

# TEAC



## SERVICE MANUAL

# PLS-85D

### AV Surround Amplifier

 **DOLBY**  
DIGITAL

**For ITALY**

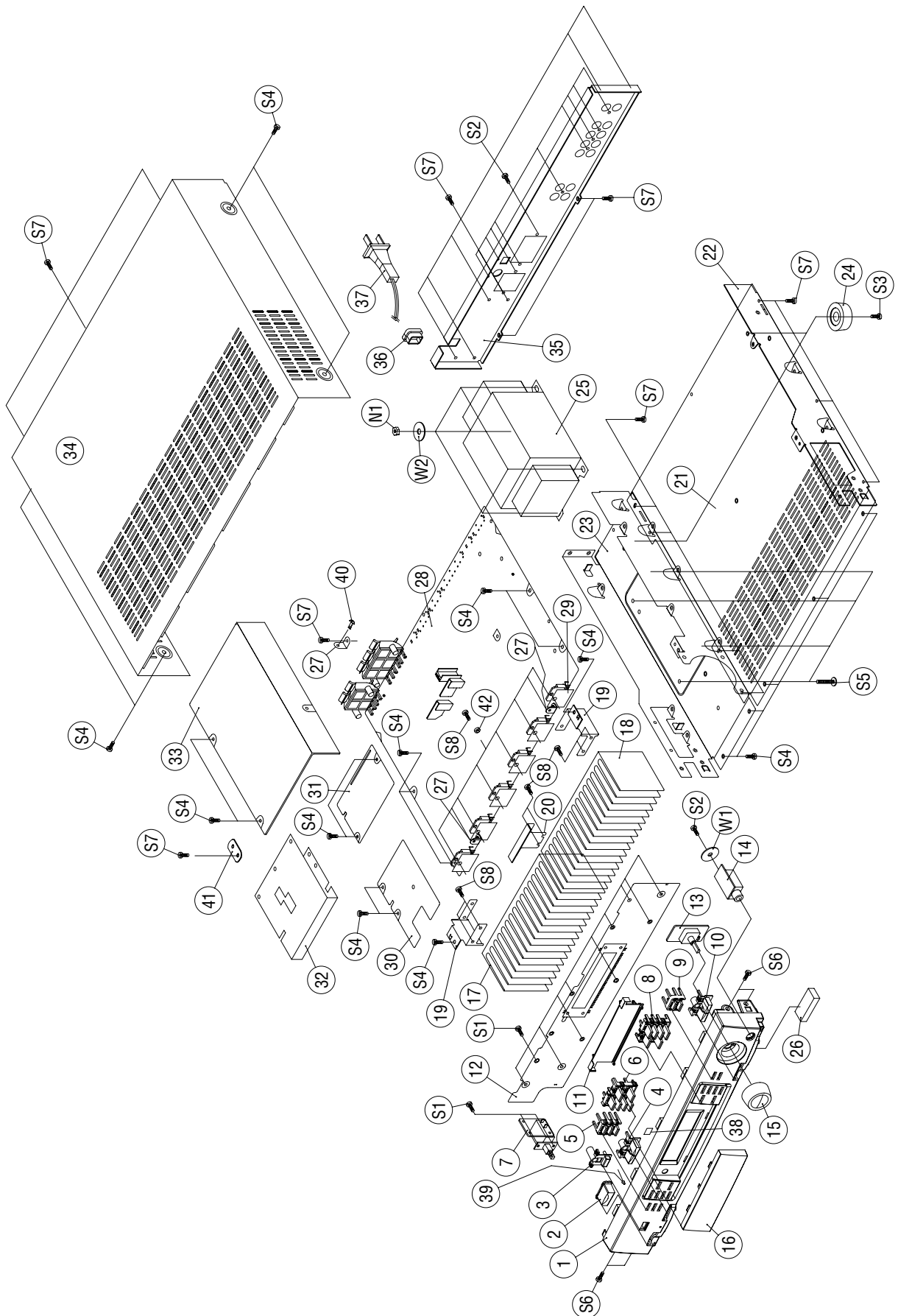
### SPECIFICA

Diffusori anteriori .....	2 x 30 watt
Diffusori posteriori (surround) .....	2 x 30 watt
Diffusore centrale .....	1 x 30 watt
Subwoofer .....	1 x 50 watt
Distorsione armonica totale .....	< +10 %
Risposta in frequenza .....	20 Hz - 20 kHz, $\pm 3$ dB
Livello canale Surround .....	da -15 dB a +10 dB rispetto all'uscita principale
Livello canale centrale .....	da -15 dB a +10 dB rispetto all'uscita principale
Livello Subwoofer .....	da -15 dB a +10 dB rispetto all'uscita principale
Alimentazione .....	220 V/50 Hz

### NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- $\triangle$  Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

# 1 EXPLODED VIEWS AND PARTS LIST



## PARTS LIST

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1	9A09025900	FRONT CAB	BPF5046-BU2
2	9A08289000	POWER KNOB	BPK6032-BU0
3	9A08289300	SOURCE KNOB	BPK8034-BU0
4	9A08289200	ADJ KNOB	BPK7018-BU0
5	9A08288800	SLEEP KNOB	BPK3010-BU0
6	9A08288700	EQ KNOB	BPK2045-BU0
7	9A09048800	PUSH SW PCB ASSY	APE0287-031
8	9A08289400	PROLOGIC KNOB	BPK8035-BU0
9	9A08289500	PRESET KNOB	BPK9013-BU0
10	9A08289100	BAL & TNR KNOB	BPK7010-BU0
11	9A08296200	VFD HOLDER	BPH0040-000
12	9A09048600	LCD PCB ASSY	APE0287-013
13	9A09048700	VR PCB ASSY	APE0287-021
14	9A09048900	PHONE JACK PCB ASSY	APE0287-041
15	9A08288900	VOL KNOB	BPK5045-BU0
16	9A09026000	DISPLAY WINDOW	BPN0074-010
17	9A08319400	HEAT SINK	GAL0119-001
18	9A08319300	HEAT SINK	GAL0118-001
19	9A08291300	HEAT SINK BRACKET	GSE0199-001
20	9A08319700	HEAT SINK BRACKET	GSE0242-001
21	9A08291000	BOTTOM CAB	GSE0196-001
22	9A08817200	BOTTOM, RIGHT	GSE0197-002
23	9A08817300	BOTTOM, LEFT	GSE0198-002
24	9A08290100	FOOT	DUF0014-002
25	△ 9A09026500	POWER TRANSFORMER, 230V	TTI2307-004
26	9A08293000	RUBBER, 34. 5X8. 5X10. 0MM	ICU0011-002
27	9A07441200	HEAT SINK BRACKET	GSE0093-001
28	9A09025500	MAIN PCB ASSY	APE0212A006
29	9A08290700	MICA, 26. 0X22. 0MM	GM10005-001
30	9A09049700	POWER PCB ASSY	APE0301-013
31	9A09049800	AC POWER PCB ASSY	APE0301-029
32	9A08288500	PVC PLATE	BNP0060-001
33	9A09025600	DECODER PCB ASSY	APE0214-005
34	9A09026100	COVER CAB	GSE0194-005
35	9A09026200	BACK CAB	GSE0195-041
36	△ 9A08289700	AC LINE BUSHING	DBU0002-002
37	△ 9A08294200	LINE CORD	2559-042122
38	9A08288400	DP SENSOR LIGHT (RED)	BFT0010-001
39	9A08294000	LED	KER0205-001
40	9A08289800	SNAP RIVET	DSL0004-001
41	9A09028900	BRACKET	GSE0093-002
42	9A08289900	WASHER	DSS0007-004
F901	△ 9A09026400	FUSE, 3. 15A 250V SLOW	KSA2315-104
F903, F904	△ 9A08774500	FUSE, 2A 250V SLOW	KSA2200-104
	9A08818100	BEAD FERRITE, 0D19X1D10XH10MM	SLF0201-025

