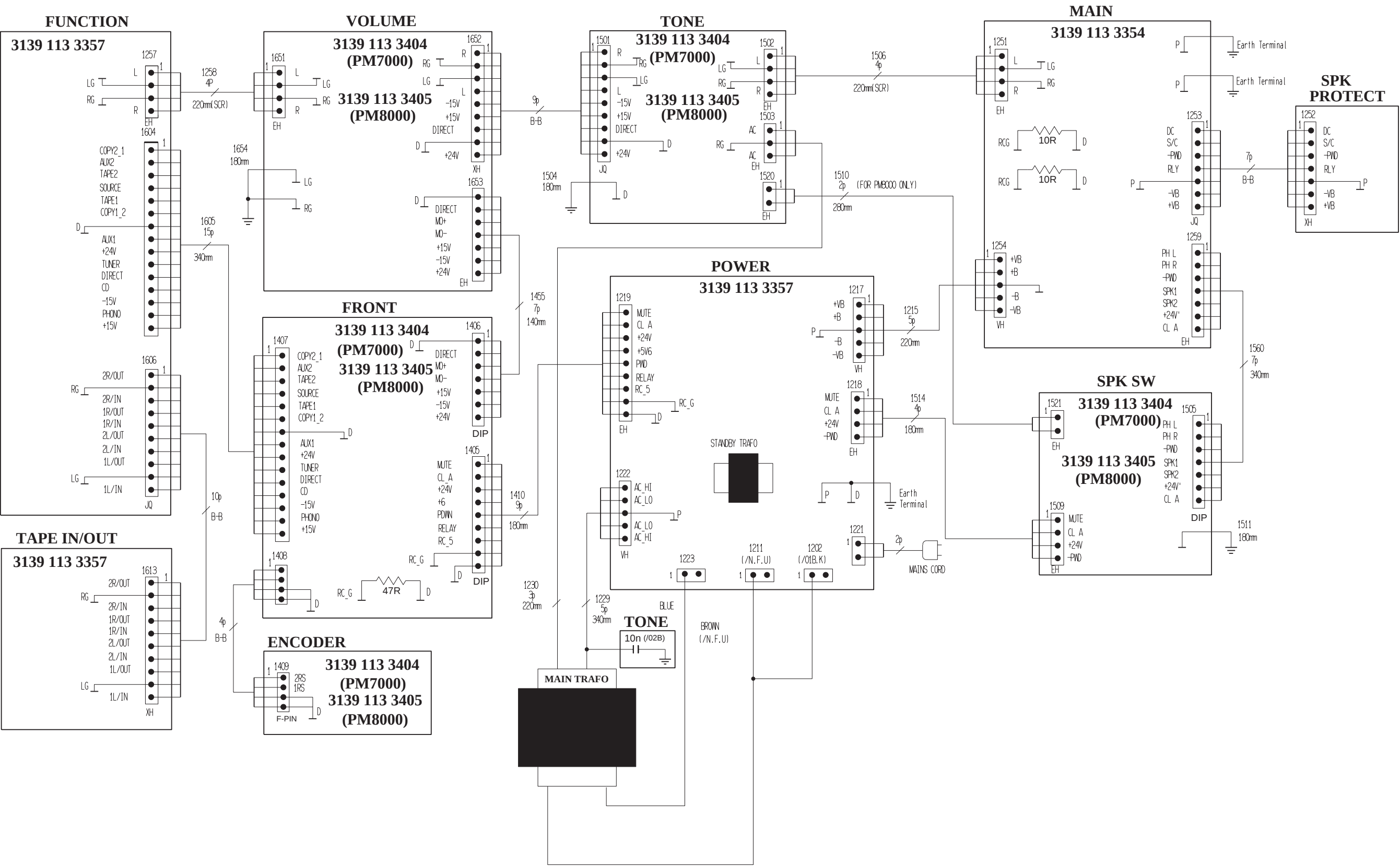


4. BLOCK DIAGRAM

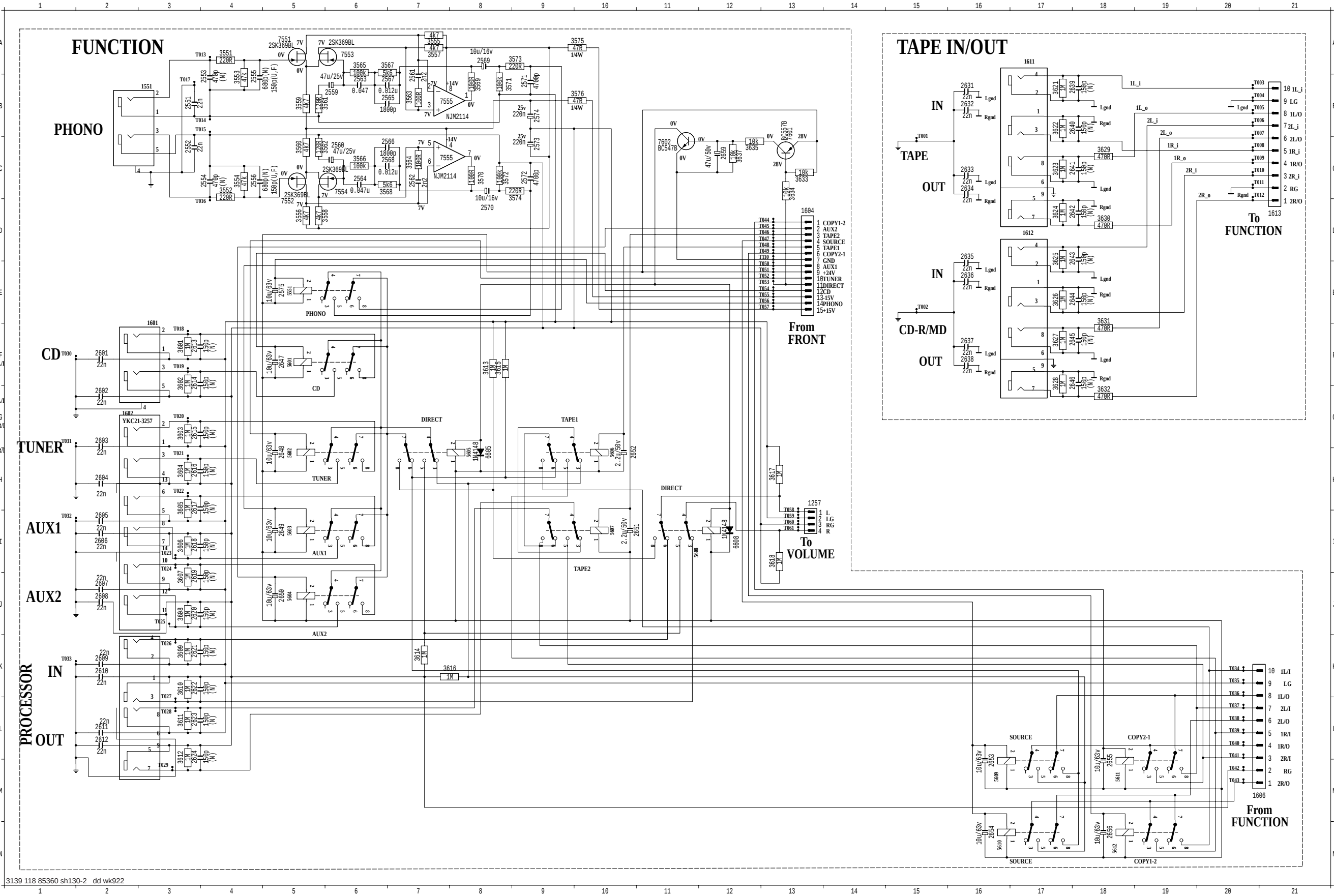


3139 119 27890 dd wk922

5. WIRING DIAGRAM

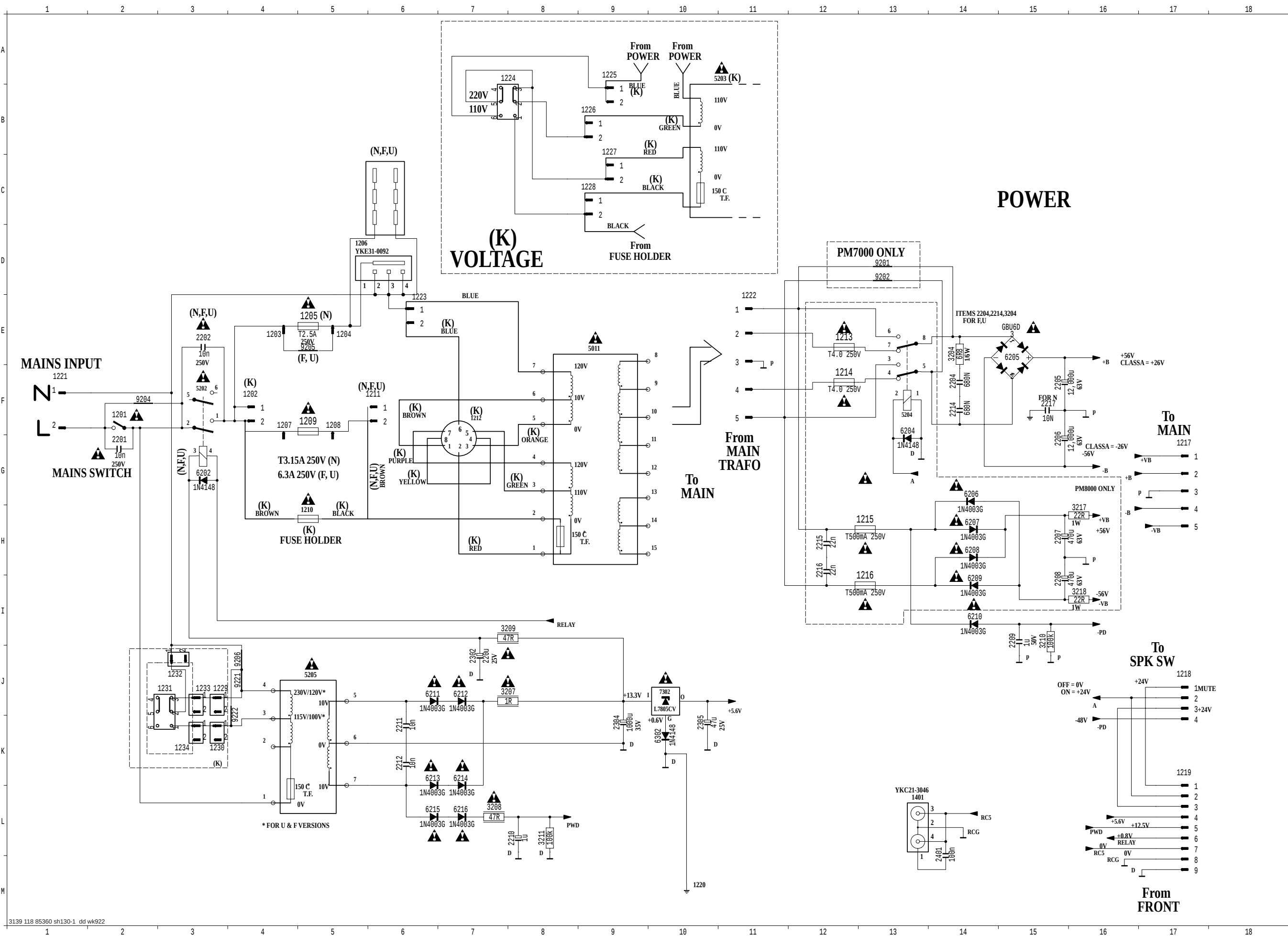


6. SCHEMATIC DIAGRAM AND PARTS LOCATION (PARTS SIDE)
FUNCTION & TAPE IN/OUT CIRCUIT

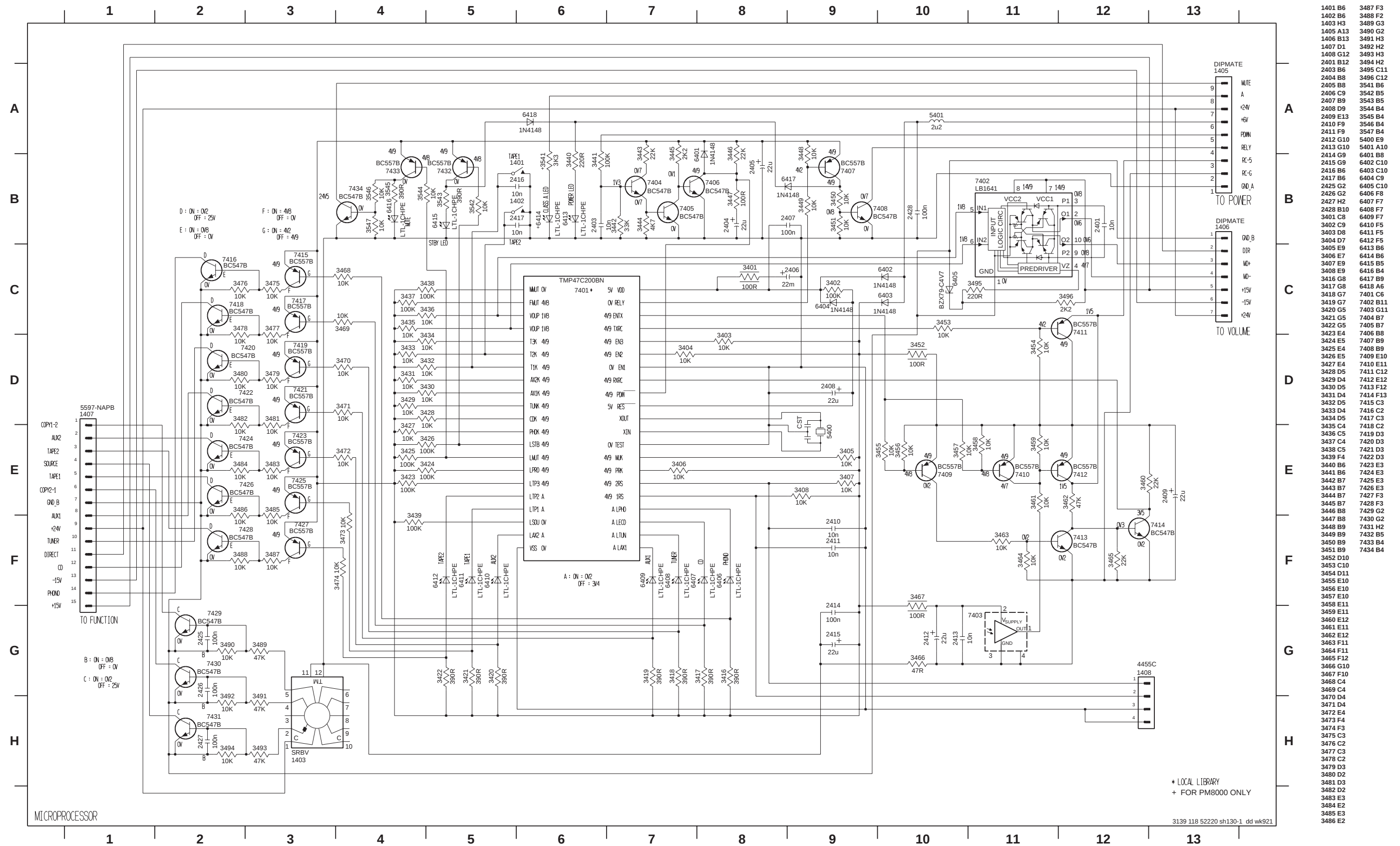


1257	H13	5684	J
1551	H13	5685	H
1553	H13	5686	H
1554	H13	5687	H
1555	H13	5688	T1
1556	H13	5689	T1
1557	H13	5690	T1
1558	H13	5691	T1
1559	H13	5692	T1
1560	H13	5693	T1
1561	H13	5694	T1
1562	H13	5695	T1
1563	H13	5696	T1
1564	H13	5697	T1
1565	H13	5698	T1
1566	H13	5699	T1
1567	H13	5700	T1
1568	H13	5701	T1
1569	H13	5702	T1
1570	H13	5703	T1
1571	H13	5704	T1
1572	H13	5705	T1
1573	H13	5706	T1
1574	H13	5707	T1
1575	H13	5708	T1
1576	H13	5709	T1
1577	H13	5710	T1
1578	H13	5711	T1
1579	H13	5712	T1
1580	H13	5713	T1
1581	H13	5714	T1
1582	H13	5715	T1
1583	H13	5716	T1
1584	H13	5717	T1
1585	H13	5718	T1
1586	H13	5719	T1
1587	H13	5720	T1
1588	H13	5721	T1
1589	H13	5722	T1
1590	H13	5723	T1
1591	H13	5724	T1
1592	H13	5725	T1
1593	H13	5726	T1
1594	H13	5727	T1
1595	H13	5728	T1
1596	H13	5729	T1
1597	H13	5730	T1
1598	H13	5731	T1
1599	H13	5732	T1
1600	H13	5733	T1
1601	H13	5734	T1
1602	H13	5735	T1
1603	H13	5736	T1
1604	H13	5737	T1
1605	H13	5738	T1
1606	H13	5739	T1
1607	H13	5740	T1
1608	H13	5741	T1
1609	H13	5742	T1
1610	H13	5743	T1
1611	H13	5744	T1
1612	H13	5745	T1
1613	H13	5746	T1
1614	H13	5747	T1
1615	H13	5748	T1
1616	H13	5749	T1
1617	H13	5750	T1
1618	H13	5751	T1
1619	H13	5752	T1
1620	H13	5753	T1
1621	H13	5754	T1
1622	H13	5755	T1
1623	H13	5756	T1
1624	H13	5757	T1
1625	H13	5758	T1
1626	H13	5759	T1
1627	H13	5760	T1
1628	H13	5761	T1
1629	H13	5762	T1
1630	H13	5763	T1
1631	H13	5764	T1
1632	H13	5765	T1
1633	H13	5766	T1
1634	H13	5767	T1
1635	H13	5768	T1
1636	H13	5769	T1
1637	H13	5770	T1
1638	H13	5771	T1
1639	H13	5772	T1
1640	H13	5773	T1
1641	H13	5774	T1
1642	H13	5775	T1
1643	H13	5776	T1
1644	H13	5777	T1
1645	H13	5778	T1
1646	H13	5779	T1
1647	H13	5780	T1
1648	H13	5781	T1
1649	H13	5782	T1
1650	H13	5783	T1
1651	H13	5784	T1
1652	H13	5785	T1
1653	H13	5786	T1
1654	H13	5787	T1
1655	H13	5788	T1
1656	H13	5789	T1
1657	H13	5790	T1
1658	H13	5791	T1
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1660	H13	5793	T1
1661	H13	5794	T1
1662	H13	5795	T1
1663	H13	5796	T1
1664	H13	5797	T1
1665	H13	5798	T1
1666	H13	5799	T1
1667	H13	5800	T1
1668	H13	5801	T1
1669	H13	5802	T1
1670	H13	5803	T1
1671	H13	5804	T1
1672	H13	5805	T1
1673	H13	5806	T1
1674	H13	5807	T1
1675	H13	5808	T1
1676	H13	5809	T1
1677	H13	5810	T1
1678	H13	5811	T1
1679	H13	5812	T1
1680	H13	5813	T1
1681	H13	5814	T1
1682	H13	5815	T1
1683	H13	5816	T1
1684	H13	5817	T1
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1686	H13	5819	T1
1687	H13	5820	T1
1688	H13	5821	T1
1689	H13	5822	T1
1690	H13	5823	T1
1691	H13	5824	T1
1692	H13	5825	T1
1693	H13	5826	T1
1694	H13	5827	T1
1695	H13	5828	T1
1696	H13	5829	T1
1697	H13	5830	T1
1698	H13	5831	T1
1699	H13	5832	T1
1700	H13	5833	T1
1701	H13	5834	T1
1702	H13	5835	T1
1703	H13	5836	T1
1704	H13	5837	T1
1705	H13	5838	T1
1706	H13	5839	T1
1707	H13	5840	T1
1708	H13	5841	T1
1709	H13	5842	T1
1710	H13	5843	T1
1711	H13	5844	T1
1712	H13	5845	T1
1713	H13	5846	T1
1714	H13	5847	T1
1715	H13	5848	T1
1716	H13	5849	T1
1717	H13	5850	T1
1718	H13	5851	T1
1719	H13	5852	T1
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1723	H13	5856	T1
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1726	H13	5859	T1
1727	H13	5860	T1
1728	H13	5861	T1
1729	H13	5862	T1
1730	H13	5863	T1
1731	H13	5864	T1
1732	H13	5865	T1
1733	H13	5866	T1
1734	H13	5867	T1
1735	H13	5868	T1
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1739	H13	5872	T1
1740	H13	5873	T1
1741	H13	5874	T1
1742	H13	5875	T1
1743	H13	5876	T1
1744	H13	5877	T1
1745	H13	5878	T1
1746	H13	5879	T1
1747	H13	5880	T1
1748	H13	5881	T1
1749	H13	5882	T1
1750	H13	5883	T1
1751	H13	5884	T1
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1797	H13	5930	T1
1798	H13	5931	T1
1799	H13	5932	T1
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1801	H13	5934	T1
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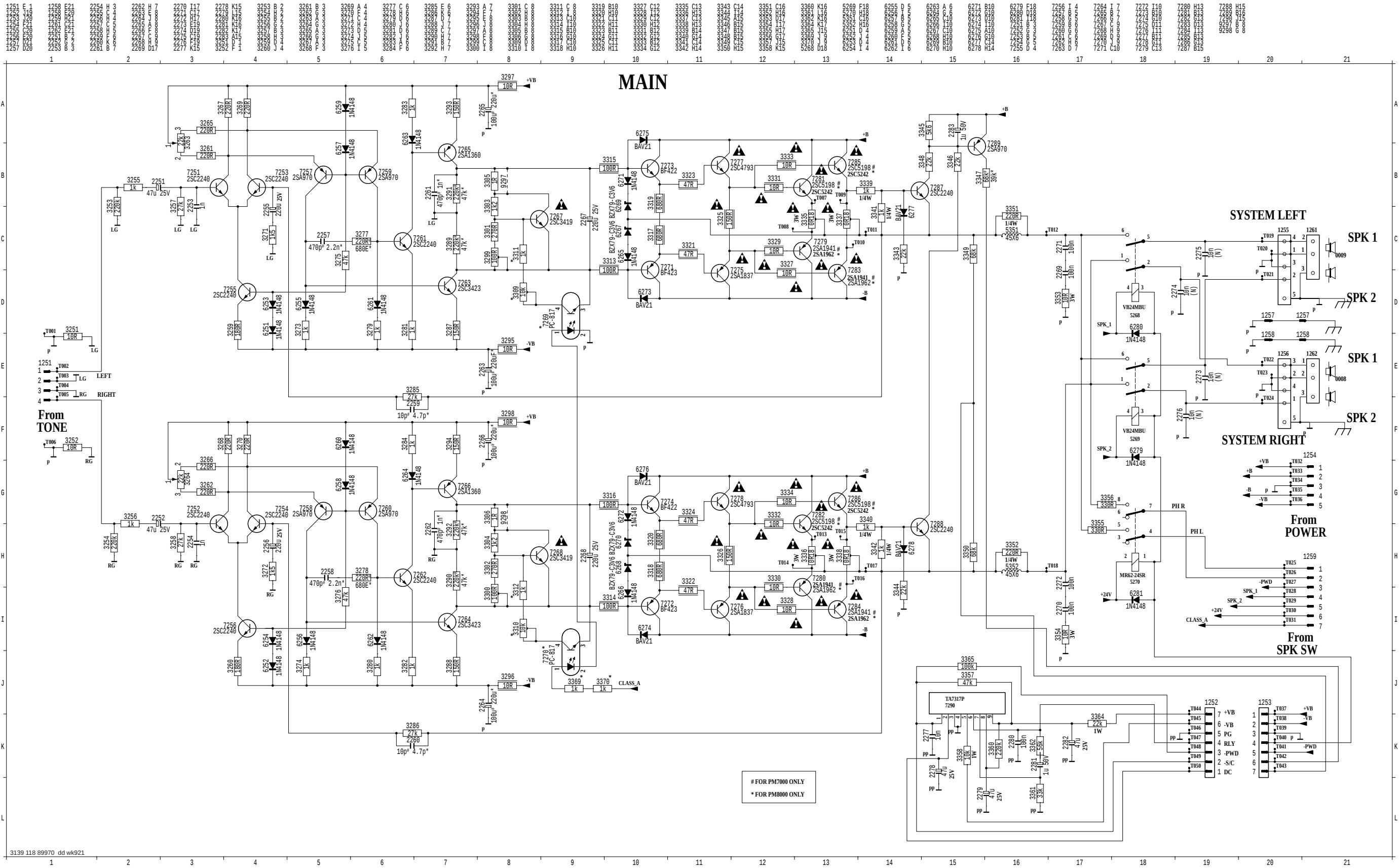
POWER CIRCUIT



