

TEAC

SERVICE MANUAL

LP-R400

STEREO MUSIC SYSTEM WITH CD RECORDER



NOTES

- PC board 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.
- ⚠ 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.
- Parts of [] mark can be used only with the version designated.
[USA] - U.S.A.; [EUR] - Europe; [UK] - UK; [JPN] - Japan

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2 SPECIFICATIONS

Amplifier Section

output power	3.5W+3.5W
frequency response	50Hz to 20KHz
Audio input sensitivity/Impedance	AUX:-6dBV(0.5V)20KΩ
Maximum output level	AUX:+6dBV(2.0V)

CD Recorder Section

Media type	CD_RW and CD_R for Digital audio (record and playback) CD (playback only)
Recording sampling frequency	44.1KHz
Frequency response	20Hz to 20KHz (playback:±2 dB, recording: ±3dB)
Signal to noise ratio	More than 80 dB(playback) More than 75dB (recording)
Total harmonic distortion	Less than 0.1%(playback) Less than 0.12% (recording)

Tuner Section

Frequency range (FM)	87.5 MHz to 108.0 MHz (100 kHz step) [USA]
Frequency range (AM)	530 kHz to 1,720 kHz (10 kHz step)
Frequency range (FM)	87.50 MHz to 108.00 MHz (50 kHz step) [EUR/UK]
Frequency range (AM)	522 kHz to 1,629 kHz (9 kHz step)
Frequency range (FM)	76.0 MHz to 90.0 MHz (100 kHz step) [JPN]
Frequency range (AM)	522 kHz to 1,620 kHz (9 kHz step)

Record player Section

Motor	DC servo motor
Drive system	Belt Drive
Speed	33-1/3 rpm, 45 rpm, 78 rpm
Wow and Flutte	less than 0.25% (WDT)
Cartridge type	Ceramic Stereo Cartridge
Stylus	TL-103
Output level	160-360 mV

Speaker System Section

Unit	70mm (3")
Impedance	4 ohms

GENERAL

Power requirements	120 V, 60 Hz [USA] 230 V, 50 Hz [EUR/UK] 100 V, 50/60 Hz [JPN]
Power consumption	25W
Dimensions (W×H×D)	18 1/2"×9 1/16" × 15 3/8" mm (470 × 230 × 390 mm)
Weight	21 13/16 lbs (10 kg)

Standard Accessories

45 RPM adaptor × 1
Remote control unit (RC-1157) × 1 [USA/EUR/UK]
Remote control unit (RC-1173) × 1 [JPN]
Battery (AA, R6, SUM-3) × 2
AM antenna × 1
Stereo RCA pin cable × 1
Owner's manual × 1
Warranty card × 1

- Design and specifications are subject to change without notice.
- Weight and dimensions are approximate.
- Illustrations may differ slightly from production models.

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3 ADJUSTMENTS AND CHECKS

120 V UL model Tuner adjustments

FM Frequency range:		
Low end	VT	adjust part
87.5MHz	1.5V	L206
FM sensitivity		
Low frequency		adjust part
90MHz		L204
High frequency		adjust part
106MHz		CT201
AM middle Frequency		adjust part
450KHz		T201
AM Frequency range:		
Low end	VT	adjust part
530KHz	1.5V	T203
AM sensitivity		
Low frequency		adjust part
600KHz		T202
High frequency		adjust part
1400KHz		CT202