**PARTS LIST**

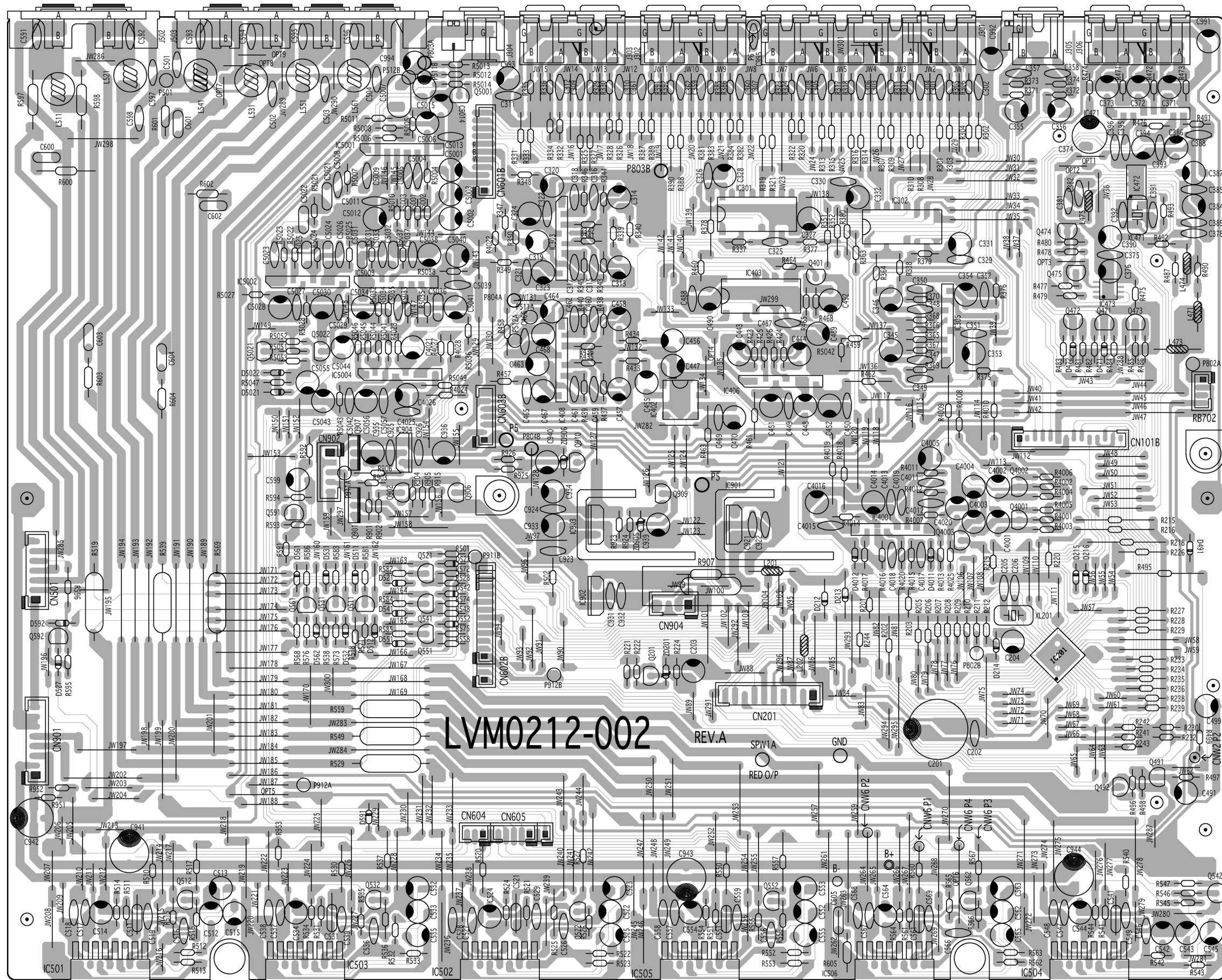
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
N1	9A07446100	NUT, @14X3.5MM	HN11482
S1	9A08291700	SCREW, T3.0XL1.27P-2RHXL10M	H101001-110
S2	9A07445100	SCREW, T3.0XL10.0MM (BLK)	H101001-310
S3	9A08292000	SCREW, M3.0XL10.0MM (BLK)	H120302-310
S4	9A08291900	SCREW, M3.0XL6.0MM (BLK)	H120302-306
S5	9A08291500	SCREW, M3.5X0.6PXL10.0MM	H060404-110
S6	9A08292100	SCREW, M3.0XL6.0MM	H120308-106
S7	9A07445500	SCREW, M3X0.5PX6MM	H120301-306
S8	9A07453100	SCREW, T3.0XL8.0	H101002-308
W1	9A08292400	WASHER	HWS1335-310
W2	9A08292300	WASHER, FIBER	HWG1025-609

**INCLUDED ACCESSORIES**

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	9A09026700	OWNER'S MNL., EUR	YOM0026M002
	9A09026600	REMOTE ASSY	W1R0026-332
	9A08290400	BATTERY, TW-UM3E 1.5V	FBM3015-001
	9A08754600	SPK BOX, SP101 50W	ESW5048-419
	9A08290300	SPK ASSY, FRONT+CENTER+SURROUND	EBT3001-302