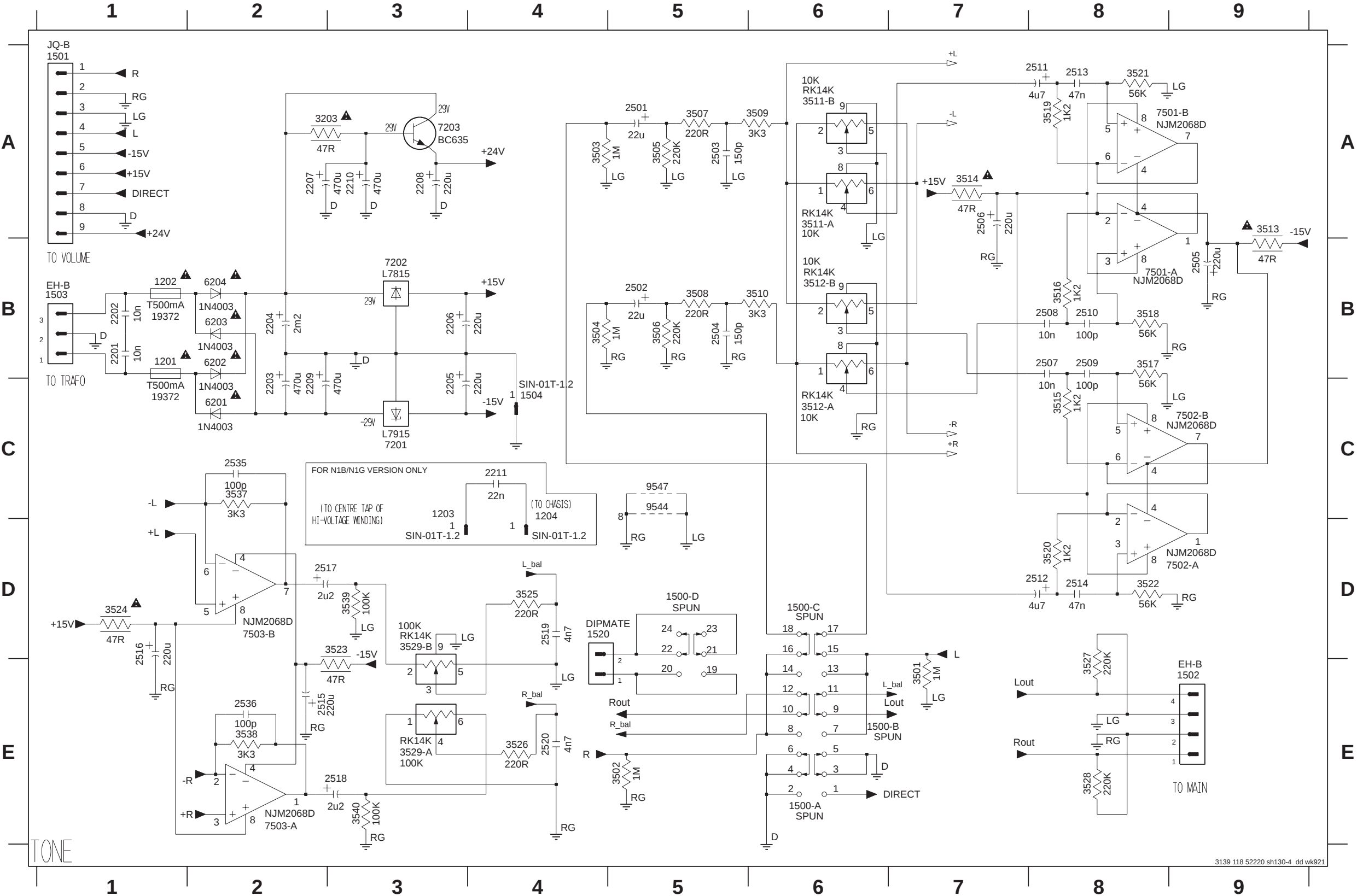
FRONT CIRCUIT



MAIN CIRCUIT

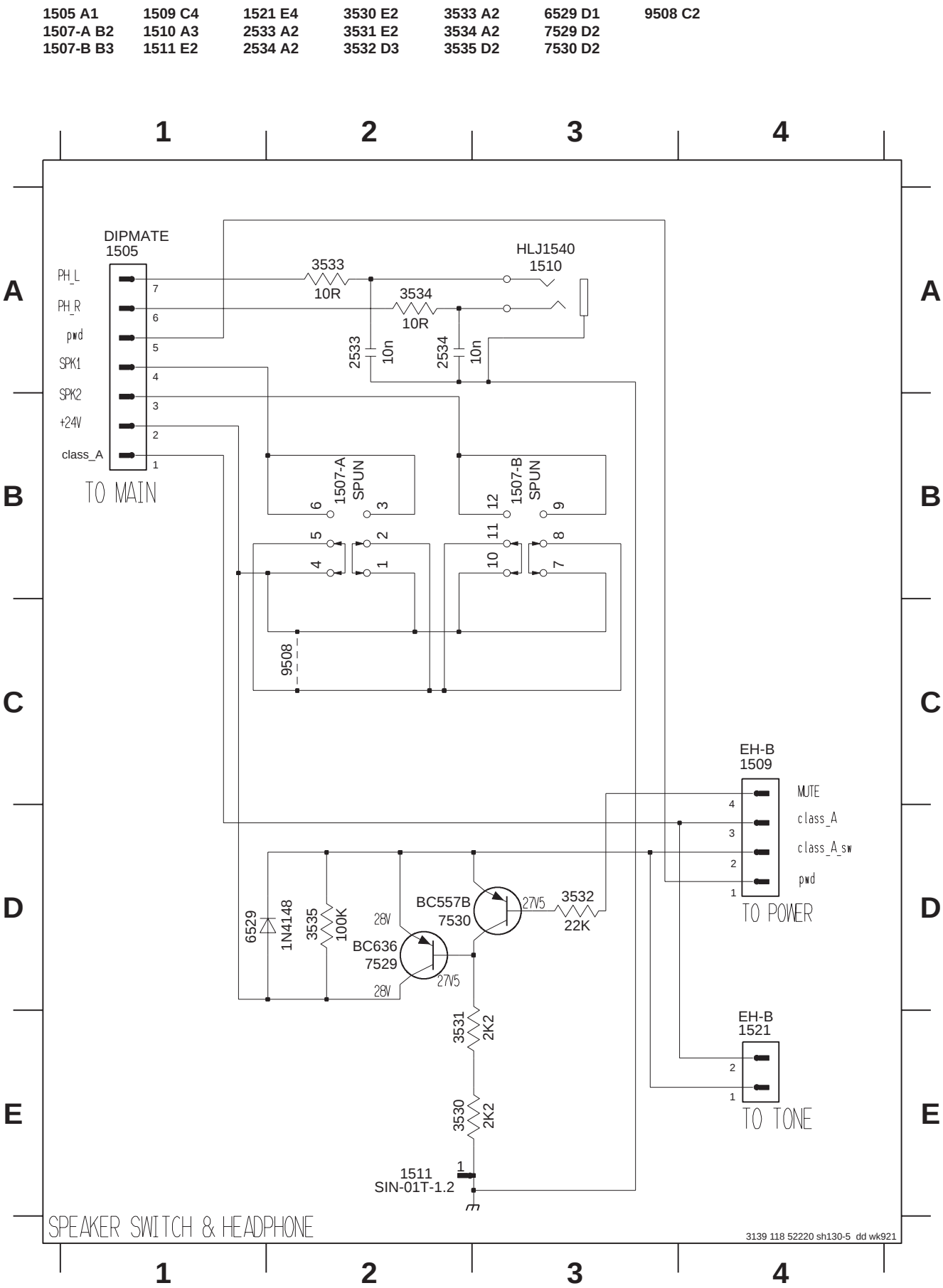


TONE CIRCUIT

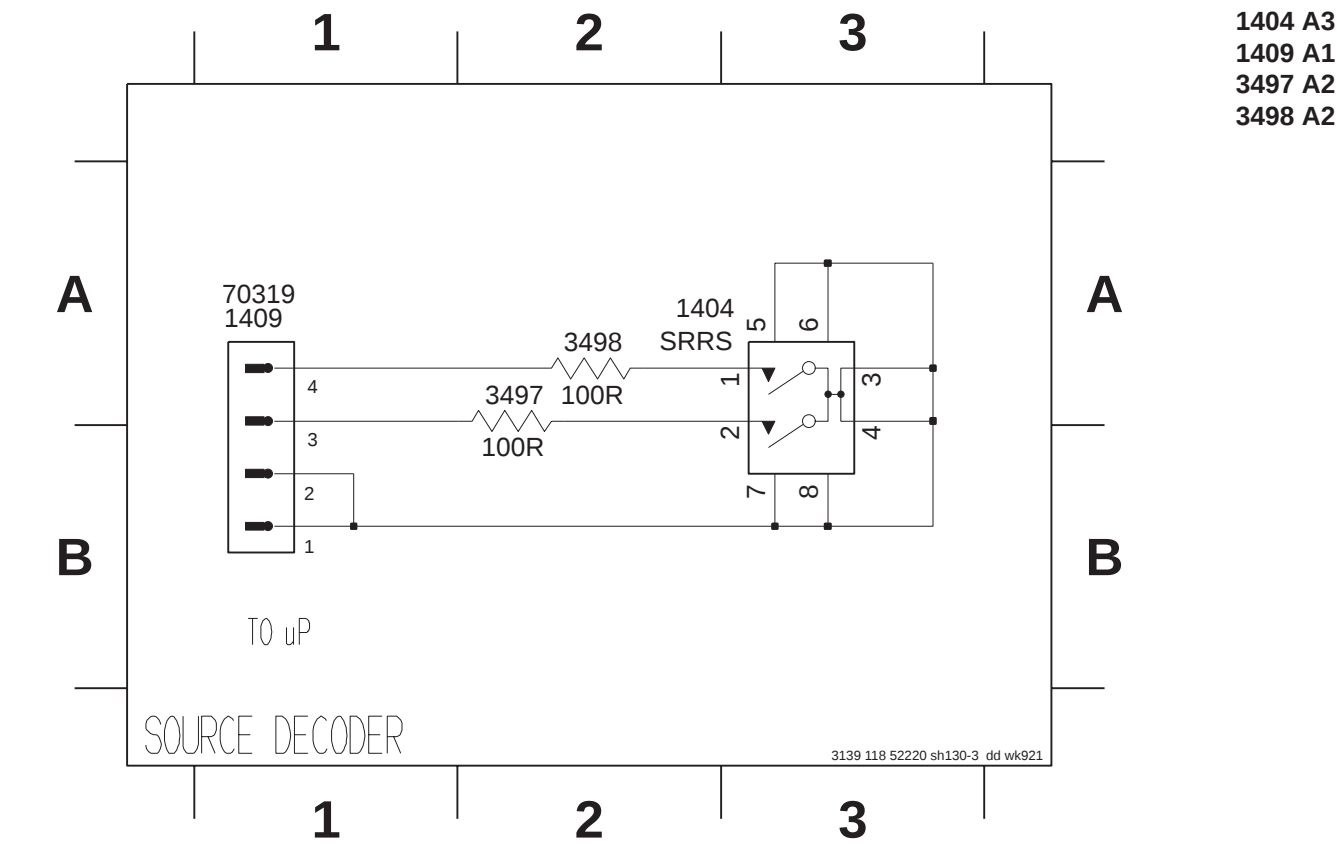


- | | |
|-----------|-----------|
| 1201 B1 | 3524 D1 |
| 1202 B1 | 3525 D4 |
| 1203 C3 | 3526 E4 |
| 1204 C4 | 3527 E8 |
| 1500-A E6 | 3528 E8 |
| 1500-B E7 | 3529-A E3 |
| 1500-C D6 | 3529-B D3 |
| 1500-D D5 | 3537 C2 |
| 1501 A1 | 3538 E2 |
| 1502 E9 | 3539 D3 |
| 1503 B1 | 3540 E3 |
| 1504 C4 | 6201 C2 |
| 1520 D5 | 6202 B2 |
| 2201 B1 | 6203 B2 |
| 2202 B1 | 6204 B2 |
| 2203 C2 | 7201 C3 |
| 2204 B2 | 7202 B3 |
| 2205 C3 | 7203 A3 |
| 2206 B3 | 7501-A B8 |
| 2207 A2 | 7501-B A8 |
| 2208 A3 | 7502-A D8 |
| 2209 C2 | 7502-B C9 |
| 2210 A3 | 7503-A E2 |
| 2211 C4 | 7503-B D2 |
| 2501 A5 | 9544 C5 |
| 2502 B5 | 9547 C5 |
| 2503 A5 | |
| 2504 B5 | |
| 2505 B9 | |
| 2506 A7 | |
| 2507 B8 | |
| 2508 B8 | |