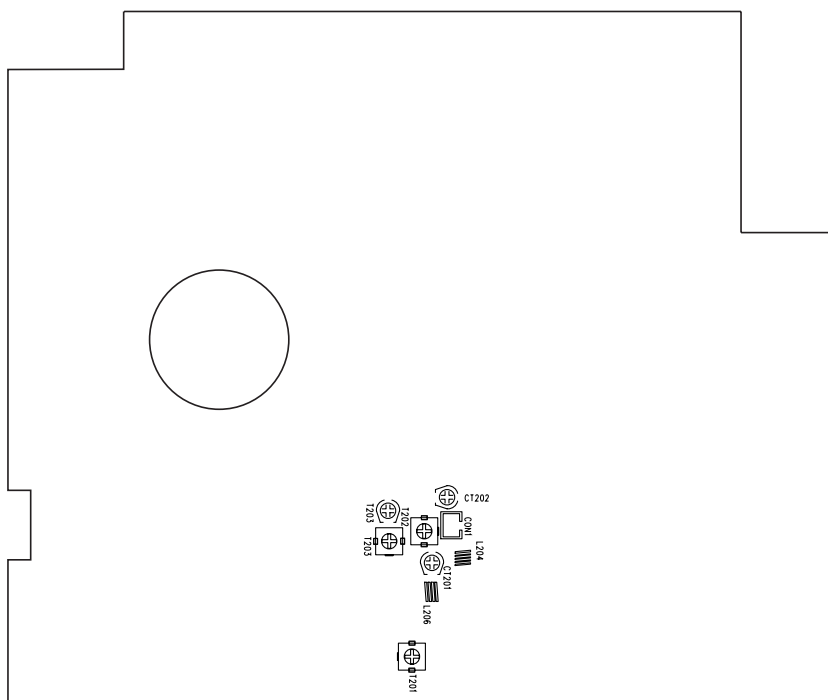
230 V EUR/UK model Tuner adjustments

FM Frequency range:		
Low end	VT	adjust part
87.5MHz	1.5V	L206
FM sensitivity		
Low frequency		adjust part
90MHz		L204
High frequency		adjust part
106MHz		CT201
AM middle Frequency		adjust part
450KHz		T201
AM Frequency range:		
Low end	VT	adjust part
522KHz	1.5V	T203
AM sensitivity		
Low frequency		adjust part
600KHz		T202
High frequency		adjust part
1400KHz		CT202

100 V JPN model Tuner adjustments

FM Frequency range:		
Low end	VT	adjust part
76MHz	1.5V	L206
FM sensitivity:		
Low frequency		adjust part
78MHz		L204
High frequency		adjust part
88MHz		CT201
AM middle Frequency		adjust part
450KHZ		T201
AM Frequency range:		
Low end	VT	adjust part
522KHz	1.5V	T203
AM sensitivity:		
Low frequency		adjust part
600KHz		T202
High frequency		adjust part
1400KHz		CT202