# 2 PC BOARDS AND PARTS LIST

## MAIN PCB

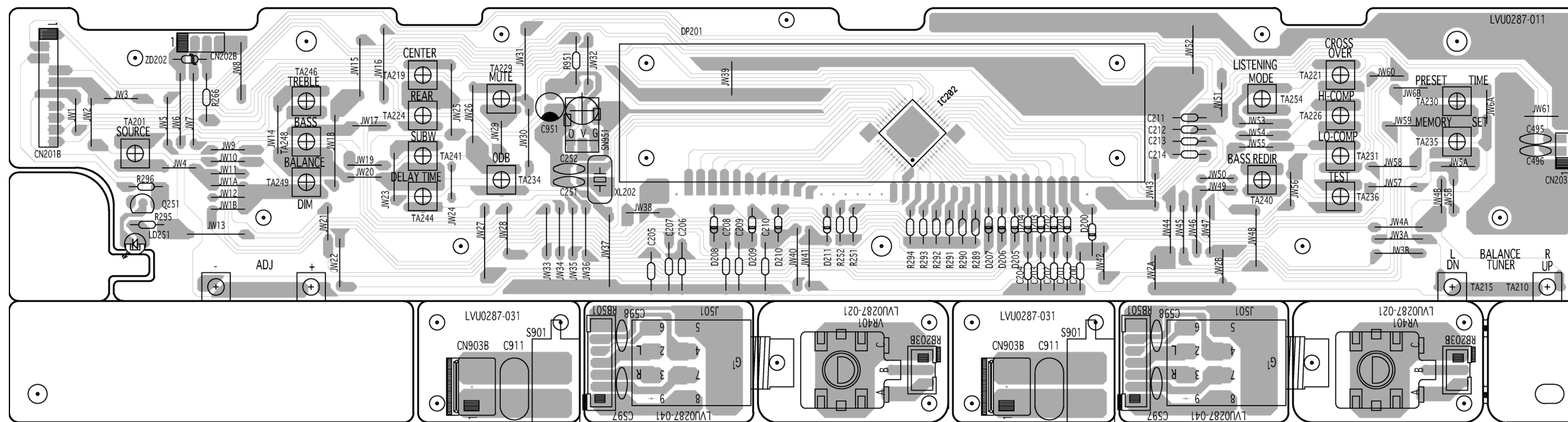


LVM0212-002

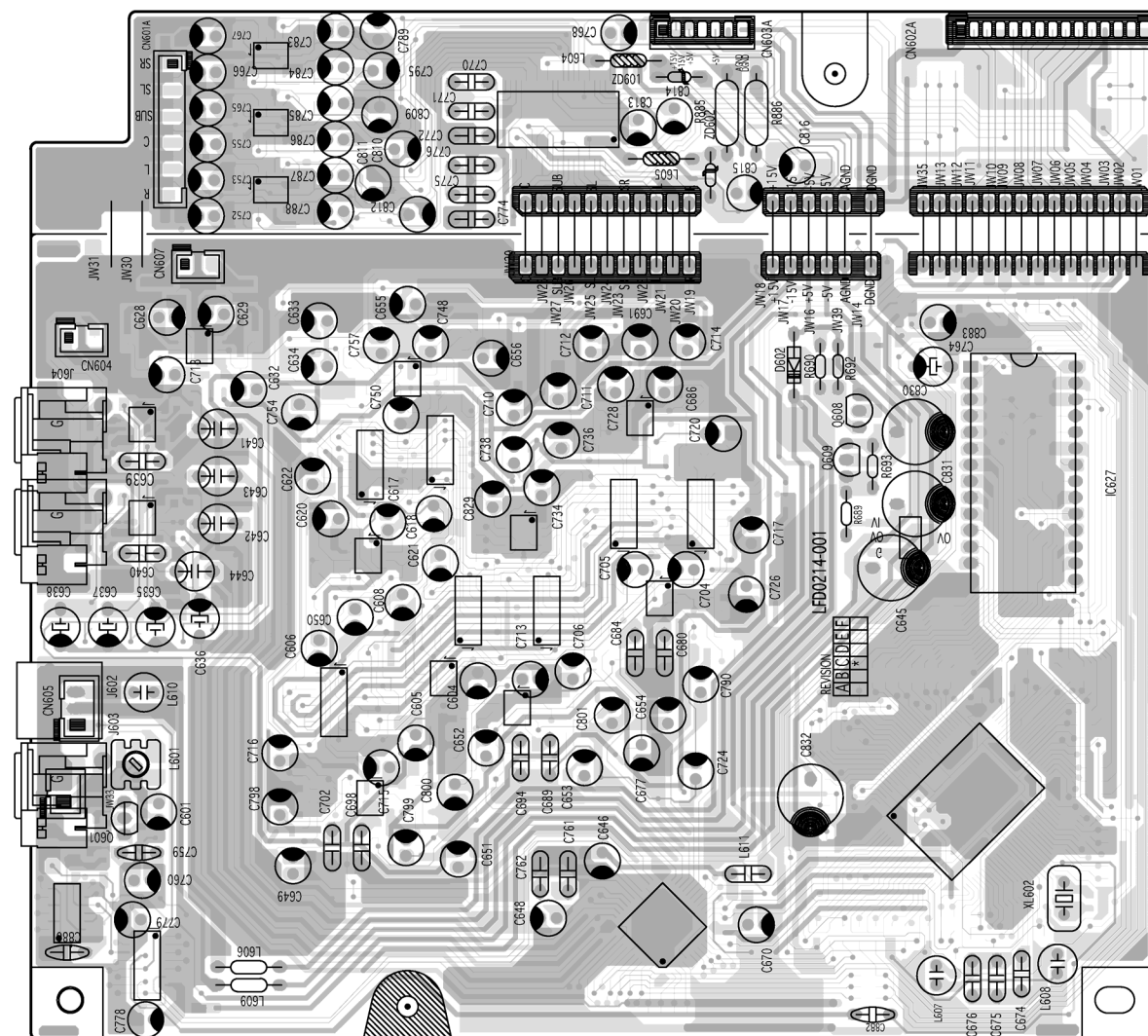
REV.A



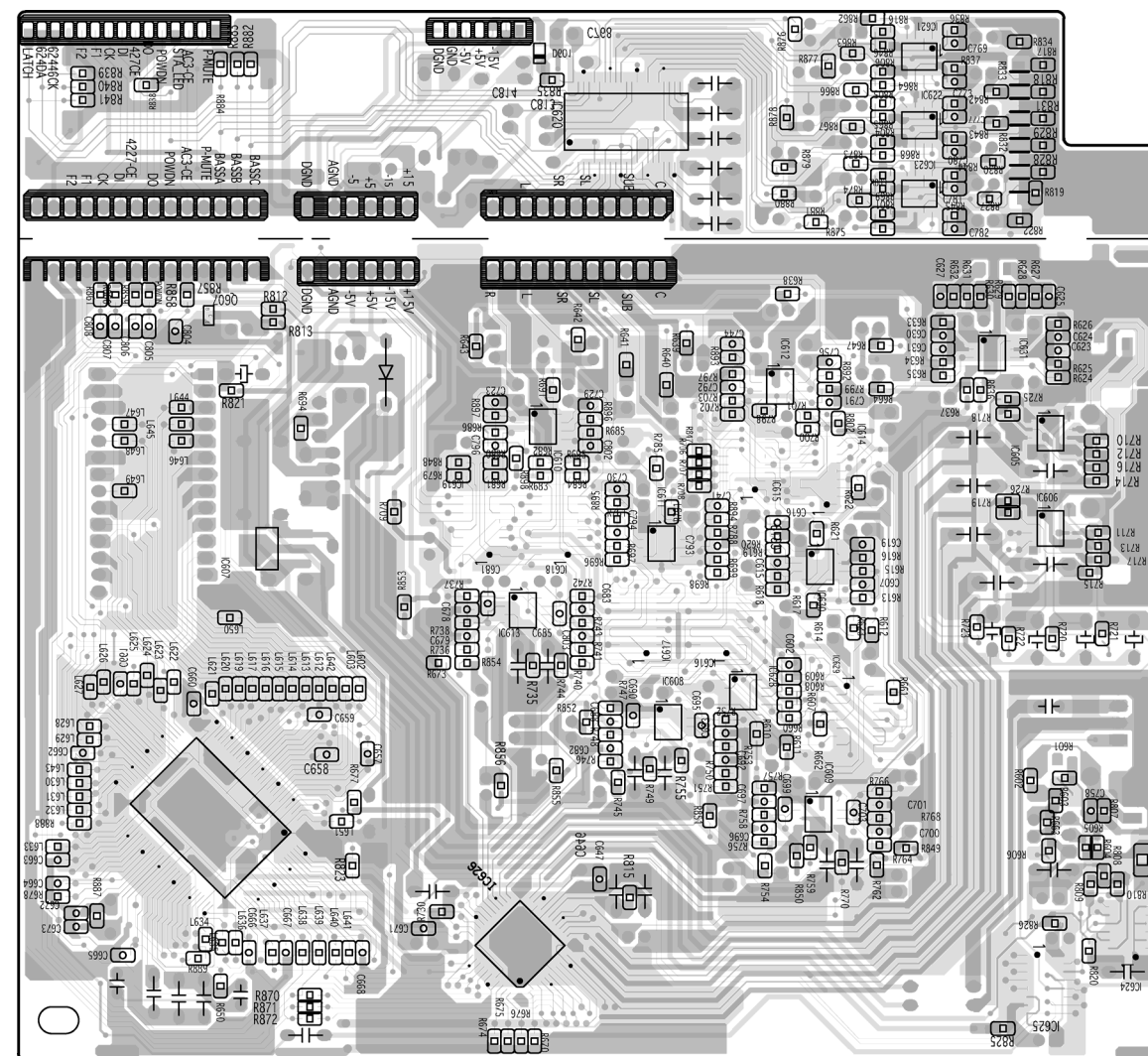
**LCD PCB**



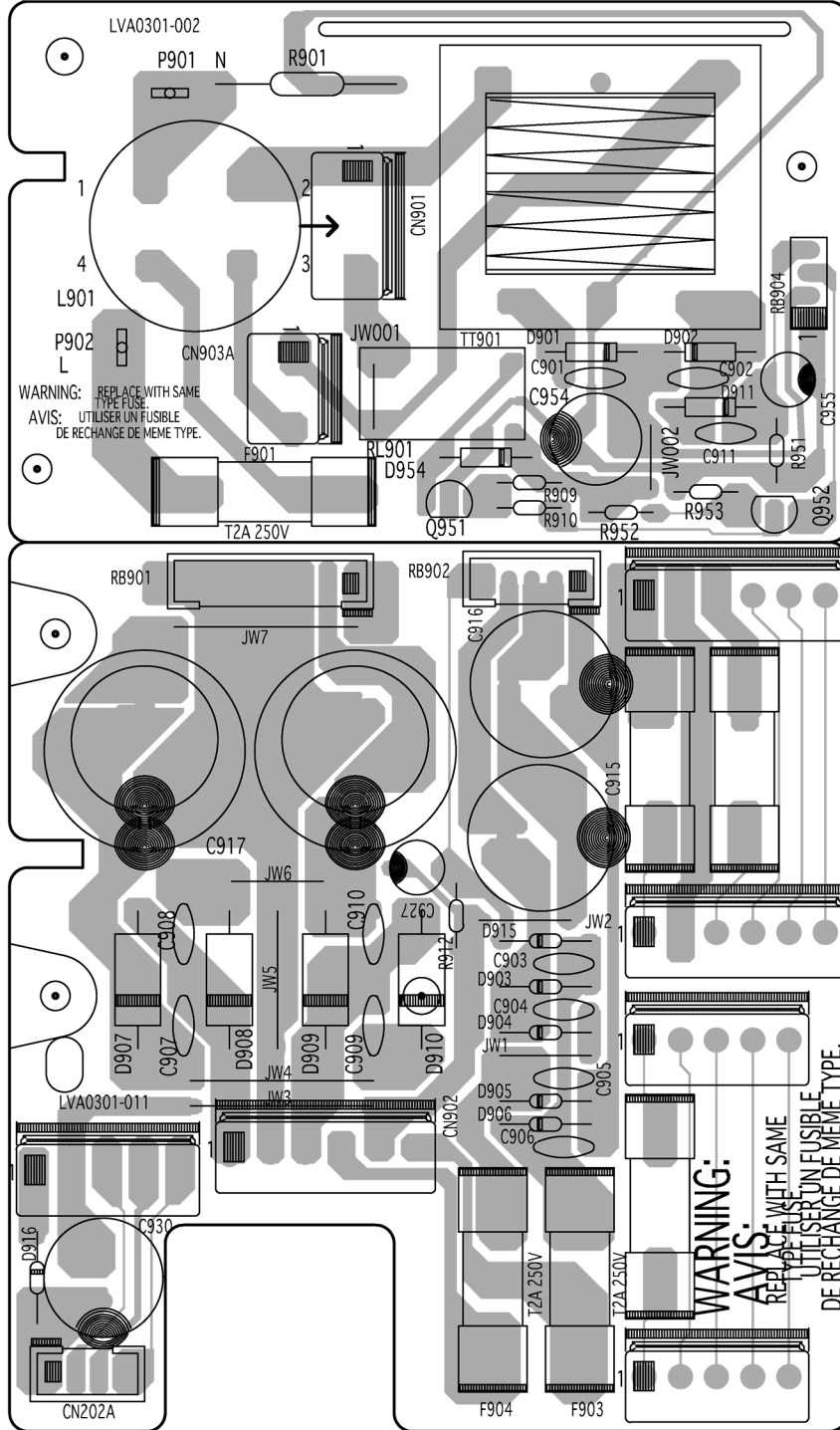
**DECODER PCB (SIDE A)**



**DECODER PCB (SIDE B)**



# POWER PCB



## MAIN PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	9A09025500	MAIN PCB ASSY
	9A08303000	MAIN PCB
	9A07441200	HEAT SINK BRACKET
	9A08299400	PVC PLATE, L5. 0XW5. 0XT0. 4M
CN201	9A08299500	CONNECTOR, B10B-XH-A 10PIN
CN501	9A07451400	CONNECTOR, B7B-XH-A 7PIN
CN602B	9A09027100	CONNECTOR, TUC-P15P-B1
CN603B	9A08299700	CONNECTOR, TUC-P7P-B1
CN901	9A08299600	CONNECTOR, B8B-XH-A 8PIN
CN902	9A07451500	CONNECTOR, B5B-XH-A 5PIN
D212-D216	9A07449400	DIODE, 1N4148
D4011	9A07449400	DIODE, 1N4148
D4012	9A07449400	DIODE, 1N4148
D5021	9A07449400	DIODE, 1N4148
D5022	9A07449400	DIODE, 1N4148
D511, D512	9A07449400	DIODE, 1N4148
D521, D522	9A07449400	DIODE, 1N4148
D527	9A07449400	DIODE, 1N4148
D531, D532	9A07449400	DIODE, 1N4148
D541, D542	9A07449400	DIODE, 1N4148
D551, D552	9A07449400	DIODE, 1N4148
D561, D562	9A07449400	DIODE, 1N4148
D591, D592	9A07449400	DIODE, 1N4148
IC201	9A09027300	IC, TC9721
IC301, 302	9A05632100	IC, TC4051BP
IC303, 305	9A07462800	IC, M5218AL
IC4001	9A07462800	IC, M5218AL
IC5002	9A07462800	IC, M5218AL
IC5003	9A07462800	IC, M5218AL
IC5004	9A07462800	IC, M5218AL
IC501-506	9A07468300	IC, TDA7295
IC901	△ 9A07463000	IC, MC7806ACT
IC901	9A09027400	HEAT SINK (BLK)
IC901, 902	9A07445500	SCREW, M3X0. 5PX6MM