| 2509 B8 | |
| 2510 B8 | |
| 2511 A8 | |
| 2512 D8 | |
| 2513 A8 | |
| 2514 D8 | |
| 2515 E2 | |
| 2516 D1 | |
| 2517 D2 | |
| 2518 E3 | |
| 2519 D4 | |
| 2520 E4 | |
| 2535 C2 | |
| 2536 E2 | |
| 3203 A2 | |
| 3501 E7 | |
| 3502 E5 | |
| 3503 A4 | |
| 3504 B4 | |
| 3505 A5 | |
| 3506 B5 | |
| 3507 A5 | |
| 3508 B5 | |
| 3509 A6 | |
| 3510 B6 | |
| 3511-A A6 | |
| 3511-B A6 | |
| 3512-A C6 | |
| 3512-B B6 | |
| 3513 A9 | |
| 3514 A7 | |
| 3515 C8 | |
| 3516 B8 | |
| 3517 B8 | |
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| 3519 A8 | |
| 3520 D8 | |
| 3521 A8 | |
| 3522 D8 | |
| 3523 D3 | |

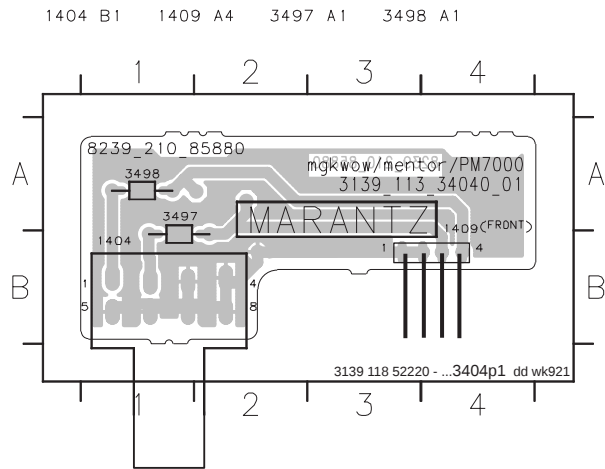
SPK SW CIRCUIT



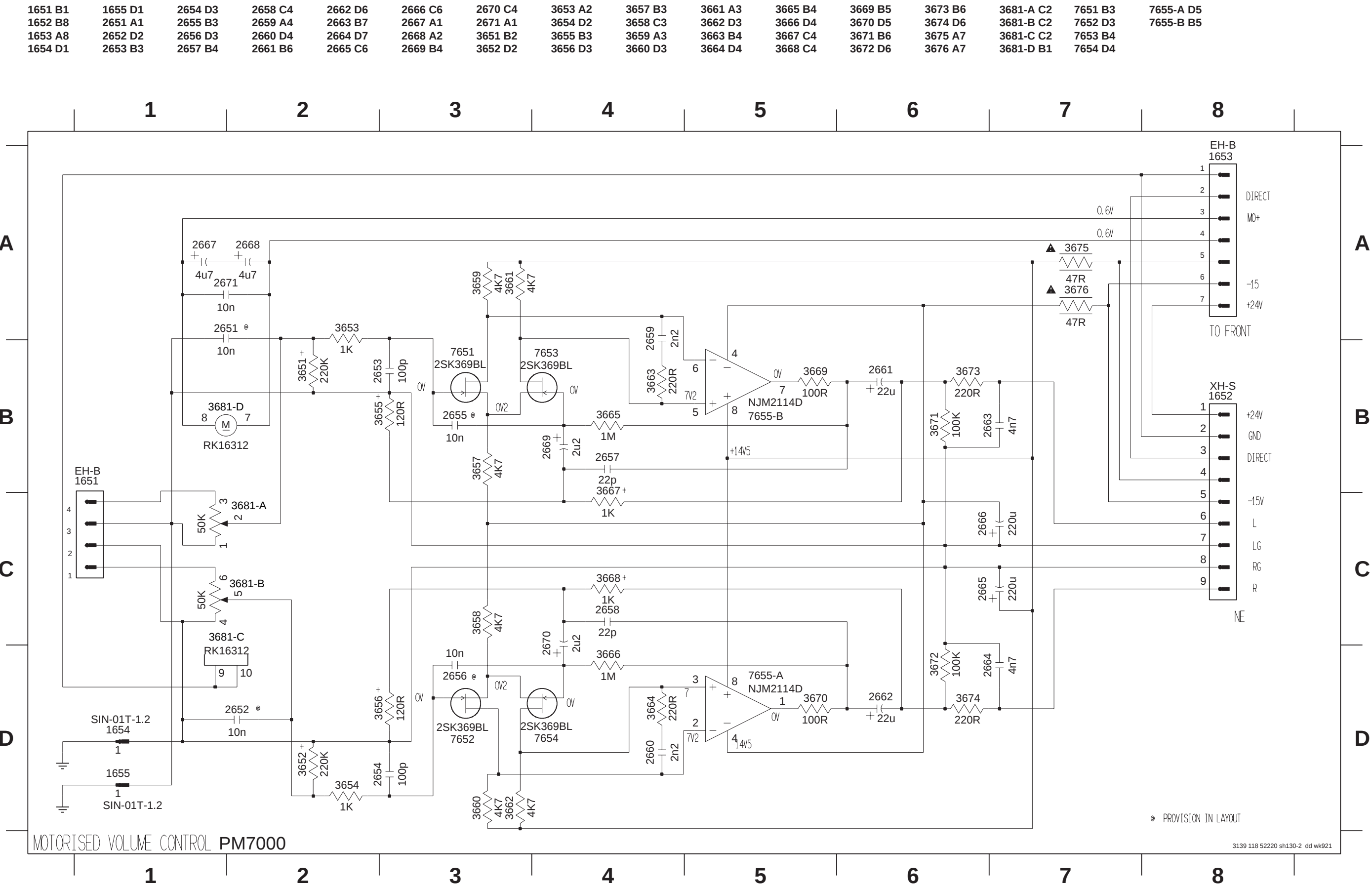
ENCODER CIRCUIT



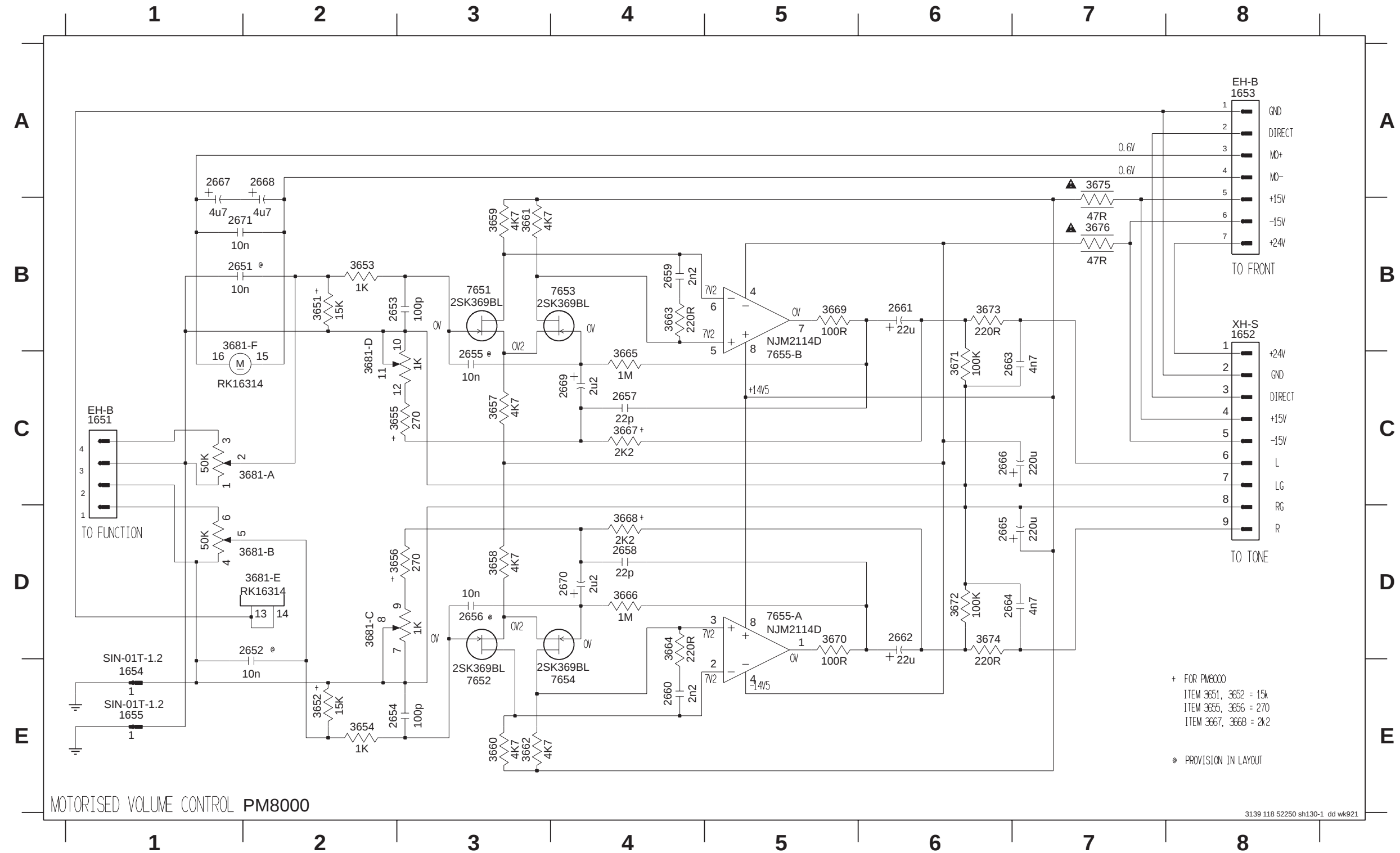
ENCODER BOARD



VOLUME CONTROL CIRCUIT (PM7000)

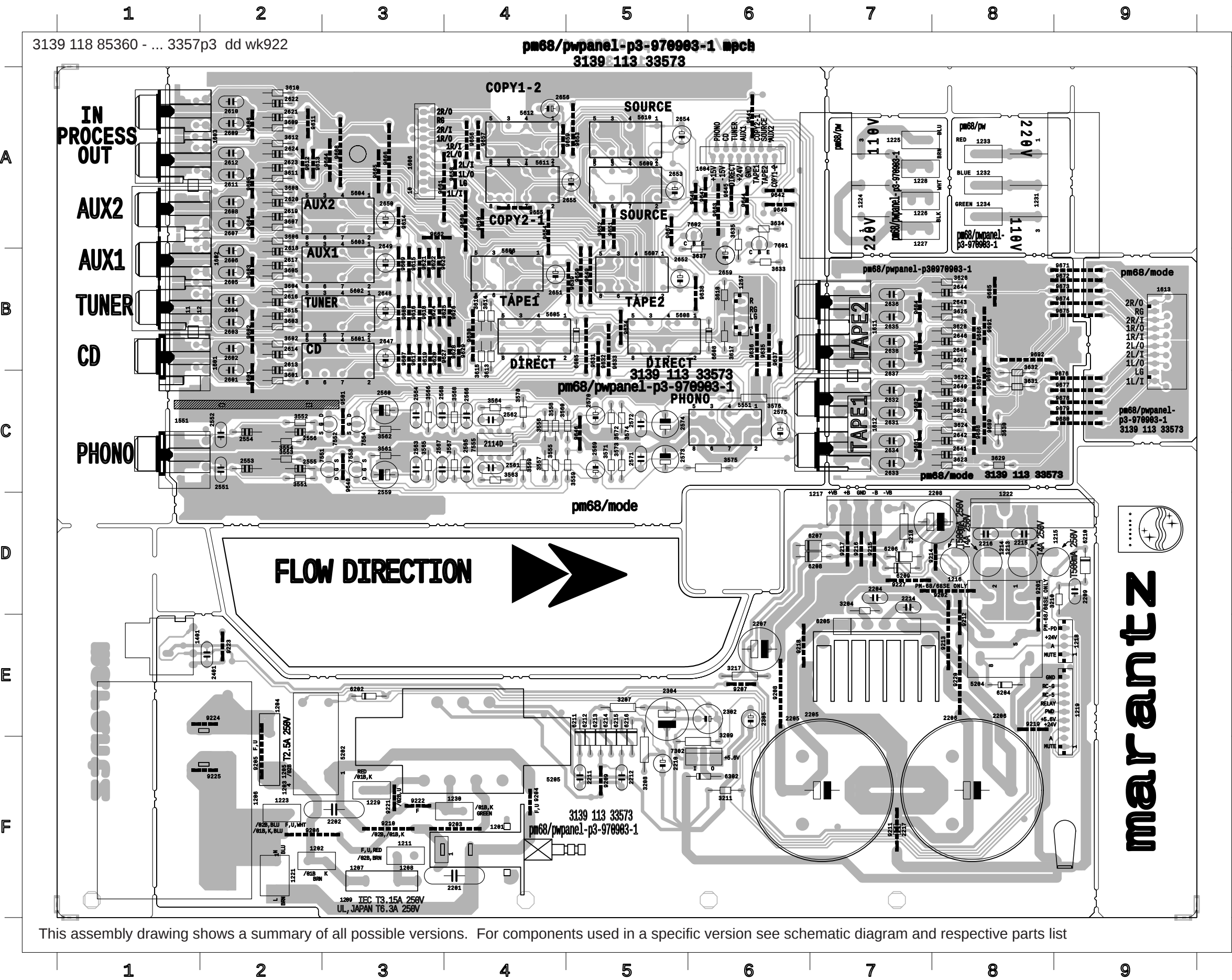


VOLUME CONTROL CIRCUIT (PM8000)