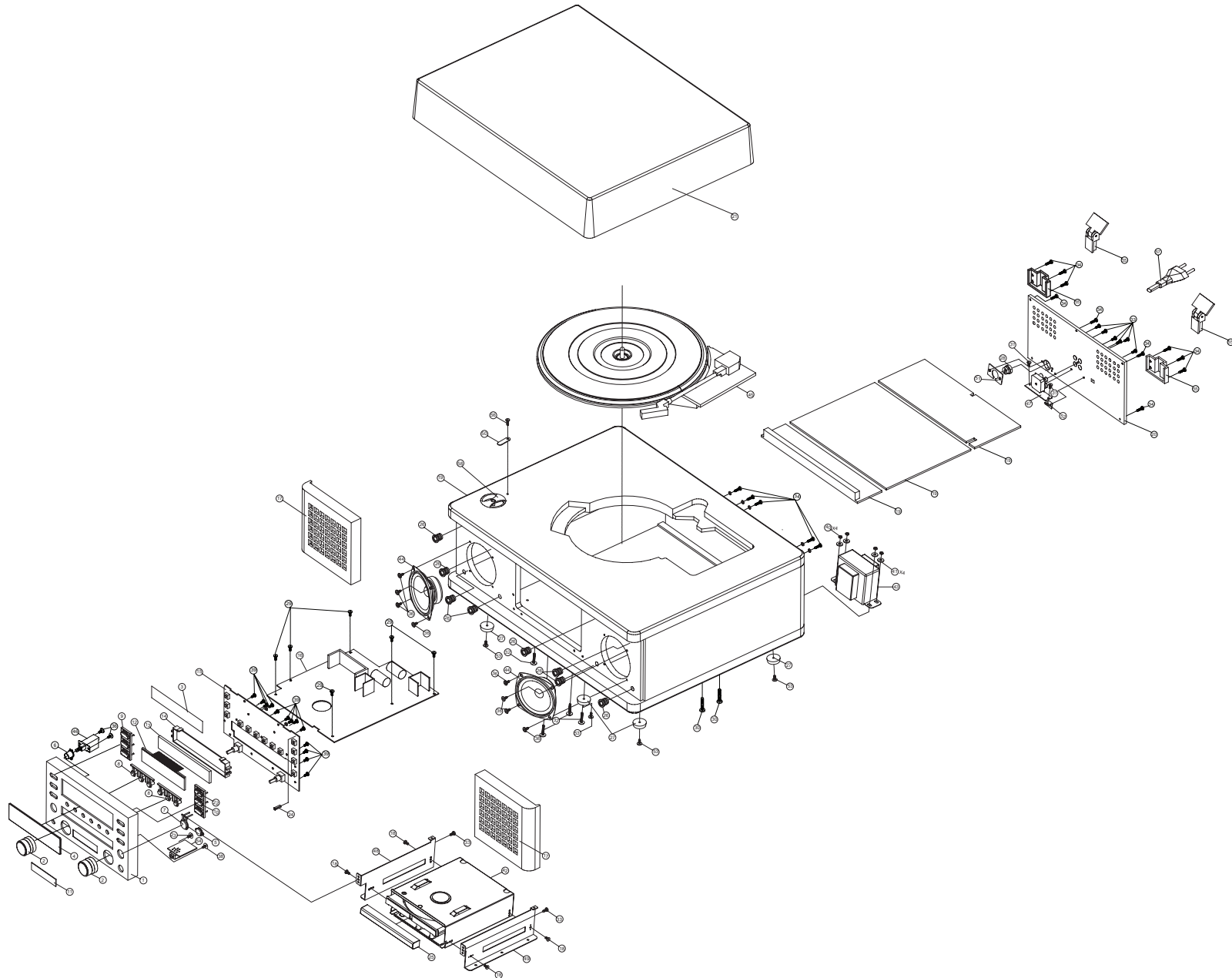
MAIN PCB



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4 EXPLODED VIEWS AND PARTS LIST