IC902	9A09028000	HEAT SINK, H=50MM (BLK)
IC902	△ 9A09027500	IC, KA7818
IC903	9A07452600	HEAT SINK
IC903	△ 9A07463100	IC, REGULATOR 15V 1A
IC904	9A09028100	HEAT SINK
IC904	△ 9A07463200	IC, 7915

## MAIN PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
J301	9A07452300	RCA JACK, RJ-1075-09-0300A
J303	9A08824700	RCA JACK, 4P (WHT/RED)
J305	9A07452200	RCA JACK, RJ-1060-09-0300A
J502	9A09027600	SPK JACK, 4P HSP-134V-10
J503	9A09027700	SPK JACK, 8P HSP-118V-13
JW117	9A07449400	DIODE, 1N4148
L201, L202	9A08305300	CHOKE, 10UH
L511, L521	9A07464000	RF COIL, 1UH
L531, L541	9A07464000	RF COIL, 1UH
L551, L561	9A07464000	RF COIL, 1UH
P501	9A07451900	SOLDER LUG
Q201	9A07449600	TR, 2SA733Q/P
Q4001	9A07449500	TR, 2SC945P
Q4002	9A07449500	TR, 2SC945P
Q4003	9A07449500	TR, 2SC945P
Q491, Q492	9A07449500	TR, 2SC945P
Q5021	9A07449500	TR, 2SC945P
Q5022	9A07449500	TR, 2SC945P
Q511, Q512	9A07449500	TR, 2SC945P
Q521, Q522	9A07449500	TR, 2SC945P
Q531, Q532	9A07449500	TR, 2SC945P
Q541, Q542	9A07449500	TR, 2SC945P
Q551, Q552	9A07449500	TR, 2SC945P
Q561, Q562	9A07449500	TR, 2SC945P
Q591, Q592	9A07449600	TR, 2SA733Q/P
Q901	△ 9A07463800	TR, 2SB772P/Q
Q902, Q909	9A07449500	TR, 2SC945P
Q906, Q910	9A07449600	TR, 2SA733Q/P
Q907	△ 9A07463500	TR, 2SD882P
R519, R529	△ 9A08301200	R, 0. 22 OHM 2W
R539, R549	△ 9A08301200	R, 0. 22 OHM 2W
R559, R569	△ 9A08301200	R, 0. 22 OHM 2W
R597, R598	△ 9A08827000	R, 1. 2K OHM 1/2W 5% CF
R907	△ 9A09027900	R, 18 OHM 7W 5%
XL201	9A08300500	CRYSTAL, 4. 194304MHZ
ZD201	9A08305200	DIODE, ZENER 4. 4-4. 6V 0. 5W
ZD905, 906	9A07461800	DIODE, ZENER 6. 0-6. 3V 0. 5W