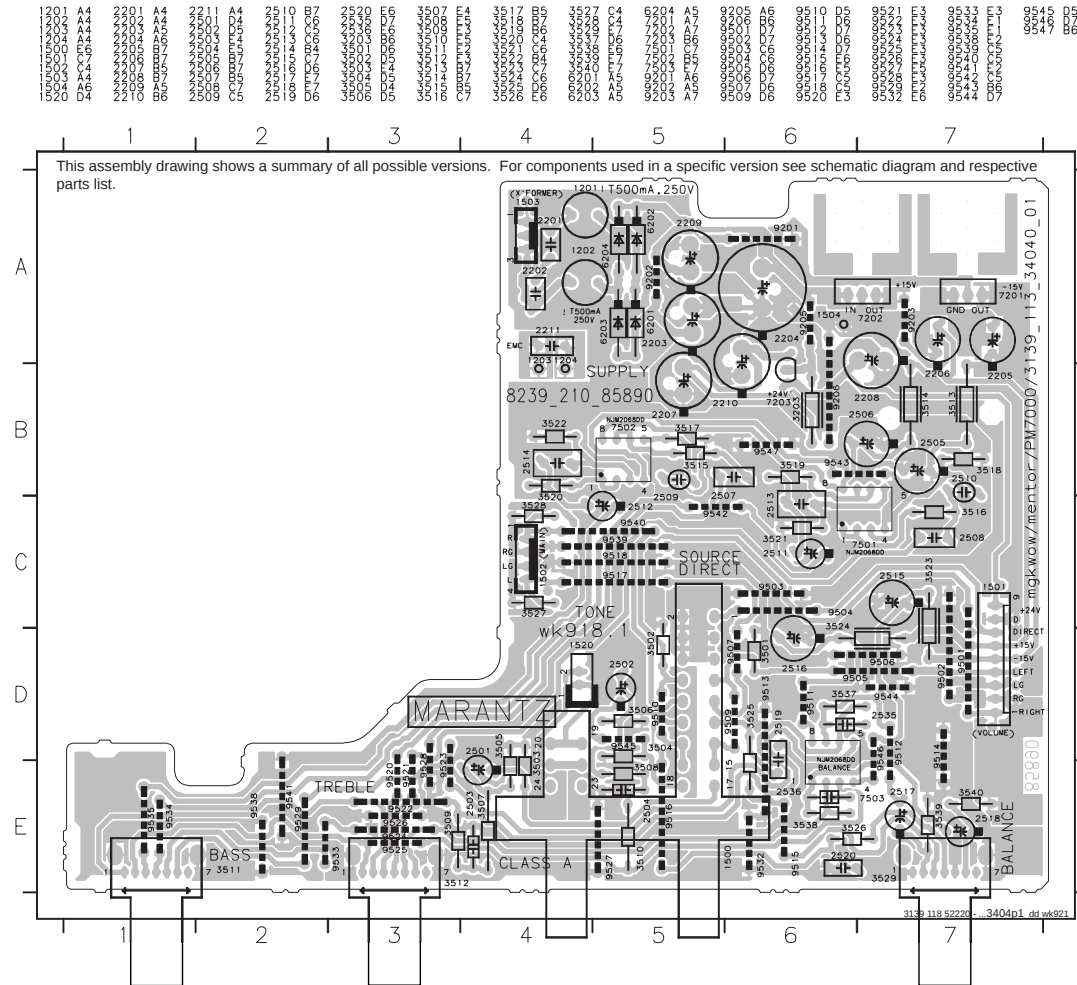
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1654 E1	T118 C1
1655 E1	T119 C1
2651 B1	T120 C1
2652 D2	T121 A8
2653 B2	T122 A8
2654 E2	T123 A8
2655 C3	T124 A8
2656 D3	T125 A8
2657 C4	T126 B8
2658 D4	T127 B8
2659 B4	T128 B8
2660 E4	T129 C8
2661 B6	T130 C8
2662 D6	T131 C8
2663 C6	T132 C8
2664 D6	T133 C8
2665 D6	T134 C8
2666 C6	T135 C8
2667 A1	T136 D8
2668 A2	
2669 C4	
2670 D4	
2671 B1	
3651 B2	
3652 E2	
3653 B2	
3654 E2	
3655 C3	
3656 D3	
3657 C3	
3658 D3	
3659 B3	
3660 E3	
3661 B3	
3662 E3	
3663 B4	
3664 D4	
3665 C4	
3666 D4	
3667 C4	
3668 D4	
3669 B5	
3670 D5	
3671 C6	
3672 D6	
3673 B6	
3674 D6	
3675 A7	
3676 B7	
3681-A C1	
3681-B D1	
3681-C D2	
3681-D C2	
3681-E D2	
3681-F B1	
7651 B3	
7652 E3	
7653 B4	
7654 E4	

FUNCTION & TAPE IN / OUT & POWER BOARD

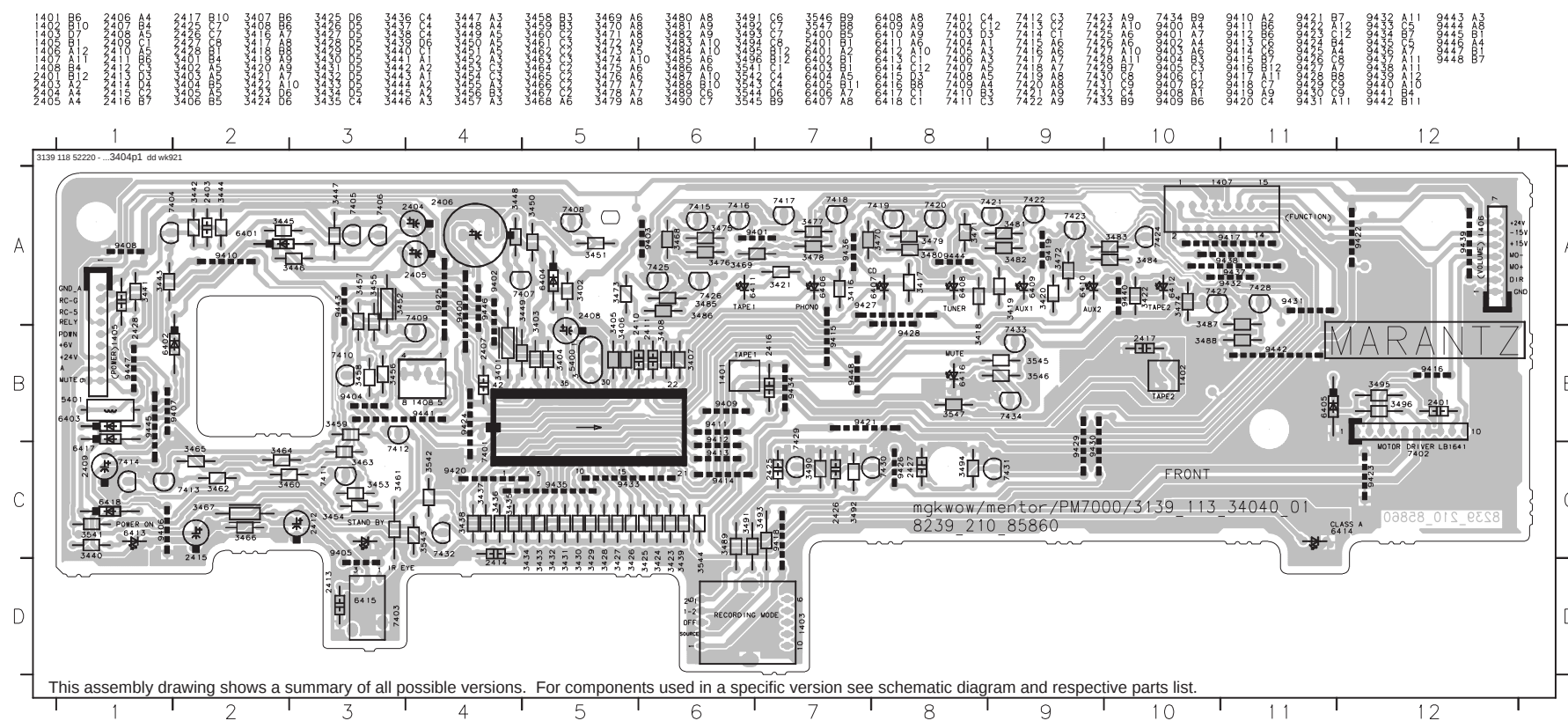


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1551 C 1	3563 C 4	9625 B 3	1233 A 8
1601 B 1	3564 C 4	9626 B 4	1234 A 8
1602 B 1	3565 C 3	9627 B 3	1401 E 1
1603 A 1	3566 C 3	9628 B 4	2201 F 4
1604 A 6	3567 C 4	9629 B 4	2202 F 3
1606 A 3	3568 C 4	9630 B 4	2204 D 7
1611 B 7	3569 C 4	9631 B 5	2205 F 7
1612 C 7	3570 C 4	9632 B 5	2206 F 8
1613 B 9	3571 C 5	9633 B 5	2207 E 6
2551 C 2	3572 C 5	9634 B 5	2208 D 8
2552 C 2	3573 C 5	9635 B 6	2209 D 9
2553 C 2	3574 C 5	9636 B 6	2210 F 5
2554 C 2	3575 C 6	9637 B 6	2211 F 5
2555 C 2	3576 C 6	9638 B 6	2212 F 5
2556 C 2	3601 C 2	9639 B 5	2214 D 7
2559 C 3	3602 B 2	9640 C 3	2215 D 8
2560 C 3	3603 B 2	9641 A 6	2216 D 8
2561 C 4	3604 B 2	9642 A 6	2217 F 7
2562 C 4	3605 B 2	9643 A 6	2302 E 6
2563 C 3	3606 A 2	9644 A 6	2304 E 5
2564 C 3	3607 A 2	9645 A 6	2305 E 6
2565 C 4	3608 A 2	9646 C 5	2401 E 2
2566 C 4	3609 A 2	9647 A 6	3204 D 7
2567 C 3	3610 A 2	9648 A 6	3207 E 5
2568 C 3	3611 A 2	9649 B 5	3208 F 5
2569 C 5	3612 A 2	9650 B 5	3209 F 6
2570 C 5	3613 B 4	9651 A 5	3210 D 9
2571 C 5	3614 B 4	9652 A 5	3211 F 6
2572 C 5	3615 B 4	9653 A 5	3217 E 6
2573 C 5	3616 B 4	9654 A 4	3218 D 7
2574 C 5	3617 B 6	9655 A 4	5202 F 2
2575 C 6	3618 B 6	9656 A 4	5204 E 8
2601 C 2	3621 C 8	9657 A 4	6202 E 3
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2603 B 2	3623 C 8	9659 A 4	6205 E 7
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2605 B 2	3625 B 8	9661 A 3	6207 D 7
2606 B 2	3626 B 8	9662 A 3	6208 D 7
2607 A 2	3627 B 8	9663 A 6	6209 D 9
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2609 A 2	3629 C 8	9665 A 3	6211 F 5
2610 A 2	3630 C 8	9666 A 3	6212 F 5
2611 A 2	3631 C 8	9667 A 5	6213 F 5
2612 A 2	3632 C 8	9668 A 3	6214 F 5
2613 C 2	3633 B 6	9671 B 9	6215 F 5
2614 B 2	3634 A 6	9672 B 9	6216 F 5
2615 B 2	3635 A 6	9673 B 9	6302 F 6
2616 B 2	3637 B 6	9674 B 9	7302 F 6
2617 B 2	5551 C 6	9675 B 9	9201 E 8
2618 B 2	5601 B 3	9676 C 9	9202 D 8
2619 A 2	5602 B 3	9677 C 9	9203 F 4
2620 A 2	5603 B 3	9678 C 9	9204 F 4
2621 A 2	5604 A 3	9679 C 9	9205 F 2
2622 A 2	5605 B 4	9680 C 9	9206 F 2
2623 A 2	5606 B 4	9681 C 7	9207 E 6
2624 A 2	5607 B 5	9682 C 7	9208 E 6
2631 C 7	5608 B 5	9683 B 7	9209 F 3
2632 C 7	5609 A 5	9684 B 7	9210 F 3
2633 C 7	5610 A 5	9685 B 8	9211 F 7
2634 C 7	5611 A 4	9686 B 8	9212 E 8
2635 B 7	5612 A 4	9687 C 8	9213 E 8
2636 B 7	6605 B 5	9688 C 8	9214 D 8
2637 B 7	6608 B 6	9689 C 8	9215 D 7
2638 B 7	7551 C 3	9690 C 8	9216 D 7
2639 C 8	7552 C 3	9691 B 8	9217 D 7
2640 C 8	7553 C 3	9692 B 8	9218 E 6
2641 C 8	7554 C 3	----	9219 E 8
2642 C 8	7555 C 4	----	9220 E 8
2643 B 8	7601 A 6	1201 F 3	9221 F 3
2644 B 8	7602 A 6	1202 F 2	9222 F 3
2645 B 8	9501 C 3	1203 F 2	9223 E 2
2646 B 8	9601 C 2	1204 F 2	9224 E 2
2647 B 3	9602 B 2	1206 F 2	9225 F 2
2648 B 3	9603 B 2	1207 F 3	9227 D 7
2649 B 3	9604 A 2	1208 F 3	
2650 A 3	9605 A 2	1211 F 3	
2651 B 4	9606 A 2	1213 D 8	
2652 B 5	9607 B 3	1214 D 8	
2653 A 5	9608 B 3	1215 D 8	
2654 A 5	9609 B 3	1216 D 9	
2655 A 5	9610 A 4	1217 D 7	
2656 A 4	9611 A 2	1218 E 9	
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3555 C 4	9617 B 3	1225 A 7	
3556 C 4	9618 B 3	1226 A 7	
3557 C 4	9619 B 3	1227 A 7	
3558 C 4	9620 B 3	1228 A 7	
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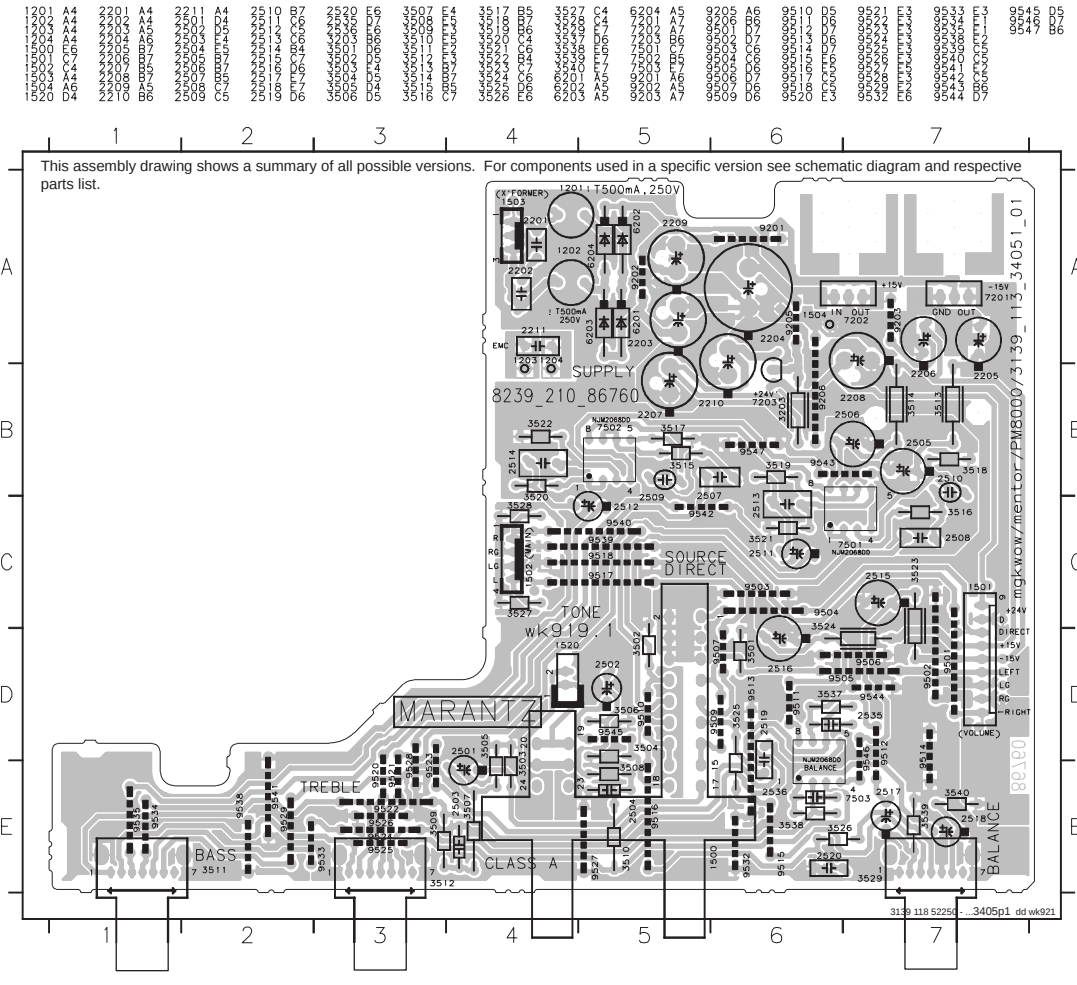
TONE BOARD (PM7000)