EXPLODE VIEW-1

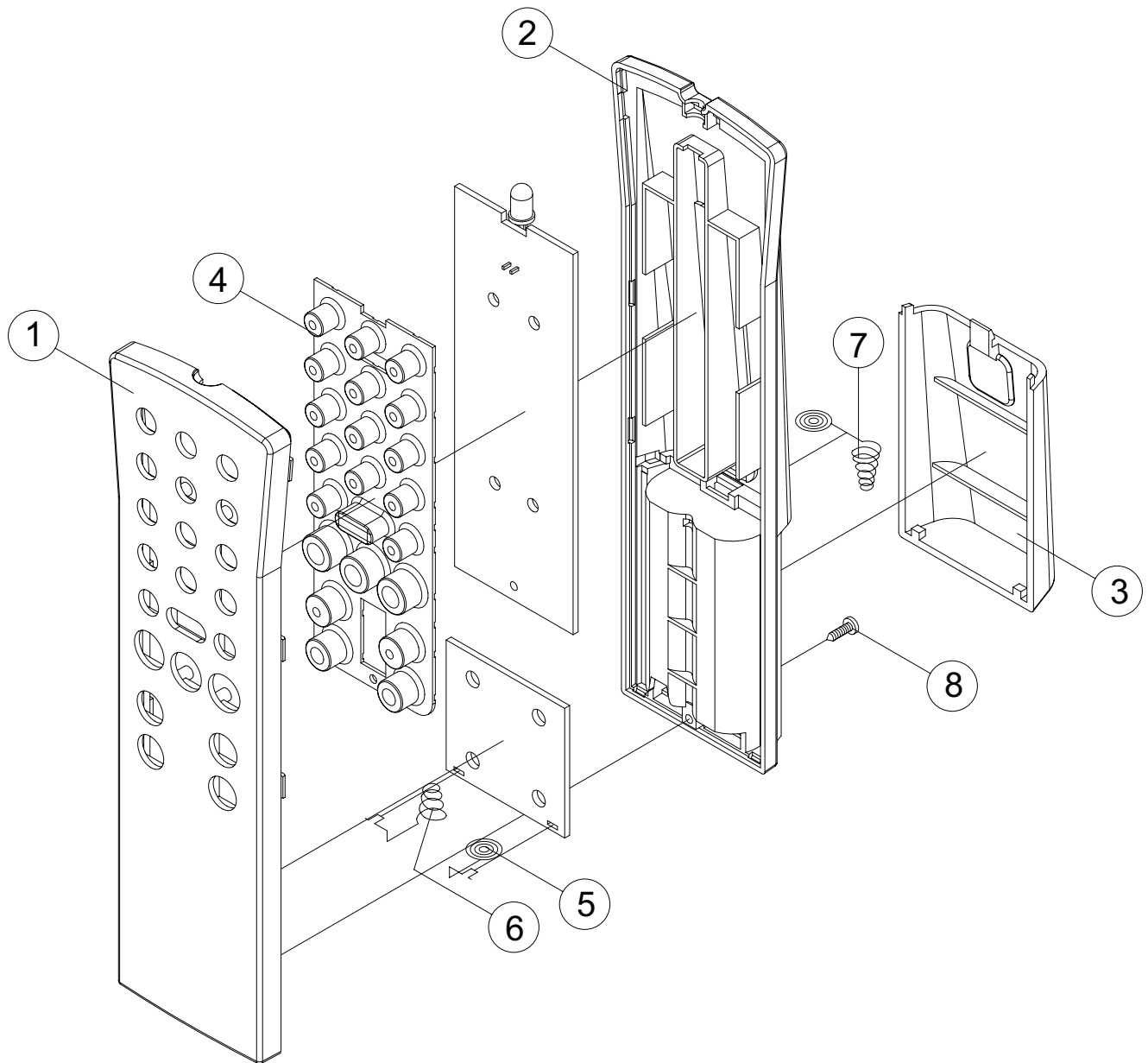


EXPLODED VIEW-1 PARTS LIST

REF.NO	PARTS NO.	DESCRIPTION	REMARKS
1-1	56-04LR4001B010 56-04LR4000B010 56-04LR4000B020	FRONT PANEL (HIPS+94V2) BLK 931980 [USA] FRONT PANEL(ABS) BLK - GRAY427C+RED186C [EUR/UK] FRONT PANEL(ABS) BLK - GRAY427C [JPN]	
1-2	56-54LR4003A000	VOLUME KNOB (ABS) silver TN8-7	
1-3	57-26LR40000020	FILTER SHEET 125x23x0.7mm	
1-4	56-57LR40010010	DISPLAY LENS (PMMA) balck	
1-5	56-57LR40022000	IR REMOTE LENS (SAN)	
1-6	56-54LR4002A000	POWER KNOB (ABS) silverTN8-7	
1-7	56-54LR4000A010	OPEN DOOR KNOB (ABS) silverTN8-7 gray433C	
1-8	56-54LR4005A000	SELECT KNOB (ABS) silverTN8-7	
1-9	56-54LR4001A000	FUNCTION KNOB (ABS) silverTN8-7	
1-10	56-54LR4004A010	PLAY KNOB (ABS)silverTN8-7 gray433C	
1-11	61-58LR40000020	BRAND PLATE (CEC2462012400) (T=0.6mm)	
1-12	13-05LR40000020	LCD DISPLAY SDT-DA1633-TP-1	
1-13	56-57LR40000000	BACK LIGHT LENS (PMMA)	
1-14	56-07LR40009000	LCD HOLDER (ABS)	
1-15	05-LR4000400000 05-LR4000400020 05-LR4000400010	PCBA-DIS [USA] PCBA-DIS [EUR/UK] PCBA-DIS [JPN]	
1-16	05-LR4000100000 05-LR4000100020 05-LR4000100010	PCBA-MAIN [USA] PCBA-MAIN [EUR/UK] PCBA-MAIN [JPN]	
1-17	56-86LR4000B000	SPEAKER GRIL (ABS)	
1-18	66-170230160103	HARDEN SCREW(RoHS) STTB 3x6mm AB(BLACK)	
1-19	06-190LR4000000 06-190LR4001000 06-190LR4000010	WOODEN BOX PART PVC: F-2905-28 (120V) [USA] WOODEN BOX PART PVC: F-2905-28 (230V) [EUR/UK] WOODEN BOX PART PVC: F-2905-28 (100V) [JPN]	
1-20	58-70LR40000020 58-70LR40000220 58-70LR40000120	REAR BOARD 120V [USA] REAR BOARD 230V REAR BOARD 100V [JPN]	
1-21	56-22LR40000000	DUST COVER (705-400-1232)	
1-22	56-57LR40039000	REC LIGHT LENS(PMMA)	
1-23	66-141430211321	SELF-TAPPING SCREW TA/WH 3x10mm (HD: 8mm)	
1-24	56-07LR40018000	LIGHT HOLDER (ABS)	
1-25	56-14LR4000B010	CD DOOR (ABS) Black 931980 gray 427C	
1-26	56-80S16800B000	SPEAKER PANEL STUD (PE) BLK	
1-27	58-263182600020	RUBBER FOOT DIA18 T=6mm (AC619)	
1-28	43-500000002020	AC POWER CORD BUSHING THK=1.6mm #4N4	
1-29	66-120230180321	MACHINE SCREW MS/BH 3x8mm	
1-30	66-120240225321	MACHINE SCREW MS/BH 4x25	
1-31	66-120330160321	MACHINE SCREW MS/PH 3x6mm	
1-32	66-120830220321	MACHINE SCREW MS/WH 3x20mm	
1-33	66-120230180121	MACHINE SCREW MS/BH 3x8mm (BLACK)	