**LCD PCB ASSY (GATHER)**

REF. NO.	PARTS NO.	DESCRIPTION
	9A09025700	LCD PCB ASSY (GATHER)
	9A09049400	LCD PCB

**LCD PCB ASSY**

REF. NO.	PARTS NO.	DESCRIPTION
	9A09048600	LCD PCB ASSY
	9A07451900	SOLDER LUG
	9A08296200	VFD HOLDER
D200-D211	9A07449400	DIODE, 1N4148
DP201	9A08296500	VACUUM FLUORESCENT DISPLAY
IC202	9A08296700	IC, MN12510F
Q251	9A07449500	TR, 2SC945P
SN951	9A08296800	IRT SENSOR
TA201, 209	9A06200100	SW, TACT
TA210, 214	9A06200100	SW, TACT
TA215, 219	9A06200100	SW, TACT
TA221, 224	9A06200100	SW, TACT
TA226	9A06200100	SW, TACT
TA229-231	9A06200100	SW, TACT
TA234-236	9A06200100	SW, TACT
TA240, 241	9A06200100	SW, TACT
TA244, 246	9A06200100	SW, TACT
TA248, 249	9A06200100	SW, TACT
TA254	9A06200100	SW, TACT
XL202	9A08296400	CRYSTAL
ZD202	9A08299000	DIODE, ZENER 7.3-7.7V 0.5W

**VR PCB ASSY**

REF. NO.	PARTS NO.	DESCRIPTION
	9A09048700	VR PCB ASSY
VR401	9A08320700	R-ENCODER, EC16B24204

**PUSH SW PCB ASSY**

REF. NO.	PARTS NO.	DESCRIPTION
	9A09048800	PUSH SW PCB ASSY
	9A08828200	PVC PLATE, L192XW59XT0.3MM
C911	△ 9A07464900	C, SAFE 0.01UF 20%
CN903B	9A08297700	CONNECTOR, 3PIN
S901	△ 9A08297900	PUSH SW

**PHONE JACK PCB ASSY**

REF. NO.	PARTS NO.	DESCRIPTION
	9A09048900	PHONE JACK PCB ASSY
J501	9A08298200	JACK, PHONE

**DECODER PCB ASSY**

REF. NO.	PARTS NO.	DESCRIPTION
	9A09025600	DECODER PCB ASSY
	9A09045100	DECODER PCB
	9A08291900	SCREW, M3.0XL6.0MM (BLK)
	9A08292300	WASHER, FIBER
	9A09028900	BRACKET
C884	9A09046000	FERRITE, 600 OHM 0805
CN601A	9A08824600	CONNECTOR, 11P
CN602A	9A09042600	CONNECTOR, TUC-P15X-B1
CN603A	9A08305500	CONNECTOR, TUC-P7X-B1
CN604	9A08300000	CONNECTOR, B3B-PH-K
D601	9A09046200	DIODE, LL4148
D602	9A07461600	RECTIFIER, 1N4001
IC601	9A09042700	IC, ZR38601
IC605, 606	9A08824100	IC, TL072CD
IC607	9A08837000	IC, REG1117
IC608-613	9A08824100	IC, TL072CD
IC614-619	9A08837200	IC, TC4051BFN
IC620	9A09046300	IC, M62446FP
IC621-623	9A08824100	IC, TL072CD
IC624	9A09046400	IC, TC74HC04AFN
IC625	9A09046500	IC, TC4052BFN
IC626	9A09042800	IC, CS4227
IC627	9A09042900	IC, EPROM
IC628, 630	9A08824100	IC, TL072CD
IC629	9A08824200	IC, TC4053BFN
J602	9A09043100	TOSLINK JACK (BLK)
J603	9A09043200	RCA JACK, 1P (GRN)
L602, L603	9A09046000	FERRITE, 600 OHM 0805
L604, L605	9A08305300	CHOKE, 10UH
L606, L609	9A09043300	BEAD, 3.5X8.3X0.76MM
L607, L610	9A09043400	CHOKE, 100UH
L611	9A09043500	CHOKE, SBT-0210
L612-L617	9A09046000	FERRITE, 600 OHM 0805
L619-L633	9A09046000	FERRITE, 600 OHM 0805
L634-L649	9A09046000	FERRITE, 600 OHM 0805
O607	9A08837600	TR, 2SC945
O608	9A07449600	TR, 2SA7330/P
O609	9A07450400	TR, 2SC2001L
R885, R886	△ 9A09043600	R, 150 OHM 1W 5% MF
XL602	9A09043700	CRYSTAL, 32.00000MHZ
ZD601, 602	9A09045000	DIODE, ZENER 6.9-7.2V 0.5W

## POWER PCB ASSY (GATHER)

REF. NO.	PARTS NO.	DESCRIPTION
	9A09025800	POWER PCB ASSY (GATHER)
	9A08309800	POWER PCB

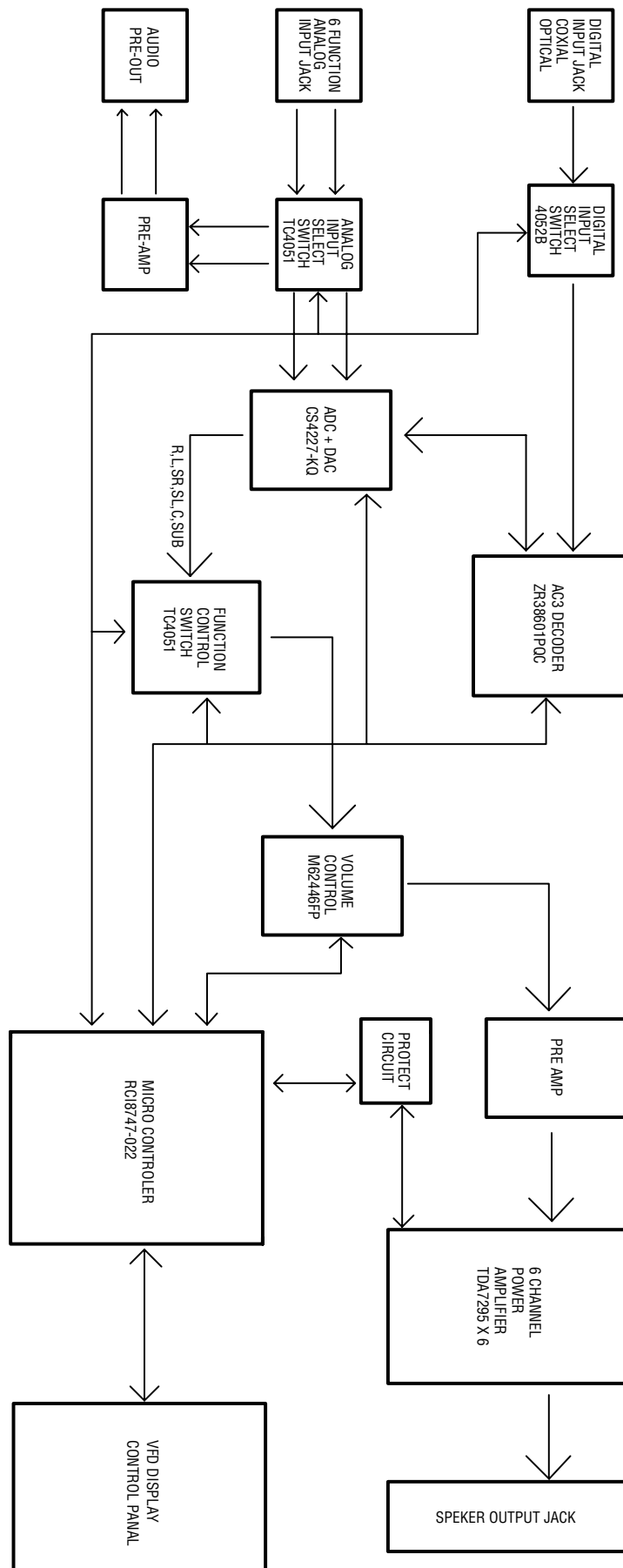
## POWER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	9A09049700	POWER PCB ASSY
C915, C916	△ 9A07457400	C, ELECT 2200UF/35V
C917, C918	△ 9A08308300	C, ELECT 3300UF/50V
C927	△ 9A09050300	C, ELECT 22UF/35V
C930	△ 9A08308400	C, ELECT 470UF/50V
CN202A	9A07466000	CONNECTOR, B4B-XH-A 4PIN
CN902	9A07451700	CONNECTOR, 6PIN CL3962WVO
CN904	9A08308200	CONNECTOR, 5PIN CL3962WVO
D903-D906	△ 9A07461600	RECTIFIER, 1N4001
D907-D910	△ 9A09050000	RECTIFIER, P600G
D915	△ 9A07461600	RECTIFIER, 1N4001
D916	△ 9A07461600	RECTIFIER, 1N4001
F903, F904	9A07451800	FUSE CLIP