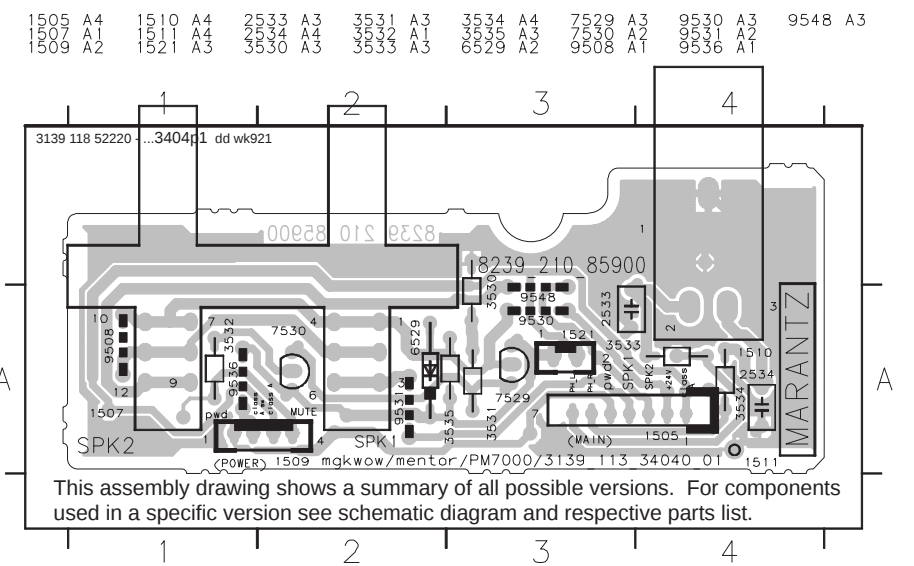
FRONT BOARD



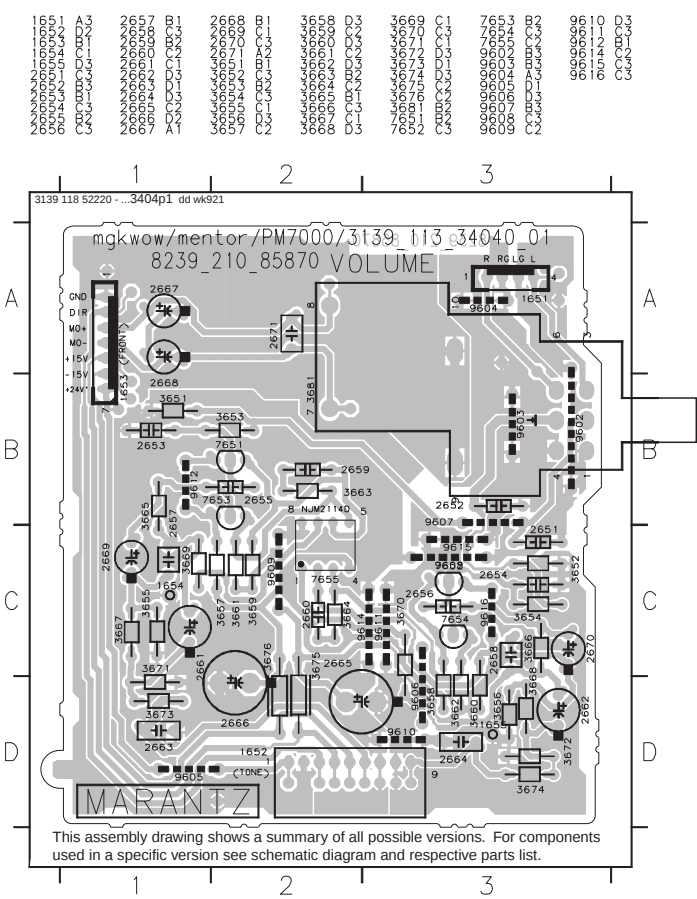
TONE BOARD (PM8000)



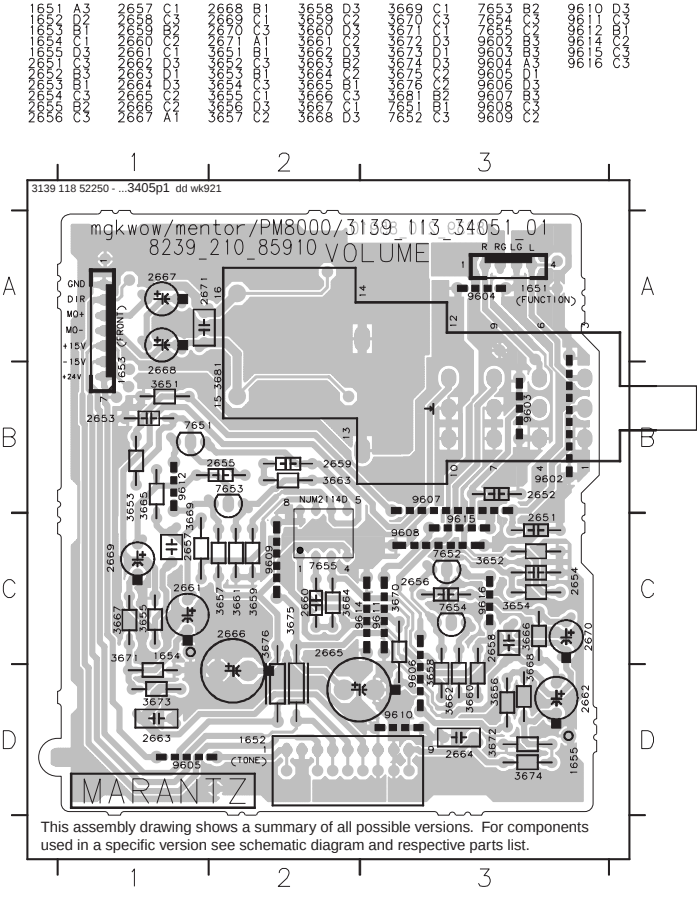
SPK SW BOARD



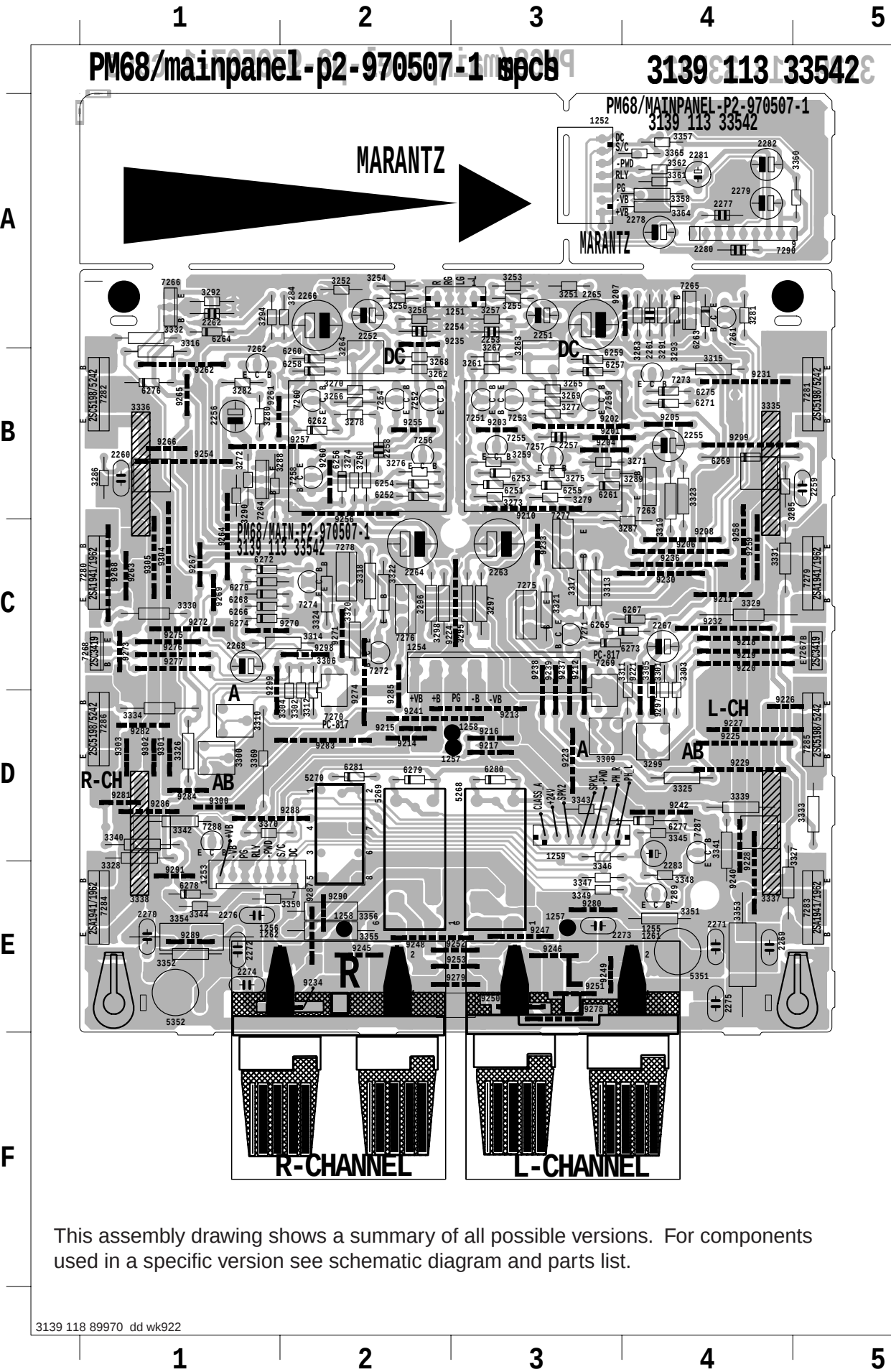
VOLUME BOARD (PM7000)



VOLUME BOARD (PM8000)