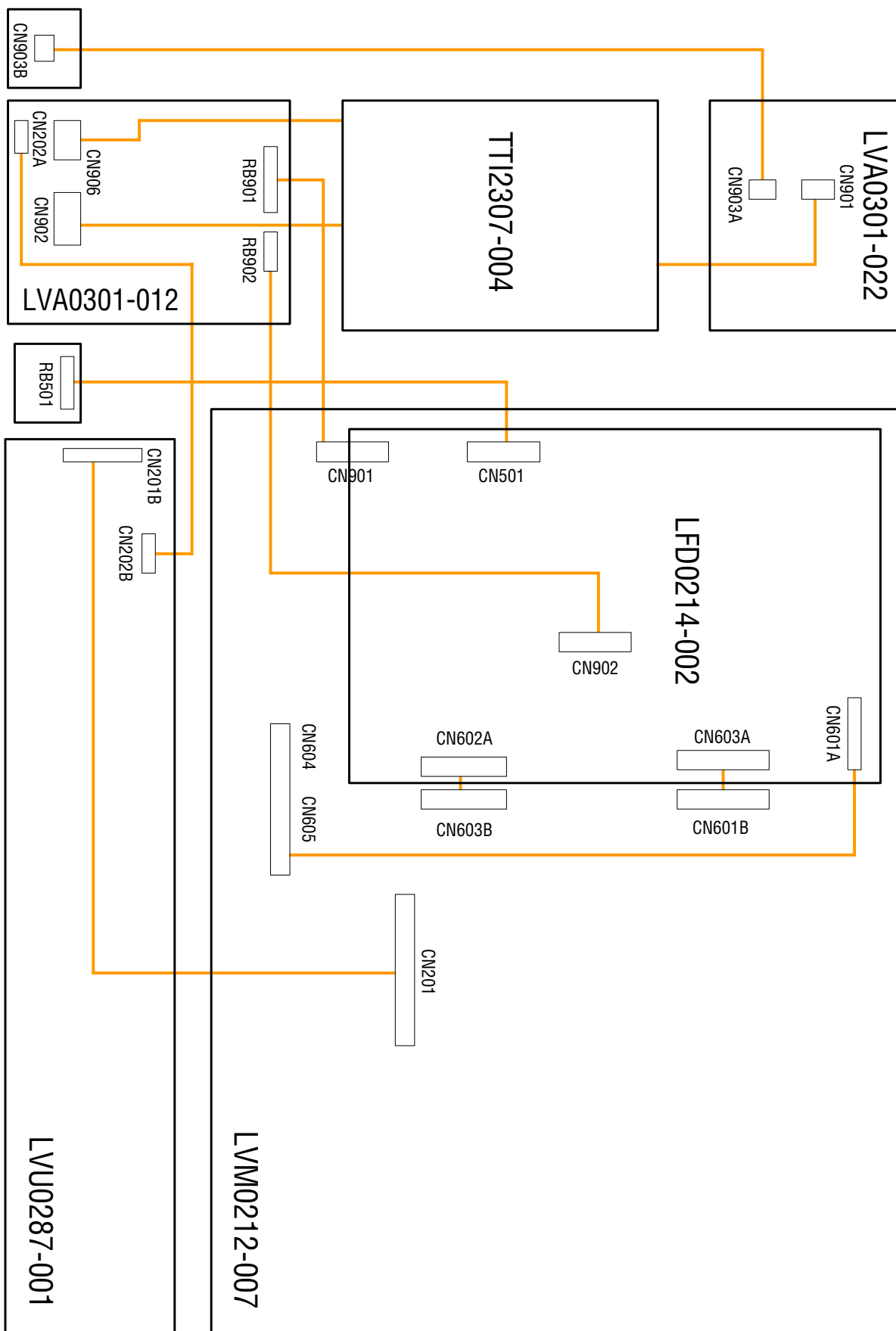
## AC POWER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	9A09049800	AC POWER PCB ASSY
CN901	9A08308800	CONNECTOR, 4PIN CL3962WVO
CN903A	9A08308900	CONNECTOR, 3PIN CL3962WVO
F901	9A07451800	FUSE CLIP
L901	△ 9A09050200	AC FILTER
LP901, 902	9A07465000	L PIN