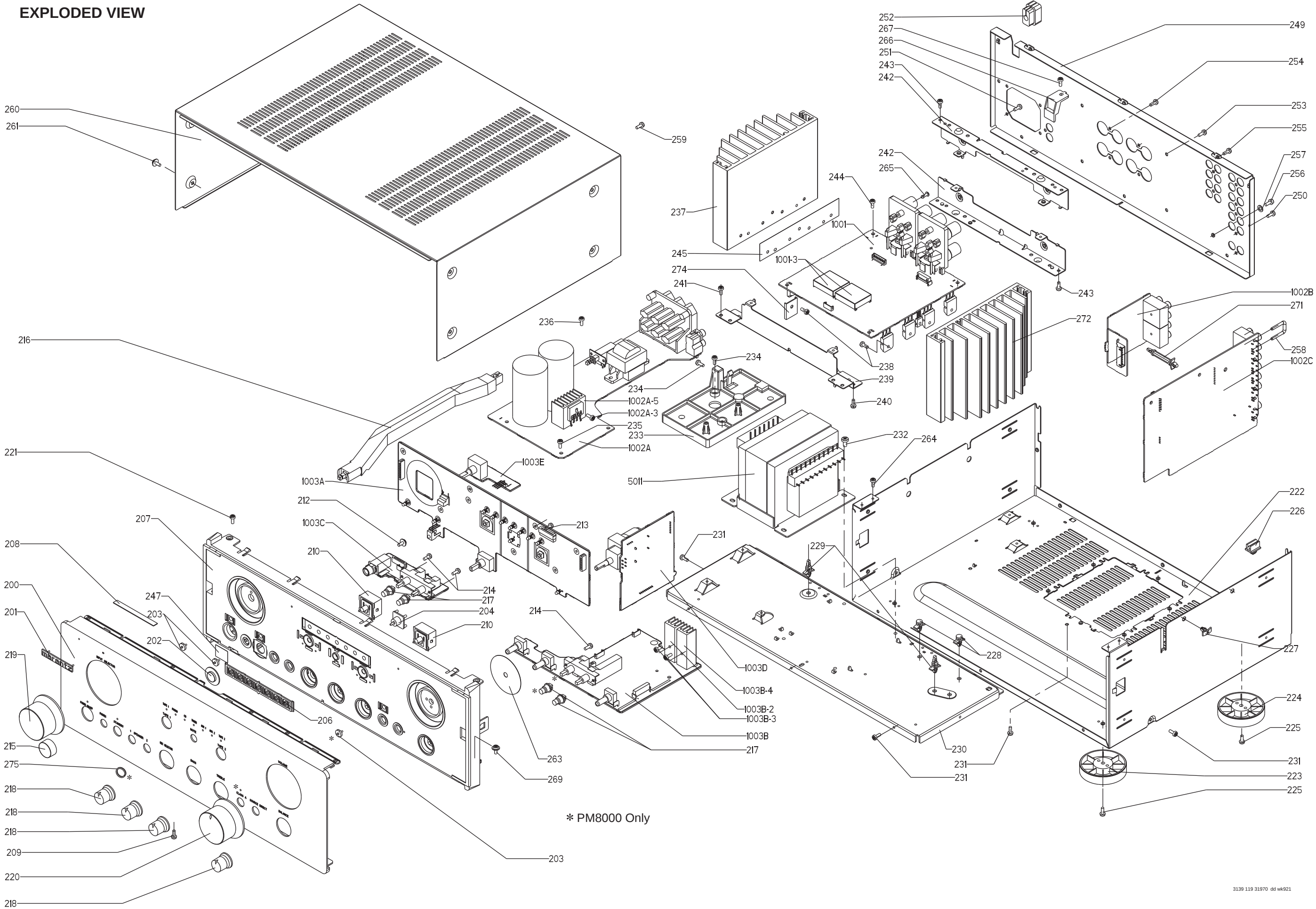


MAIN & SP PROTECT BOARD



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1252 A 3	3305 D 4	7251 B 3	9257 B 1
1253 E 1	3306 C 2	7252 B 2	9258 C 4
1254 C 3	3309 D 3	7253 B 3	9259 C 4
1255 F 3	3310 D 1	7254 B 2	9260 B 2
1256 F 2	3311 D 4	7255 B 3	9261 B 1
1259 D 3	3312 D 2	7256 B 2	9262 B 1
1261 F 3	3313 C 3	7257 B 3	9263 C 1
1262 F 2	3314 C 2	7258 B 2	9264 C 1
1251 A 3	3315 B 4	7259 B 3	9265 B 1
1252 A 2	3316 B 1	7260 B 2	9266 B 1
1253 A 3	3317 C 3	7261 A 4	9267 C 1
1254 A 2	3318 C 2	7262 B 1	9268 C 1
1255 B 4	3319 B 4	7263 B 4	9269 C 1
1256 B 1	3320 C 2	7264 B 1	9270 C 1
1257 B 3	3321 C 3	7265 A 4	9271 C 2
1258 B 2	3322 C 2	7266 A 1	9272 C 1
1259 B 5	3323 B 4	7267 C 5	9273 C 1
1260 B 1	3324 C 2	7268 C 1	9274 C 2
1261 A 4	3325 D 4	7269 D 3	9275 C 1
1262 A 1	3326 D 1	7270 D 2	9276 C 1
1263 C 3	3327 E 4	7271 C 3	9277 C 1
1264 C 2	3328 D 1	7272 C 2	9278 E 3
1265 A 3	3329 C 4	7273 B 4	9279 E 3
1266 A 2	3330 C 1	7274 C 2	9280 E 3
1267 C 4	3331 C 4	7275 C 3	9281 D 1
1268 C 1	3332 A 1	7276 C 2	9282 D 1
1269 E 4	3333 D 5	7277 C 3	9283 D 2
1270 E 1	3334 D 1	7278 C 2	9284 D 1
1271 E 4	3335 B 4	7279 C 5	9285 C 2
1272 E 1	3336 B 1	7280 C 1	9286 D 1
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1274 E 1	3338 D 1	7282 B 1	9288 D 1
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1279 A 4	3343 D 3	7287 D 4	9298 C 2
1280 A 4	3344 E 1	7288 D 1	9299 D 1
1281 A 4	3345 D 4	7289 E 4	9300 D 1
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1283 D 4	3347 E 3	9201 B 3	9302 D 1
1251 A 3	3348 E 4	9202 B 3	9303 D 1
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1253 A 3	3350 E 1	9204 B 3	9305 C 1
1254 A 2	3351 F 4	9205 B 4	----
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1256 A 2	3353 E 4	9207 A 4	
1257 A 3	3354 E 1	9208 C 4	
1258 A 2	3355 E 2	9209 B 4	
1259 B 3	3356 E 2	9210 B 3	
1260 B 2	3357 A 4	9211 C 4	
1261 B 3	3358 A 4	9212 D 3	
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1263 B 3	3361 A 4	9214 D 2	
1264 B 2	3362 A 4	9215 D 2	
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1274 B 2	6251 B 3	9226 D 4	
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1279 B 3	6256 B 2	9231 B 4	
1280 B 1	6257 B 3	9232 C 4	
1281 A 4	6258 B 2	9233 C 3	
1282 B 1	6259 B 3	9234 E 2	
1283 A 4	6260 B 2	9235 A 2	
1284 A 2	6261 B 3	9236 C 4	
1285 B 4	6262 B 2	9237 D 3	
1286 B 1	6263 A 4	9238 D 3	
1287 C 4	6264 A 1	9239 D 3	
1288 B 1	6265 C 4	9240 D 4	
1289 B 3	6266 C 1	9241 D 2	
1290 B 1	6267 C 4	9242 D 4	
1291 A 4	6268 C 1	9243 D 3	
1292 A 1	6269 B 4	9244 D 3	
1293 A 4	6270 C 1	9245 E 2	
1294 A 1	6271 B 4	9246 E 3	
1295 C 3	6272 C 1	9247 E 3	
1296 C 2	6273 C 3	9248 E 2	
1297 C 3	6274 C 1	9249 E 3	
1298 C 2	6275 B 4	9250 E 3	
1299 D 4	6276 B 1	9251 E 3	
1300 D 1	6277 D 4	9252 E 3	
1301 D 4	6278 E 1	9253 E 3	
1302 D 2	6279 D 2	9254 B 1	
1303 D 4	6280 D 3	9255 B 2	

7. EXPLODED VIEW AND PARTS LIST
EXPLODED VIEW



POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
200	PM7000 BLK	3139 117 88070	FRONT PANEL BLACK
200	PM8000 BLK	3139 117 88080	FRONT PANEL BLACK
200	PM7000 GLD	3139 117 88050	FRONT PANEL GOLD
200	PM8000 GLD	3139 117 88060	FRONT PANEL GOLD
201		4822 454 11825	PLATE, INDICATION
202	BLK	3139 114 66790	WINDOW IR BLACK
202	GLD	3139 114 66800	WINDOW IR GOLD
203		3139 114 66920	LIGHT GUIDE POWER/CLASS
204		3139 114 66900	LIGHT GUIDE MUTE
206		3139 114 66910	LIGHT GUIDE SOURCE
207	BLK	3139 114 66940	CABINET, FRONT BLACK
207	GLD	3139 117 88580	CABINET, FRONT GOLD
210	BLK	3139 114 66930	BUTTON TAPE BLACK
210	GLD	3139 117 88610	BUTTON TAPE GOLD
215	BLK	4822 410 12499	PUSH BUTTON, POWER
215	GLD	4822 410 12552	PUSH BUTTON, POWER
216		3139 114 66970	LINK, POWER
217	BLK	3139 114 66770	BUTTON, PUSH BLACK
217	GLD	3139 117 88600	BUTTON, PUSH GOLD
218	BLK	3139 114 66750	KNOB, ROTARY BLACK
218	GLD	3139 117 88590	KNOB, ROTARY GOLD
219	BLK	3139 117 88040	KNOB, SELECTOR BLACK
219	GLD	3139 117 88110	KNOB, SELECTOR GOLD
220	BLK	3139 117 88030	KNOB, VOL BLACK
220	GLD	3139 117 88090	KNOB, VOL GOLD
223		4822 462 42129	FOOT FRONT
224		4822 462 42129	FOOT REAR
252		4822 532 60948	BUSH, PLASTIC
256		4822 502 13921	SCREW, STEEL
271		4822 404 10933	PLASTIC SUPPORT(LCBS-22)
▲ 385	N	4822 321 11139	MAINS CORD
▲ 385	U	4822 321 11464	MAINS CORD
▲ 385	F	4822 321 11349	MAINS CORD
1605		4822 323 10406	FLEX CABLE 15P
▲ 5011	PM7000 N	4822 146 10823	MAINS TRANSFORMER
▲ 5011	PM8000 N	4822 146 10844	MAINS TRANSFORMER
▲ 5011	PM7000 U	4822 146 10854	MAINS TRANSFORMER
▲ 5011	PM8000 F	4822 146 10853	MAINS TRANSFORMER
PACKING			
384		3139 228 82240	REMOTE CONTROL RC0465/02
387	N	3139 116 18910	USER GUIDE
387	U	3139 116 18920	USER GUIDE
387	F	3139 116 18930	USER GUIDE

8. IDLING CURRENT AND DC OFFSET VOLTAGE ALIGNMENT

8.1 Quiescent Current Adjustment for Class AB

-Set to CD mode with no input, minimum volume position & mains supply at 230 V $\pm$ 5 %.

-Power up the unit, adjust **SLOWLY** 3299 (L) & 3300 (R) until voltage across L-Channel -----3335 (T007 / T006) & 3337 (T009 / T010), R-Channel ----- 3336 (T013 / T014) & 3338 (T015 / T016) is as per the table below.

Time	Voltage
after 30 sec to 1 min*	0.3 mV to < 0.4 mV

- After 30 min, the voltage should settle down to 18 mV $\pm$ 3 mV.

* Start from cold condition.

8.2 Quiescent Current Adjustment for Class A.

- Next, switch to Class A operation. Adjust **SLOWLY** 3309 (L) & 3310 (R) until voltage across L-Channel ----- 3335 (T007 / T006) & 3337 (T009 / T010) , R-Channel ----- 3336 (T013 / T014) & 3338 (T015 / T016) is as per the table below.

Time	Voltage
after 0 sec to 30 sec**	65 mV to <70 mV

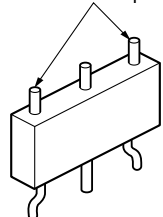
- After 30 min, the voltage should settle down to 90 mV $\pm$ 5 mV.

** Continue immediately after 8.1

REMARKS:

- Please take note that for both Class AB & A alignment, at all time during adjustment, refer to the higher reading of each channel.

Quiescent Current
Measurement point



POS.No.
3335
3337
3336
3338

8.3 DC Offset.

- Adjust 3263 and 3264 until DC offset voltage is less than $\pm$ 10 mV at Speaker output terminal.

8.アイドリング電流およびDCオフセット電圧調整

8.1 アイドリング電流調整 (Class AB)

- 1) 本体の電源スイッチを入れる前に、ボリュームを最小に、バランス及びトーンコントロールをセンターに合わせます。
- 2) CDモードにし、電源電圧を100Vにします。
- 3) セメント抵抗、3335 (T007 / T006) 、3337 (T009 / T010) のLチャンネルと3336 (T013 / T014) 、3338 (T015 / T016) のRチャンネル各々の電圧が下記の値になるまで、半固定抵抗3299 (L) と3300 (R) をゆっくり調整します。

時間	電圧
30秒－1分＊	0.3mV以上0.4mV以下

30分後、電圧は18mV $\pm$ 3mVに安定します。

＊冷却状態からスタートします。

8.2アイドリング電流調整 (Class A)

- 1) A クラス動作に切り換えます。
- 2) セメント抵抗3335 (T007 / T006)、3337 (T009 / T010) のLチャンネルと3336 (T013 / T014) 、3338(T015 / T016)のRチャンネル各々の電圧が下記の値になるまで、半固定抵抗3309 (L) と3310 (R) ゆっくり調整します。

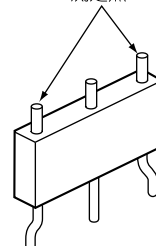
時間	電圧
0秒－30秒 ＊＊	65mV以上70mV以下

30分後、電圧は90mV $\pm$ 5mVに安定します。

＊＊切換え後、すぐに行ってください。

注意：Aクラス動作及びABクラス動作のアイドリング電流調整において、同チャンネル内の2ヶ所の測定点で指示値に差異があった場合は、高い方の電圧値が調整範囲内となるようにします。

アイドリング電流
測定点



POS.No.
3335
3337
3336
3338

8.3 DCオフセット電圧調整

DCオフセット電圧が、スピーカー出力端子で10mV以下になるまで半固定抵抗3263と3264を調整します。

9. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R* ** : 1) GD05 x x x 140, Carbon film fixed resistor, $\pm 5\%$ 1/4W
 R* ** : 2) GD05 x x x 160, Carbon film fixed resistor, $\pm 5\%$ 1/6W
 ① Resistance value

Examples ;

① Resistance value

0.1 Ω 001 10 Ω 100 1k Ω 102 100k Ω 104
 0.5 Ω 005 18 Ω 180 2.7k Ω 272 680k Ω 684
 1 Ω 010 100 Ω 101 10k Ω 103 1M Ω 105
 6.8 Ω 068 390 Ω 391 22k Ω 223 4.7M Ω 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C* ** : CERAMIC CAP.

3) DD1 x x x x 370, Ceramic capacitor
 Disc type
 Temp.coef. P350~N1000, 50V
 ③ Capacity value
 ② Tolerance

Examples

② ATolerance (Capacity deviation)

± 0.25 pF 0
 ± 0.5 pF 1
 $\pm 5\%$ 5

* Tolerance of COMMON PARTS handled here are as follows :

0.5 pF - 5 p ± 0.25 pF
 6 pF - 10 pF ± 0.5 pF
 12 F - 560 pF $\pm 5\%$

③ Capacity value

0.5 pF 005 3 pF 030 100 pF 101
 1 pF 010 10 pF 100 220 pF 221
 1.5 p 015 47 pF 470 560 pF 561

C* ** : CERAMIC CAP.

4) DK16 x x x 300, High dielectric constant ceramic capacitor
 Disc type
 Temp.chara. 2B4, 50V
 ④ Capacity value

Examples

④ Capacity value

100 pF 101 1000 pF 102 10000 pF 103
 470 pF 471 2200 pF 222

C* ** : 5) ELECTROLY CAP. (), 6) FILM CAP ()

5) EA x x x x x 10, Electrolytic capacitor
 One-way lead type Tolerance $\pm 20\%$
 ⑤ Capacity value
 ⑥ Working voltage

Examples

⑤ Capacity value

0.1 μ F 04 4.7 μ F 475 100 μ F 107
 0.33 μ F 334 10 μ F 106 330 μ F 337
 1 μ F 105 22 μ F 226 1100 μ F 118
 2200 μ F 228

⑥ Working voltage

6.3 V. . . 006 25 V. . . 025
 10 V. . . 010 35 V. . . 035
 16 V. . . 016 50 V. . . 050
 6) DF15 x x x 350 Plastic film capacitor
 DF15 x x x 310 One-way type, Mylar $\pm 5\%$ 50V
 DF16 x x x 310 Plastic film capacitor
 One-way type, Mylar $\pm 10\%$ 50V

⑦ Capacity value

Examples

⑦ Capacity value

0.001 μ F (1000pF) 102 0.1 μ F 104
 0.0018 μ F 182 0.56 μ F 564
 0.01 μ F 103 1 μ F 105
 0.015 μ F 151

NOTE : 1) The above CODES(R* **, R* **, C* **, C* **, C* **, and C* **) are omitted on the schematic diagram in some case.

2) On the occasion, be confirmed the common parts on the parts list.

3) Refer to "Common Parts List" for the other common parts(RI05, DD4, DK4).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows ;

1. KOA Corporation

Part No.(MJI)	Type No.(KOA)	Description
NH05 x x x 140	RF25S x x x x Ω J	($\pm 5\%$ 1/4W)
NH05 x x x 120	RF50S x x x x Ω J	($\pm 5\%$ 1/2W)
NH85 x x x 110	RF73B2A x x x x Ω J	($\pm 5\%$ 1/10W)
NH95 x x x 140	RF73B2E x x x x Ω J	($\pm 5\%$ 1/4W)

* Resistance value Resistance value(0.1 Ω - 10k Ω)

2. Matsushita Electronic Components Co., Ltd

Part No.(MJI)	Type No.(MEC)	Description
NF05 x x x 140	ERD-2FCJ x x x	($\pm 5\%$ 1/4W)
RF05 x x x 140		
NF02 x x x 140	ERD-2FCG x x x	($\pm 2\%$ 1/4W)
RF02 x x x 140		

* Resistance value

Examples :

* Resistance value

0.1 Ω 001 10 Ω 100 1k Ω 102 100k Ω 104
 0.5 Ω 005 18 Ω 180 2.7k Ω 272 680k Ω 684
 1 Ω 010 100 Ω 101 10k Ω 103 1M Ω 105
 6.8 Ω 068 390 Ω 391 22k Ω 23 4.7M Ω 475

ABBREVIATION AND MARKS

ANT. : ANTENNA	BATT. : BATTERY
CAP. : CAPACITOR	CER. : CERAMIC
CONN. : CONNECTING	DIG. : DIGITAL
HP : HEADPHONE	MIC. : MICROPHONE
μ -PRO : MICROPROCESSOR	REC. : RECORDING
RES. : RESISTOR	SPK : SPEAKER
SW : SWITCH	TRANSF. : TRANSFORMER
TRIM. : TRIMMING	TRS. : TRANSISTOR
VAR. : VARIABLE	X ' TAL : CRYSTAL

NOTE ON SAFETY:

Symbol  Fire or electrical shock hazard.
 Only original parts should be used to replaced any part marked with symbol  . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

 がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			FUNCTION CIRCUIT BOARD				SEMICONDUCTORS
2551		4822 126 12147	CER. 22NF 10% 25V	6605		4822 130 30621	DIODE 1N4148
2552		4822 126 12147	CER. 22NF 10% 25V	6608		4822 130 30621	DIODE 1N4148
2553	N	4822 122 33519	CER. 470pF 10% 50V	7555		4822 209 31153	IC NJM2114D
2554	N	4822 122 33519	CER. 470pF 10% 50V	7551			
2555	N	4822 126 14316	CER. 680pF 10% 50V	}		4822 130 42839	FET 2SK369BL
2555	U, F	4822 122 33849	CER. 150pF 10% 50V	7554			
2556	N	4822 126 14316	CER. 680pF 10% 50V	7601		4822 130 44568	TRS. BC557B
2556	U, F	4822 122 33849	CER. 150pF 10% 50V	7602		4822 130 40959	TRS. BC547B
2559		4822 124 12023	ELECT 47 μ F 20% 25V				MISCELLANEOUS
2560		4822 124 12023	ELECT 47 μ F 20% 25V	1551		4822 265 10311	CONNECTOR, 2P
2561		4822 121 70654	FILM 2N2 10% 50V	1601		4822 265 10311	CONNECTOR, 2P
2562		4822 121 70654	FILM 2N2 10% 50V	1602	PM7000	4822 267 20453	CONNECTOR, 6P
2563		4822 121 51399	FILM 47NF 10% 50V	1602	PM8000	4822 265 11061	CONNECTOR, 6P
2564		4822 121 51399	FILM 47NF 10% 50V	1603	PM7000	4822 267 31452	CONNECTOR, CABLE/WIRE
2565		4822 121 10685	FILM 1.8NF 10% 50V	1603	PM8000	4822 265 30996	CONNECTOR, CABLE/WIRE
2566		4822 121 10685	FILM 1.8NF 10% 50V	1604		4822 267 50915	CONNECTOR, 15P
2567		4822 121 41935	FILM 12NF 5% 250V	5551		4822 280 20501	RELAY MR62-24SR
2568		4822 121 41935	FILM 12NF 5% 250V	5601			
2569		4822 124 12024	ELECT 10 μ F 20% 16V	}		4822 280 20501	RELAY MR62-24SR
2570		4822 124 12024	ELECT 10 μ F 20% 16V	5612			
2571		4822 121 10696	FILM 4.7NF 2% 50V				TAPE IN/OUT CIRCUIT BOARD
2572		4822 121 10696	FILM 4.7NF 2% 50V				CAPACITORS
2573		4822 124 12022	ELECT 220 μ F 20% 25V	2631			
2574		4822 124 12022	ELECT 220 μ F 20% 25V	}		4822 126 12147	CER. 22NF 10% 25V
2575		4822 124 40248	ELECT 10 μ F 20% 63V	2638			
2601				2639			
}		4822 126 12147	CER. 22NF 10% 25V	}	N	4822 122 33849	CER. 150pF 10% 50V
2612				2646			
2613							RESISTORS
}	N	4822 122 33849	CER. 150pF 10% 50V				
2624				3621			
2647				}		4822 116 83866	1M 5% 1/6W
}		4822 124 40248	ELECT 10 μ F 20% 63V	3628			
2656				3629			
2659		4822 124 11566	ELECT 47 μ F 20% 50V	}		4822 116 83883	470R 5% 0.5W
			RESISTORS	3632			
3551		4822 116 83872	220R 5% 0.5W				MISCELLANEOUS
3552		4822 116 83872	220R 5% 0.5W	1611	PM7000	4822 267 31452	CONNECTOR, CABLE/WIRE
3553		4822 116 83884	47K 5% 0.5W	1611	PM8000	4822 265 30996	CONNECTOR, CABLE/WIRE
3554		4822 116 83884	47K 5% 0.5W	1612	PM7000	4822 267 31452	CONNECTOR, CABLE/WIRE
3555				1612	PM8000	4822 265 30996	CONNECTOR, CABLE/WIRE
}		4822 116 52283	4K7 5% 0.5W				VOLUME CIRCUIT BOARD
3560							CAPACITORS
3561		4822 116 52206	120E 5% 0.5W	2653		4822 122 33195	CER. 100pF 10% 50V
3562		4822 116 52206	120E 5% 0.5W	2654		4822 122 33195	CER. 100pF 10% 50V
3563		4822 116 52175	100E 5% 0.5W	2657		4822 122 33524	CER. 22pF 5% 50V
3564		4822 116 52175	100E 5% 0.5W	2658		4822 122 33524	CER. 22pF 5% 50V
3565		4822 116 52234	100K 5% 0.5W	2659		4822 126 12339	CER. 2.2NF 10%
3566		4822 116 52234	100K 5% 0.5W	2660		4822 126 12339	CER. 2.2NF 10%
3567		4822 116 52289	5K6 5% 0.5W	2661		4822 124 12026	ELECT 22 μ F 20% 25V
3568		4822 116 52289	5K6 5% 0.5W	2662		4822 124 12026	ELECT 22 μ F 20% 25V
3569		4822 116 52175	100E 5% 0.5W	2663		4822 121 10686	FILM 4.7NF 10% 50V
3570		4822 116 52175	100E 5% 0.5W	2664		4822 121 10686	FILM 4.7NF 10% 50V
3571		4822 116 52234	100K 5% 0.5W	2665		4822 124 12434	ELECT 220 μ F 20% 16V
3572		4822 116 52234	100K 5% 0.5W	2666		4822 124 12434	ELECT 220 μ F 20% 16V
3573		4822 116 83872	220R 5% 0.5W	2667		4822 124 40769	ELECT 4.7 μ F 20% 100V
3574		4822 116 83872	220R 5% 0.5W	2668		4822 124 40769	ELECT 4.7 μ F 20% 100V
3575		4822 052 10479	47R 5% 0.33W	2669		4822 124 12027	ELECT 2.2 μ F 20% 50V
3576		4822 052 10479	47R 5% 0.33W	2670		4822 124 12027	ELECT 2.2 μ F 20% 50V
3601				2671		4822 122 30043	CER. 10NF 80% 63V
}		4822 116 83866	1M 5% 0.5W				
3618							
3633		4822 050 21003	10K 1% 0.6W				
3634		4822 050 21003	10K 1% 0.6W				
3635		4822 050 21003	10K 1% 0.6W				
3637		4822 050 21003	10K 1% 0.6W				

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			RESISTORS				
3651	PM7000	4822 116 83874	220K 5% 0.5W	3416			
3651	PM8000	4822 116 52244	15K 5% 0.5W	3422		4822 116 83881	390R 5% 0.5W
3652	PM7000	4822 116 83874	220K 5% 0.5W	3423			
3652	PM8000	4822 116 52244	15K 5% 0.5W	3426		4822 116 52234	100K 5% 0.5W
3653		4822 050 11002	1K 1% 0.4W	3427			
3654		4822 050 11002	1K 1% 0.4W	3436		4822 050 21003	10K 1% 0.6W
3655	PM7000	4822 116 52206	120E 5% 0.5W	3437		4822 116 52234	100K 5% 0.5W
3655	PM8000	4822 116 83876	270R 5% 0.5W	3438		4822 116 52234	100K 5% 0.5W
3656	PM7000	4822 116 52206	120E 5% 0.5W	3439		4822 116 52234	100K 5% 0.5W
3656	PM8000	4822 116 83876	270R 5% 0.5W	3440		4822 116 83872	220R 5% 0.5W
3657				3441		4822 116 52234	100K 5% 0.5W
3662		4822 116 52283	4K7 5% 0.5W	3442		4822 050 23303	33K 1% 0.6W
3663		4822 116 83872	220R 5% 0.5W	3443		4822 116 52257	22K 5% 0.5W
3664		4822 116 83872	220R 5% 0.5W	3444		4822 116 52283	4K7 5% 0.5W
3665		4822 116 83866	1M 5% 0.5W	3445		4822 116 52256	2K2 5% 0.5W
3666		4822 116 83866	1M 5% 0.5W	3446		4822 116 52257	22K 5% 0.5W
3667	PM7000	4822 050 11002	1K 1% 0.4W	3447		4822 116 52175	100E 5% 0.5W
3667	PM8000	4822 116 52256	2K2 5% 0.5W	3448			
3668	PM7000	4822 050 11002	1K 1% 0.4W	3451		4822 050 21003	10K 1% 0.6W
3668	PM8000	4822 116 52256	2K2 5% 0.5W	3452		4822 052 10101	100R 5% 0.33W
3669		4822 116 52175	100E 5% 0.5W	3453			
3670		4822 116 52175	100E 5% 0.5W	3459		4822 050 21003	10K 1% 0.6W
3671		4822 116 52234	100K 5% 0.5W	3460		4822 116 52257	22K 5% 0.5W
3672		4822 116 52234	100K 5% 0.5W	3461		4822 050 21003	10K 1% 0.6W
3673		4822 116 83872	220R 5% 0.5W	3462		4822 116 83884	47K 5% 0.5W
3674		4822 116 83872	220R 5% 0.5W	3463		4822 050 21003	10K 1% 0.6W
▲ 3675		4822 052 10479	47R 5% 0.33W	3464		4822 050 21003	10K 1% 0.6W
▲ 3676		4822 052 10479	47R 5% 0.33W	3465		4822 116 52257	22K 5% 0.5W
3681	PM7000	4822 101 11789	VARIAB. 50K X2 20% 0.05W	3466		4822 116 52195	47E 5% 0.5W
3681	PM8000	4822 101 11803	VARIAB. RK16314MC(50KX2)	3467		4822 052 10101	100R 5% 0.33W
			SEMICONDUCTORS	3468			
7651				3488		4822 050 21003	10K 1% 0.6W
7654		4822 130 42839	FET 2SK369BL	3489		4822 116 83884	47K 5% 0.5W
7655		4822 209 31153	IC NJM2114D	3490		4822 050 21003	10K 1% 0.6W
			FRONT CIRCUIT BOARD	3491		4822 116 83884	47K 5% 0.5W
			CAPACITORS	3492		4822 050 21003	10K 1% 0.6W
2401		4822 121 51387	FILM 10NF 20% 16V	3493		4822 116 83884	47K 5% 0.5W
2403		4822 121 51387	FILM 10NF 20% 16V	3494		4822 050 21003	10K 1% 0.6W
2404		4822 124 81151	ELECT 22μF 50V	3495		4822 116 83872	220R 5% 0.5W
2405		4822 124 81151	ELECT 22μF 50V	3496		4822 116 52256	2K2 5% 0.5W
2406		4822 124 80818	ELECT 22M 5.5V	3541	PM8000	4822 053 10332	3K30 5% 1W
2407		4822 126 12882	CER. 100NF +80-20% 50V	3542		4822 050 21003	10K 1% 0.6W
2408		4822 124 81151	ELECT 22μF 50V	3543		4822 116 83881	390R 5% 0.5W
2409		4822 124 81151	ELECT 22μF 50V	3544		4822 050 21003	10K 1% 0.6W
2410		4822 121 51387	FILM 10NF 20% 16V	3545		4822 116 83881	390R 5% 0.5W
2411		4822 121 51387	FILM 10NF 20% 16V	3546		4822 050 21003	10K 1% 0.6W
2412		4822 124 81151	ELECT 22μF 50V	3547		4822 050 21003	10K 1% 0.6W
2413		4822 121 51387	FILM 10NF 20% 16V				SEMICONDUCTORS
2414		4822 126 12882	CER. 100NF +80-20% 50V	6401		4822 130 30621	DIODE 1N4148
2415		4822 124 81151	ELECT 22μF 50V	6404			
2416		4822 121 51387	FILM 10NF 20% 16V	6405		4822 130 34174	DIODE BZX79-B4V7
2417		4822 121 51387	FILM 10NF 20% 16V	6406			
2425				6413		4822 130 82978	LED LTL-16KPE-P
2428		4822 126 12882	CER. 100NF +80-20% 50V	6414	PM8000	4822 130 82978	LED LTL-16KPE-P
			RESISTORS	6415		4822 130 82978	LED LTL-16KPE-P
3401		4822 052 10101	100R 5% 0.33W	6416		4822 130 82978	LED LTL-16KPE-P
3402		4822 116 52234	100K 5% 0.5W	6417		4822 130 30621	DIODE 1N4148
3403				6418		4822 130 30621	DIODE 1N4148
3408		4822 050 21003	10K 1% 0.6W	7401		4822 209 15719	IC TMP47C200BN
				7402		4822 209 30193	IC LB1641

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
7404	N	4822 130 40959	TRS. BC547B	2509		4822 122 33293	CER. 100pF 5% 50V
7405		4822 130 40959	TRS. BC547B	2510		4822 122 33293	CER. 100pF 5% 50V
7406		4822 130 40959	TRS. BC547B	2511		4822 124 40769	ELECT 4.7 μ F 20% 100V
7407		4822 130 44568	TRS. BC557B	2512		4822 124 40769	ELECT 4.7 μ F 20% 100V
7408		4822 130 40959	TRS. BC547B	2513		4822 121 51399	FILM 47NF 10% 50V
7409		4822 130 44568	TRS. BC557B	2514		4822 121 51399	FILM 47NF 10% 50V
7412				2515		4822 124 12022	ELECT 220 μ F 20% 25V
7413		4822 130 40959	TRS. BC547B	2516		4822 124 12022	ELECT 220 μ F 20% 25V
7414		4822 130 40959	TRS. BC547B	2517		4822 124 40763	ELECT 2.2 μ F 100 V
7415		4822 130 44568	TRS. BC557B	2518		4822 124 40763	ELECT 2.2 μ F 100 V
7416		4822 130 40959	TRS. BC547B	2519		4822 121 10686	FILM 4.7NF 10% 50V
7417		4822 130 44568	TRS. BC557B	2520		4822 121 10686	FILM 4.7NF 10% 50V
7418		4822 130 40959	TRS. BC547B	2535		4822 122 33195	CER. 100pF 10% 50V
7419		4822 130 44568	TRS. BC557B	2536		4822 122 33195	CER. 100pF 10% 50V
7420		4822 130 40959	TRS. BC547B				RESISTORS
7421		4822 130 44568	TRS. BC557B	▲ 3203		4822 052 10479	47R 5% 0.33W
7422		4822 130 40959	TRS. BC547B	3501		4822 116 83866	1M 5% 0.5W
7423		4822 130 44568	TRS. BC557B	}			
7424		4822 130 40959	TRS. BC547B	3504			
7425		4822 130 44568	TRS. BC557B	3505		4822 116 83874	220K 5% 0.5W
7426		4822 130 40959	TRS. BC547B	3506		4822 116 83874	220K 5% 0.5W
7427		4822 130 44568	TRS. BC557B	3507		4822 116 83872	220R 5% 0.5W
7428		4822 130 40959	TRS. BC547B	3508		4822 116 83872	220R 5% 0.5W
}				3509		4822 116 52269	3K3 5% 0.5W
7431		4822 130 44568	TRS. BC557B	3510		4822 116 52269	3K3 5% 0.5W
7432				3511		4822 101 11788	VARIAB. 10K X2 20% 0.05W
7433		4822 130 44568	TRS. BC557B	3512		4822 101 11788	VARIAB. 10K X2 20% 0.05W
7434		4822 130 40959	TRS. BC547B	▲ 3513		4822 052 10479	47R 5% 0.33W
			MISCELLANEOUS	▲ 3514		4822 052 10479	47R 5% 0.33W
1401		4822 276 13114	SWITCH, PUSH BUTTON	3515		4822 116 52207	1K2 5% 0.5W
1402		4822 276 13114	SWITCH, PUSH BUTTON	3516		4822 116 52207	1K2 5% 0.5W
1403		4822 273 10336	SWITCH, ROTARY	3517		4822 116 52291	56K 5% 0.5W
			SRBV14-F1620-11	3518		4822 116 52291	56K 5% 0.5W
1407		4822 267 51322	CONNECTOR, 15P	3519		4822 116 52207	1K2 5% 0.5W
5400		4822 242 72527	FILTER, CERAMIC	3520		4822 116 52207	1K2 5% 0.5W
			CST4.00MGW-TF01	3521		4822 116 52291	56K 5% 0.5W
5401		4822 157 50963	COIL 2.2 μ H	3522		4822 116 52291	56K 5% 0.5W
7403		4822 130 10165	REMOTE RECEIVER GP1U28XP	3523		4822 052 10479	47R 5% 0.33W
			ENCODER CIRCUIT BOARD	▲ 3524		4822 052 10479	47R 5% 0.33W
			RES. 100E 5% 0.5W	3525		4822 116 83872	220R 5% 0.5W
3497		4822 116 52175	RES. 100E 5% 0.5W	3526		4822 116 83872	220R 5% 0.5W
3498		4822 116 52175	RES. 100E 5% 0.5W	3527		4822 116 83874	220K 5% 0.5W
				3528		4822 116 83874	220K 5% 0.5W
1404		4822 273 10237	SWITCH, ROTARY	3529		4822 101 30828	VARIAB. 100K
			SRRS1C(G79424930)	3537		4822 116 52269	3K3 5% 0.5W
			TONE CIRCUIT BOARD	3538		4822 116 52269	3K3 5% 0.5W
			CAPACITORS	3539		4822 116 52234	100K 5% 0.5W
2201		4822 122 30043	CER. 10NF 80% 63V	3540		4822 116 52234	100K 5% 0.5W
2202		4822 122 30043	CER. 10NF 80% 63V	▲ 6201		4822 130 31878	SEMICONDUCTORS
2203		4822 124 12025	ELECT 470 μ F 20% 35V	▲ 6202		4822 130 31878	DIODE 1N4003G
2204		4822 124 41329	ELECT 2200 μ F 20% 35V	▲ 6203		4822 130 31878	DIODE 1N4003G
2205		4822 124 12022	ELECT 220 μ F 20% 25V	▲ 6204		4822 130 31878	DIODE 1N4003G
2206		4822 124 12022	ELECT 220 μ F 20% 25V	7201		5322 209 86361	IC MC7915CT
2207		4822 124 12025	ELECT 470 μ F 20% 35V	7202		5322 209 71759	IC MCT7815CT
2208		4822 124 40257	ELECT 220 μ F 20% 63V	7203		5322 130 44349	TRS. BC635
2209		4822 124 12025	ELECT 470 μ F 20% 35V	7501		4822 209 73064	IC NJM2068DD
2210		4822 124 12025	ELECT 470 μ F 20% 35V	7502		4822 209 73064	IC NJM2068DD
2211		4822 122 30103	CER. 22NF 80% 63V	7503		4822 209 73064	IC NJM2068DD
2501		4822 124 81151	ELECT 22 μ F 50V				
2502		4822 124 81151	ELECT 22 μ F 50V	▲ 1201		4822 071 55001	MISCELLANEOUS
2503		4822 122 33849	CER. 150pF 10% 50V	▲ 1202		4822 071 55001	FUSE 19372(500MA)
2504		4822 122 33849	CER. 150pF 10% 50V	1500		2422 128 02902	FUSE 19372(500MA)
2505		4822 124 12022	ELECT 220 μ F 20% 25V				SWITCH, PUSH
2506		4822 124 12022	ELECT 220 μ F 20% 25V				
2507		4822 121 41857	FILM 10NF 5% 250V				
2508		4822 121 41857	FILM 10NF 5% 250V				