### 3 BLOCK DIAGRAM

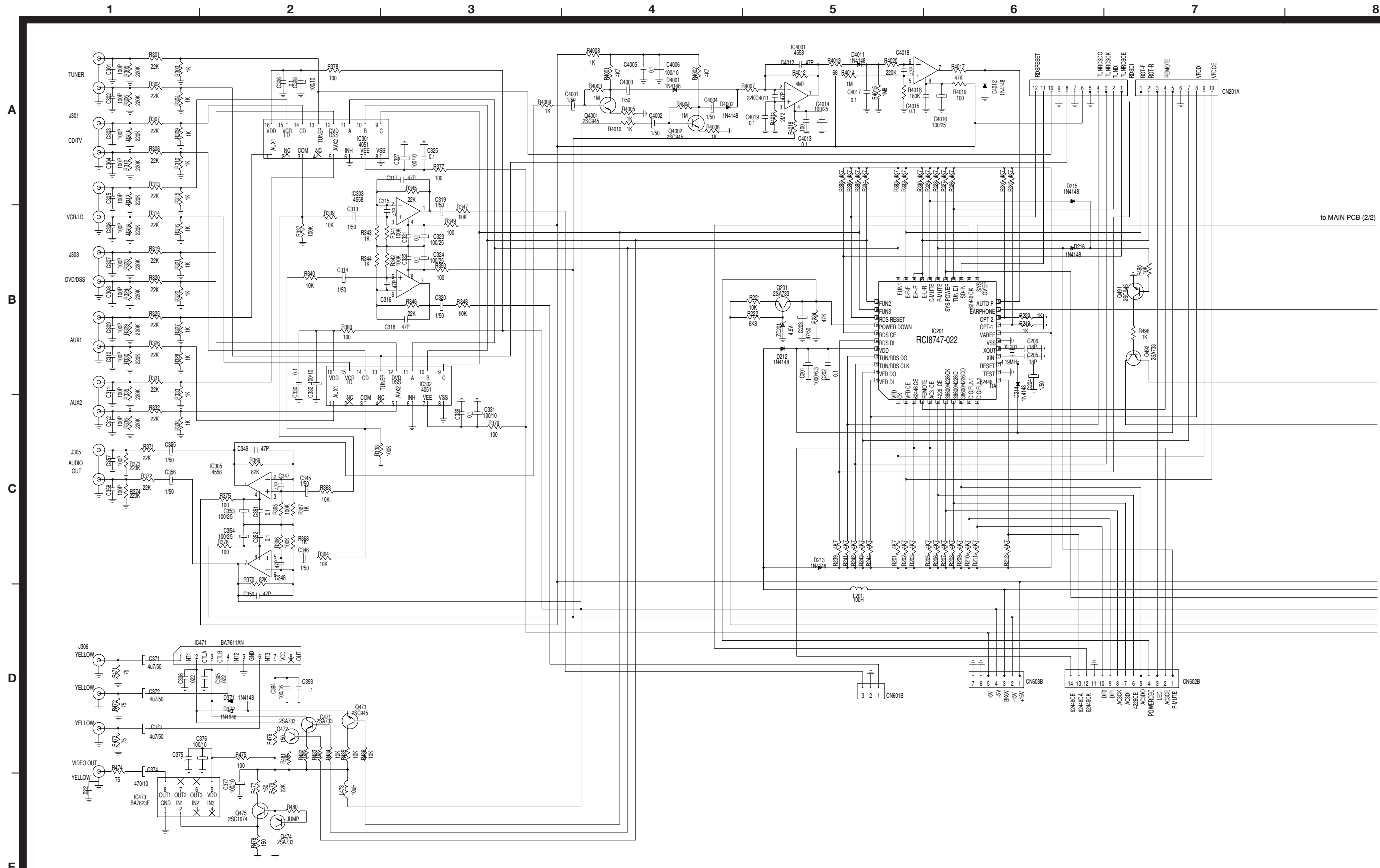


# 4 WIRING DIAGRAM





# TEAC SCHEMATIC DIAGRAM PLS-85D MAIN PCB (1/2)



**INSTRUCTIONS FOR SERVICE PERSONNEL**  
**BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.**

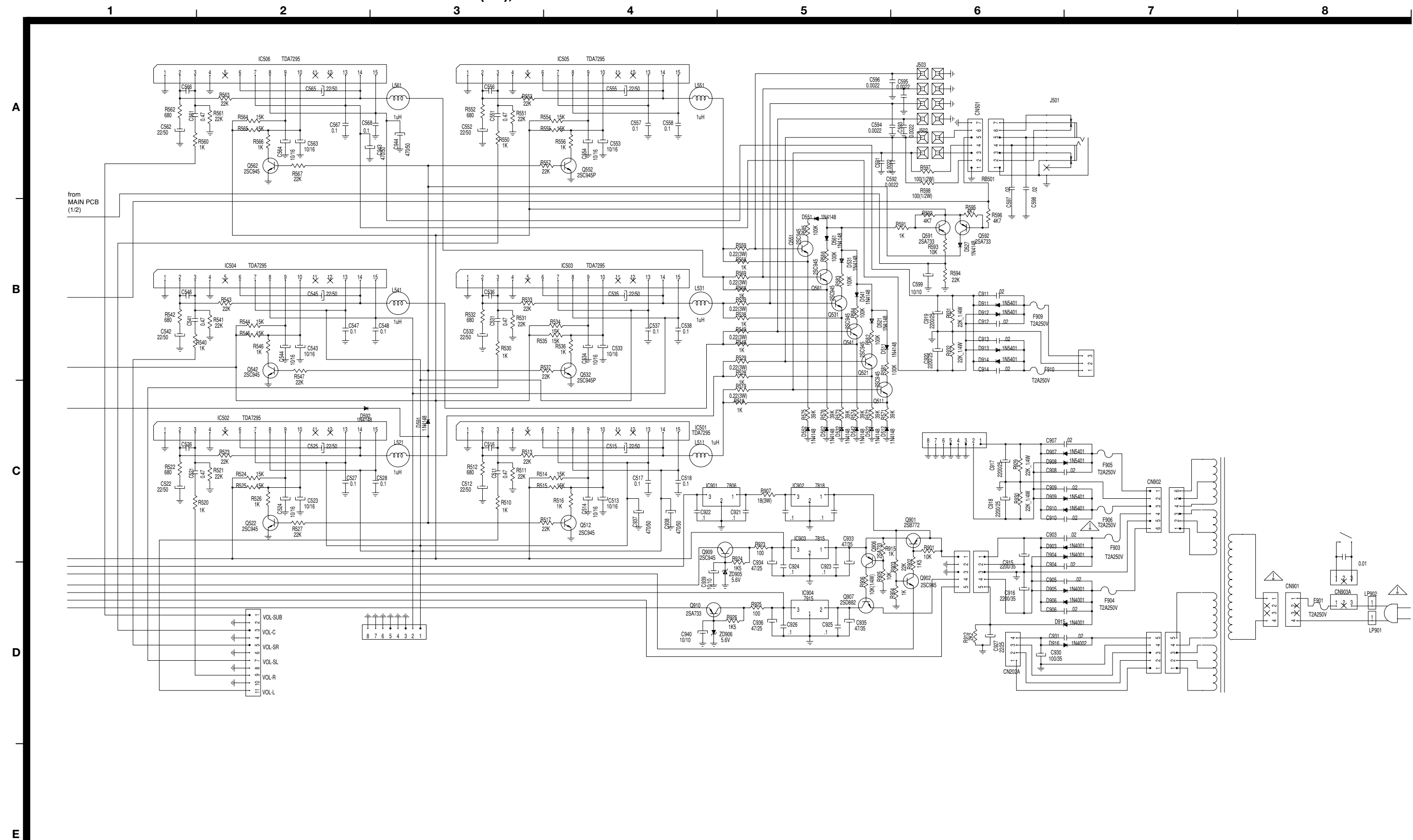
**NOTES:**  
 1. Resistor values are in ohms (k=kilo-ohms, M=megohms).  
 2. Capacitor values are in microfarads (p=picofarads).  
 3.  $\Delta$  Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