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			POWER CIRCUIT BOARD CAPACITORS				MAIN CIRCUIT BOARD CAPACITORS
▲ 2201		2020 558 90382	CER. CERSAF KC-F 250V S 10N PM20	2251		4822 124 12023	ELECT 47 μ F 20% 25V
▲ 2202		2020 558 90382	CER. CERSAF KC-F 250V S 10N PM20	2252		4822 124 12023	ELECT 47 μ F 20% 25V
2204	U, F	5322 121 42498	CER. 680NF 5% 63V	2253		4822 122 33197	CER. 1NF 10% 50V
2205		4822 124 12028	ELECT 12000 μ F 20% 63V	2254		4822 122 33197	CER. 1NF 10% 50V
2206		4822 124 12028	ELECT 12000 μ F 20% 63V	2255		4822 124 12022	ELECT 220 μ F 20% 25V
2207	PM8000	4822 124 42391	ELECT 470 μ F 20% 63V	2256		4822 124 12022	ELECT 220 μ F 20% 25V
2208	PM8000	4822 124 42391	ELECT 470 μ F 20% 63V	2257	PM7000	4822 122 33519	CER. 470pF 10% 50V
2209		4822 121 51319	FILM 1 μ F 1% 63V	2258	PM7000	4822 126 12339	CER. 2.2NF 10%
2210		4822 124 21913	ELECT 1 μ F 20% 63V	2258	PM8000	4822 122 33519	CER. 470pF 10% 50V
2211		4822 124 80141	CER. 10NF 10% 50V	2259	PM8000	4822 126 12339	CER. 2.2NF 10%
2212		4822 124 80141	CER. 10NF 10% 50V	2259	PM7000	4822 126 14164	CER. 10pF 5% 50V
2214	U, F	5322 121 42498	CER. 680NF 5% 63V	2259	PM8000	4822 122 31822	CER. 4.7pF 10% 100V
2217	N	4822 121 51387	FILM 10NF 20% 16V	2260	PM7000	4822 126 14164	CER. 10pF 5% 50V
2302		4822 124 12022	ELECT 220 μ F 20% 25V	2260	PM8000	4822 122 31822	CER. 4.7pF 10% 100V
2304		4822 124 12056	ELECT 1000 μ F 20% 35V	2261	PM7000	4822 122 33519	CER. 470pF 10% 50V
2305		4822 124 40433	ELECT 47 μ F 20% 25V	2261	PM8000	4822 122 33197	CER. 1NF 10% 50V
2401		4822 126 12333	CER. 100NF 10% 25V	2262	PM7000	4822 122 33519	CER. 470pF 10% 50V
			RESISTORS	2262	PM8000	4822 122 33197	CER. 1NF 10% 50V
3204	U, F	4822 050 26808	6R8 1% 0.6W	2263	PM7000	2020 012 93547	ELECT 100 μ F 20% 63V
▲ 3207		4822 052 10108	1R 5% 0.33W	2263	PM8000	4822 124 40257	ELECT 220 μ F 20% 63V
▲ 3208		4822 052 10479	47R 5% 0.33W	2264	PM7000	2020 012 93547	ELECT 100 μ F 20% 63V
▲ 3209		4822 052 10479	47R 5% 0.33W	2264	PM8000	4822 124 40257	ELECT 220 μ F 20% 63V
3210		4822 116 52234	100K 5% 0.5W	2265	PM7000	2020 012 93547	ELECT 100 μ F 20% 63V
3211		4822 116 52234	100K 5% 0.5W	2266	PM8000	4822 124 40257	ELECT 220 μ F 20% 63V
3217	PM8000	4822 053 10229	22R 5% 1W	2266		4822 124 12022	ELECT 220 μ F 20% 25V
3218	PM8000	4822 053 10229	22R 5% 1W	2267		4822 124 12022	ELECT 220 μ F 20% 25V
			SEMICONDUCTORS	2268			
6202		4822 130 30621	DIODE 1N4148	2269		5322 121 42386	FILM 100NF 0.05 63V
6204	PM8000	4822 130 30621	DIODE 1N4148	2272			
▲ 6205		4822 130 10944	DIODE BRIDGE GBU6D	2273		4822 124 80141	CER. 10NF 10% 50V
6206					N		
}	PM8000	4822 130 31878	DIODE 1N4003G	2276		4822 124 21913	ELECT 1 μ F 20% 63V
6209				2283			
▲ 6210		4822 130 31878	DIODE 1N4003G				RESISTORS
}				3251		4822 116 52176	10E 5% 0.5W
▲ 6216		4822 130 30621	DIODE 1N4148	3252		4822 116 52176	10E 5% 0.5W
6302		4822 209 80817	IC L7805CV	3253		4822 116 83874	220K 5% 0.5W
▲ 7302				3254		4822 116 83874	220K 5% 0.5W
			MISCELLANEOUS	3255		4822 050 11002	1K00 1% 0.4W
▲ 1201		2422 128 02898	SWITCH, PUSH	3256		4822 050 11002	1K00 1% 0.4W
▲ 1205	N	4822 070 32502	FUSE 21802.5(2.5A)	3257		4822 116 52264	27K 5% 0.5W
▲ 1206	N	4822 265 11009	MAINS OUTLET	3258		4822 116 52264	27K 5% 0.5W
▲ 1206	U, F	4822 265 11081	MAINS OUTLET	3259		4822 116 52213	180E 5% 0.5W
▲ 1209	N	4822 070 33152	FUSE 2183.15(3.15A)	3260		4822 116 52213	180E 5% 0.5W
▲ 1209	U, F	4822 070 36302	FUSE 21806.3(6.3A)	3261		4822 116 83872	220R 5% 0.5W
▲ 1213	PM8000	4822 071 54002	FUSE 19372(4A)	3262		4822 116 83872	220R 5% 0.5W
▲ 1214	PM8000	4822 071 54002	FUSE 19372(4A)	3263		4822 100 11213	VARIAB. 22K 30% LIN 0.1W
▲ 1215		4822 071 55001	FUSE 19372(500MA)	3264		4822 100 11213	VARIAB. 22K 30% LIN 0.1W
▲ 1216	PM8000	4822 071 55001	FUSE 19372(500MA)	3265		4822 116 83872	220R 5% 0.5W
1401		4822 267 41009	CONNECTOR, CABLE/WIRE	}			
▲ 5202		4822 280 10337	RELAY VS-12MB-NR (1P-12V)	3270			
▲ 5204	PM8000	4822 280 10344	RELAY LY2-0-DC24 B	3271		4822 116 52243	1K5 5% 0.5W
▲ 5205	N	4822 146 10828	TRANSFORMER	3272		4822 116 52243	1K5 5% 0.5W
▲ 5205	U, F	4822 146 10861	TRANSFORMER	3273		4822 050 11002	1K00 1% 0.4W
				3274		4822 050 11002	1K00 1% 0.4W
				3275		4822 116 83884	47K 5% 0.5W
				3276		4822 116 83884	47K 5% 0.5W
				3277	PM7000	4822 116 83872	220R 5% 0.5W
				3277	PM8000	4822 116 52228	680E 5% 0.5W
				3278	PM7000	4822 116 83872	220R 5% 0.5W
				3278	PM8000	4822 116 52228	680E 5% 0.5W
				3279			
				}		4822 050 11002	1K 1% 0.4W
				3284			

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
3285	PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000	4822 116 52264	27K 5% 0.5W	6251	PM8000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000 PM7000 PM8000	4822 130 30621	SEMICONDUCTORS DIODE 1N4148
3286		4822 116 52264	27K 5% 0.5W	}			
3287		4822 116 83868	150R 5% 0.5W	6266			
3288		4822 116 83868	150R 5% 0.5W	6267		5322 130 34834	DIODE BZX79-C3V6
3289		4822 116 83874	220K 5% 0.5W	}			
3289		4822 116 83884	47K 5% 0.5W	6270			
3290		4822 116 83874	220K 5% 0.5W	6271		4822 130 30621	DIODE 1N4148
3290		4822 116 83884	47K 5% 0.5W	6272		4822 130 30621	DIODE 1N4148
3291		4822 116 83874	220K 5% 0.5W	6273			
3291		4822 116 83884	47K 5% 0.5W	}		4822 130 30842	DIODE BAV21
3292		4822 116 83874	220K 5% 0.5W	6278			
3292		4822 116 83884	47K 5% 0.5W	6279		4822 130 30621	DIODE 1N4148
3293		4822 116 83868	150R 5% 0.5W	6280		4822 130 30621	DIODE 1N4148
3294		4822 116 83868	150R 5% 0.5W	6281		4822 130 30621	DIODE 1N4148
3295				7251			
}		4822 052 10109	10E 5% 0.33W	}		4822 130 43233	TRS. 2SC2240GR
3298				7256			
3299		4822 101 11787	VARIAB. 100R 30% 0.1W	7257			
3300		4822 101 11787	VARIAB. 100R 30% 0.1W	}		4822 130 42949	TRS. 2SA970GR
3301		4822 116 83876	270R 5% 0.5W	7260			
3302		4822 116 83876	270R 5% 0.5W	7261		4822 130 43233	TRS. 2SC2240GR
3303		4822 116 52207	1K2 5% 0.5W	7262		4822 130 43233	TRS. 2SC2240GR
3304		4822 116 52207	1K2 5% 0.5W	7263		4822 130 61009	TRS. 2SC3423(O)
3305		4822 116 80176	1E 5% 0.5W	7264		4822 130 61009	TRS. 2SC3423(O)
3306		4822 116 80176	1E 5% 0.5W	7265		5322 130 61728	TRS. 2SA1360-Y
3309		4822 100 20166	VARIAB. 10K 30% LIN 0.1W	7266		5322 130 61728	TRS. 2SA1360-Y
3310		4822 100 20166	VARIAB. 10K 30% LIN 0.1W	▲ 7267		4822 130 60117	TRS. 2SC3419
3311		4822 050 11002	1K 1% 0.4W	▲ 7268		4822 130 60117	TRS. 2SC3419
3312		4822 050 11002	1K 1% 0.4W	7269		4822 130 90347	COUPLER /PHOTO PC817
3313				7270		4822 130 90347	COUPLER /PHOTO PC817
}		4822 052 10101	100R 5% 0.33W	7271		4822 130 41646	TRS. BF423
3316				7272		4822 130 41646	TRS. BF423
3317				7273		4822 130 41782	TRS. BF422
}		4822 052 10681	680R 5% 0.33W	7274		4822 130 41782	TRS. BF422
3320				▲ 7275		4822 130 63634	TRS. 2SA1837Y
3321				▲ 7276		4822 130 63634	TRS. 2SA1837Y
}		4822 052 10479	47R 5% 0.33W	▲ 7277		4822 130 10941	TRS. 2SC4793
3324				▲ 7278		4822 130 10941	TRS. 2SC4793
▲ 3325		4822 052 10151	150R 5% 0.33W	▲ 7279		4822 130 10942	TRS. 2SA1941
▲ 3326		4822 052 10151	150R 5% 0.33W	▲ 7279		4822 130 37279	TRS. 2SA1962
▲ 3327				▲ 7280		4822 130 10942	TRS. 2SA1941
}		4822 052 10109	10R 5% 0.33W	▲ 7280		4822 130 10983	TRS. 2SA1962
▲ 3334				▲ 7281		4822 130 10943	TRS. 2SC5198
▲ 3335				▲ 7281		4822 130 10984	TRS. 2SC5242
}		4822 116 82049	2 X R18 3W	▲ 7282		4822 130 10943	TRS. 2SC5198
▲ 3338				▲ 7282		4822 130 10984	TRS. 2SC5242
3339				▲ 7283		4822 130 10942	TRS. 2SA1941
}		4822 050 21002	1K 1% 0.6W	▲ 7283		4822 130 10983	TRS. 2SA1962
3342				▲ 7284		4822 130 10942	TRS. 2SA1941
3343		4822 116 52257	22K 5% 0.5W	▲ 7284		4822 130 10983	TRS. 2SA1962
3344		4822 116 52257	22K 5% 0.5W	▲ 7285		4822 130 10943	TRS. 2SC5198
3345		4822 116 52289	5K6 5% 0.5W	▲ 7285		4822 130 10984	TRS. 2SC5242
3346		4822 116 52257	22K 5% 0.5W	▲ 7286		4822 130 10943	TRS. 2SC5198
3347		4822 116 52297	68K 5% 0.5W	▲ 7286		4822 130 10984	TRS. 2SC5198
3347		4822 116 83882	39K 5% 0.5W	7287		4822 130 10984	TRS. 2SC5242
3348		4822 116 52257	22K 5% 0.5W	7288		4822 130 43233	TRS. 2SC2240GR
3349		4822 116 52297	68K 5% 0.5W	7289		4822 130 43233	TRS. 2SC2240GR
3350		4822 116 52297	68K 5% 0.5W			4822 130 42949	TRS. 2SA970GR
3351		4822 052 10221	220R 5% 0.33W				
3352		4822 052 10221	220R 5% 0.33W	1255		4822 265 11068	MISCELLANEOUS CONNECTOR,LOUDSPEAKER SOCKET LEFT
3353		4822 053 12109	10R 5% 3W	1256		4822 265 11069	CONNECTOR,LOUDSPEAKER SOCKET RIGHT
3354		4822 053 12109	10R 5% 3W				
3355		4822 053 11331	330R 5% 2W	5268		4822 280 70354	RELAY VB-24MBU-510
3356		4822 053 11331	330R 5% 2W	5269		4822 280 70354	RELAY VB-24MBU-510
3369		4822 050 11002	1K 1% 0.4W	5270		4822 280 20501	RELAY MR62-24SR
3370		4822 050 11002	1K 1% 0.4W	5351		4822 157 70599	COIL
				5352		4822 157 70599	COIL

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			SPK PROTECT CIRCUIT BOARD CAPACITORS				
2277		4822 121 51387	FILM 10NF 20% 16V				
2278		4822 124 40433	ELECT 47 μ F 20% 25V				
2279		4822 124 40433	ELECT 47 μ F 20% 25V				
2281		4822 124 21913	ELECT 1 μ F 20% 63V				
2282		4822 124 40433	ELECT 47 μ F 20% 25V				
			RESISTORS				
3357		4822 116 83884	47K 5% 0.5W				
3358		4822 053 10103	10K 5% 1W				
3360		4822 116 83874	220K 5% 0.5W				
3361		4822 050 23303	33K 1% 0.6W				
3362		4822 116 52291	56K 5% 0.5W				
3364		4822 053 10223	22K 5% 1W				
3365		4822 116 52234	100K 5% 0.5W				
			SEMICONDUCTOR				
7290		4822 209 83312	IC TA7317P				
			SPK SW CIRCUIT BOARD CAPACITORS				
2533		4822 122 30043	CER. 10NF 80% 63V				
2534		4822 122 30043	CER. 10NF 80% 63V				
			RESISTORS				
3530		4822 116 52256	2K2 5% 0.5W				
3531		4822 116 52256	2K2 5% 0.5W				
3532		4822 116 52257	22K 5% 0.5W				
3533		4822 116 52176	10E 5% 0.5W				
3534		4822 116 52176	10E 5% 0.5W				
3535		4822 116 52234	100K 5% 0.5W				
			SEMICONDUCTORS				
6529		4822 130 30621	DIODE 1N4148				
7529		4822 130 44283	TRS. BC636				
7530		4822 130 44568	TRS. BC557B				
			MISCELLANEOUS				
1507		2422 128 02897	SWITCH UNIT				
1510		4822 267 31453	CONNECTOR, HLJ1540				