# PLS-85D

## AV Surround Amplifier

1st Issue; June 2001

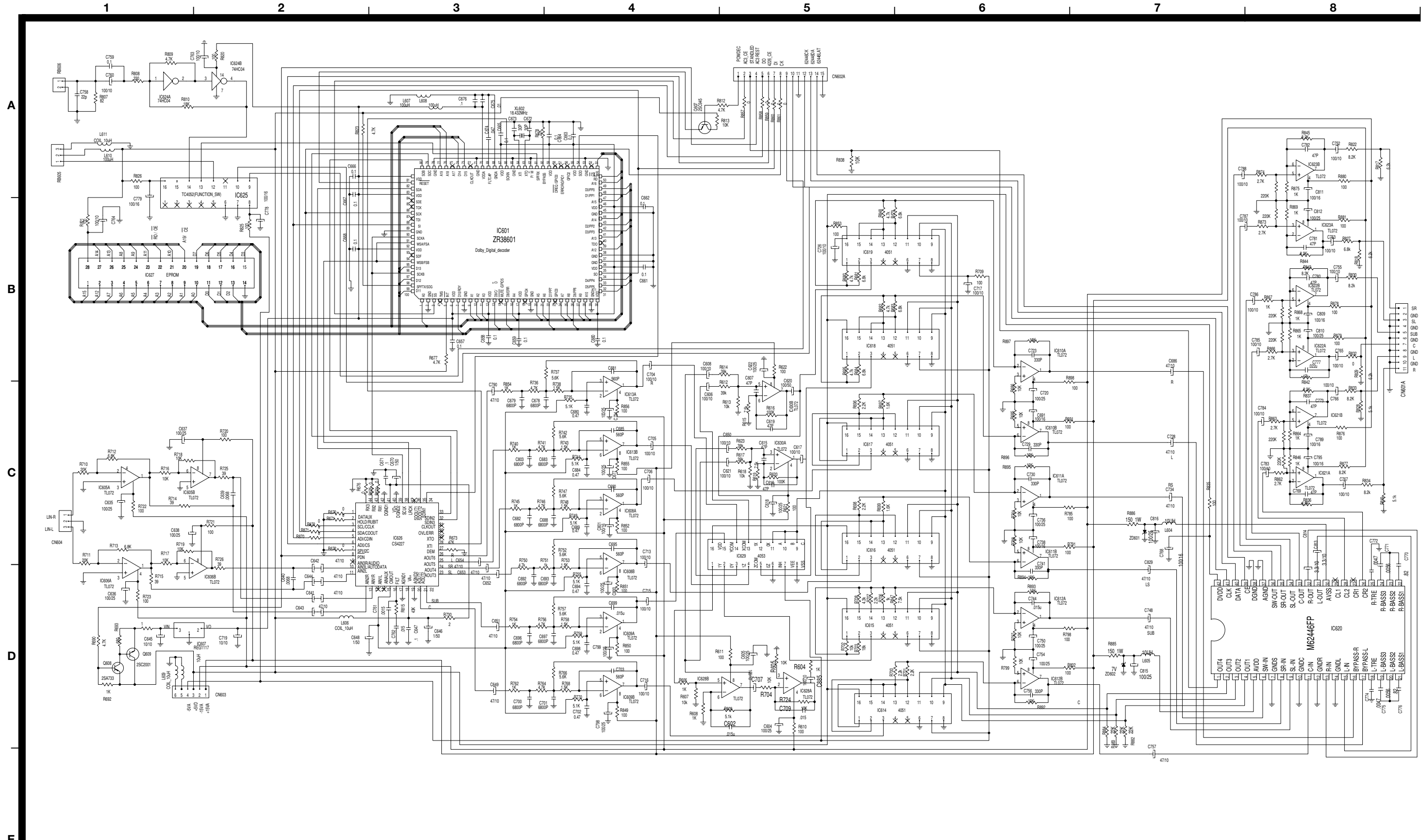
# TEAC SCHEMATIC DIAGRAM PLS-85D MAIN PCB (2/2), POWER PCB



**INSTRUCTIONS FOR SERVICE PERSONNEL**  
**BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.**

- NOTES:**
1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
  2. Capacitor values are in microfarads (p=picofarads).
  3.  $\Delta$  Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

# TEAC SCHEMATIC DIAGRAM PLS-85D DECODER PCB



**INSTRUCTIONS FOR SERVICE PERSONNEL**  
**BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.**

**NOTES:**  
 1. Resistor values are in ohms (k=kilo-ohms, M=megohms).  
 2. Capacitor values are in microfarads (p=picofarads).  
 3.  $\Delta$  Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

# PLS-85D

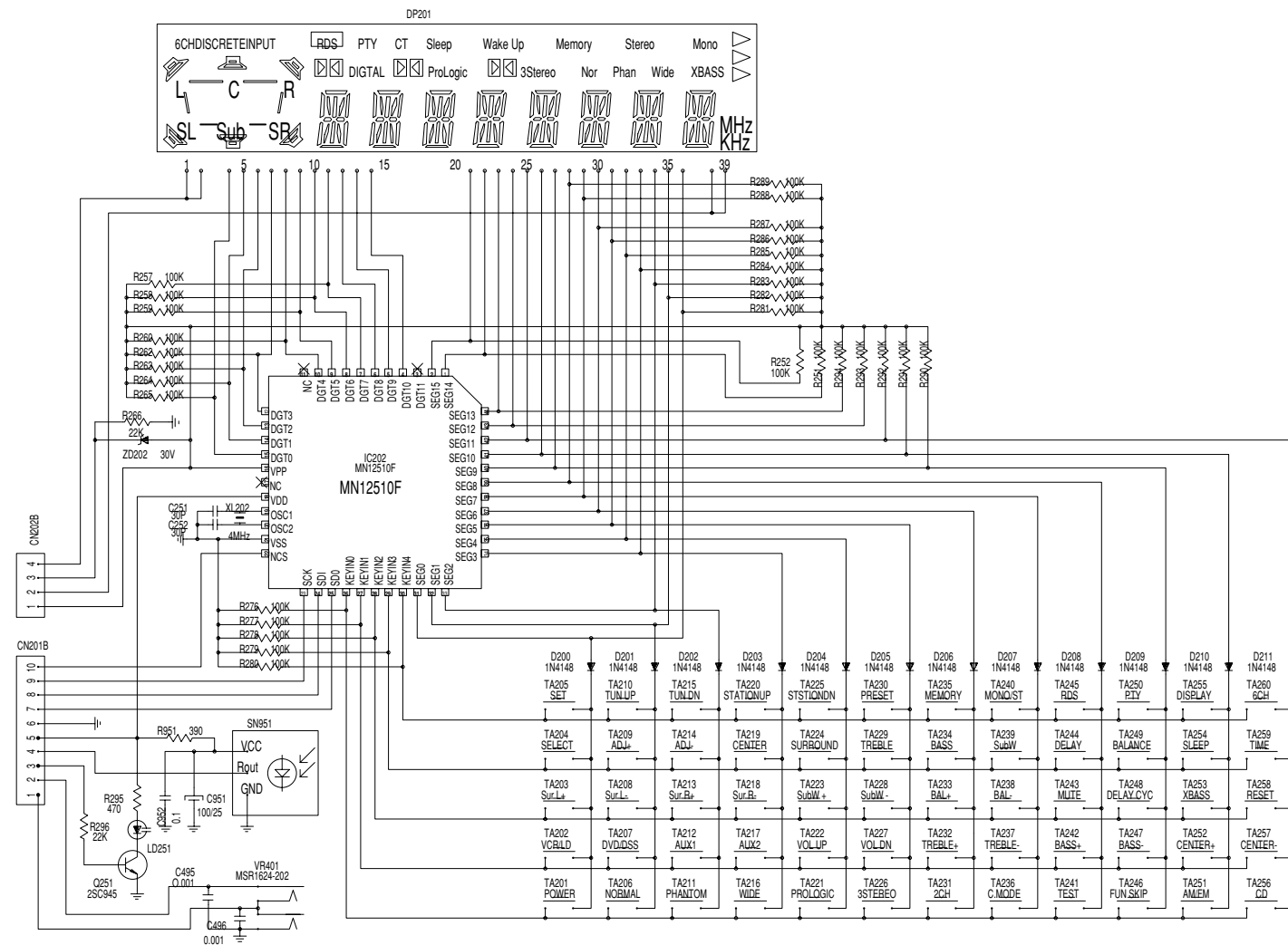
## AV Surround Amplifier

1st Issue; June 2001

# TEAC SCHEMATIC DIAGRAM PLS-85D LCD PCB

1 2 3 4 5 6 7 8

A  
B  
C  
D  
E



**INSTRUCTIONS FOR SERVICE PERSONNEL**  
**BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.**

**NOTES:**  
 1. Resistor values are in ohms (k=kilo-ohms, M=megohms).  
 2. Capacitor values are in microfarads (p=picofarads).  
 3.  $\Delta$  Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.