1-34	66-140230214121	SELF-TAPPING SCREW TA/BH 3x14mm(BLACK)	
1-35	66-141430218321	SELF-TAPPING SCREW TA/WH 3x18mm (BLACK)	
1-36	66-120830160321	MACHINE SCREW MS/WH 3x6mm	
1-37	66-141430211321	SELF-TAPE SCREW TA/WH 3x10mm (BLACK)	
1-38	66-141430210321	SELF-TAPPING SCREW TA/WH 3x10mm(HD:10mm)	
1-39	66-140330180321	SELF-TAPPING SCREW TA/PH 3x8mm	
1-40	67-021400000020	NUT M4mm	
1-41	68-112403101000	METAL WASHER 4x10x1mm	
1-42	06-200GF3501001	CD MECH ASSY, CRD-RA2A (205010)	
1-43	△ 18-203LR40000000 △ 18-205LR40000000 △ 18-201LR40000000	TRANSFORMER 120V T08685A (WAHHING) [USA] TRANSFORMER 230V T08685C (WAHHING) [EUR/UK] TRANSFORMER 100V T08685B (WAHHING) [JPN]	
1-44	19-021093100220	SPEAKER 3" 10W 4Ω #JHD-SA78-25	
1-45	20-60ST15000000	PHONOGRAPH MECHANISM #H10B(HANPIN)	
1-46	△ 41-191120000010	POWER SWITCH (HUA FENG) KDC-A04-10(B2)	
1-47	05-LR4000800000 05-LR4000800010 05-LR4000800010	PCBA-AUX [USA] PCBA-AUX [EUR/UK] PCBA-AUX [JPN]	
1-48	61-11LR40000020	DECKBKTM-L	
1-49	61-11LR40000120	DECKBKTM-R	
1-50	57-08ST15000120	PVC PLATE	
1-51	61-22SG19000020	BUSHING MOUNTING PLATE	
1-52	61-25SCD66000020	CONTACT PLATE (THK 1.2mm) 11x11x8mm	
1-53	66-150830180121	SELF-TAPPING SCREW(RoHS) TB/WH 3x8mm(BLACK)	
1-54	05-LR4000900000	PCBA-H.P	
1-55	56-64LR4000B010	HINGE ASS'Y (BLACK) (705-400-1233)	
1-56	66-120830160321	MACHINESCREW RoHS MS/WH 3x6mm	
1-57	△ 45-113420300150 △ 45-114200500061 △ 45-114200411008 △ 45-113420300150	AC CORD UL APP L=420mm 105C(YA HUAN) BLK [USA] AC CORD VDE APP 2M (M.T) BLK [EUR] AC CORD BS APP BLK [UK] AC CORD UL APP L=420mm 105C(YA HUAN) BLK [JPN]	
1-58	56-01GF35000020	45RPM ADAPTER (100-S300-069)	

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EXPLODE VIEW-2



EXPLODED VIEW-2 PARTS LIST

REF.NO	PARTS NO.	DESCRIPTION	REMARKS
2-1	56-43GF3500B030	REMOTE FRONT CAB (ABS) Black RC-1157 [USA/EUR/UK]	
	56-43GF3500B040	REMOTE FRONT PANEL (ABS) BLK RC-1173 [JPN]	
2-2	56-43GF3501B010	REMOTE BOTTOM CAB (ABS)Black	
2-3	56-44GF3500B010	REMOTE BATTERY DOOR (ABS) Black	
2-4	58-23LR4000B120	RUBBER KEY (BLACK,WHITE,BLUE)	
2-5	61-26GF35000020	REMOTE BATTERY SPRING (+)	
2-6	61-26GF35000120	REMOTE BATTERY SPRING (-)	
2-7	61-26GF35000220	REMOTE BATTERY SPRING (+/-)	
2-8	66-140320180321	SELF-TAPPING SCREW RoHS! TA/PH 2x8mm	

5 PC BOARDS AND PARTS LIST

MAIN PCB ASSY

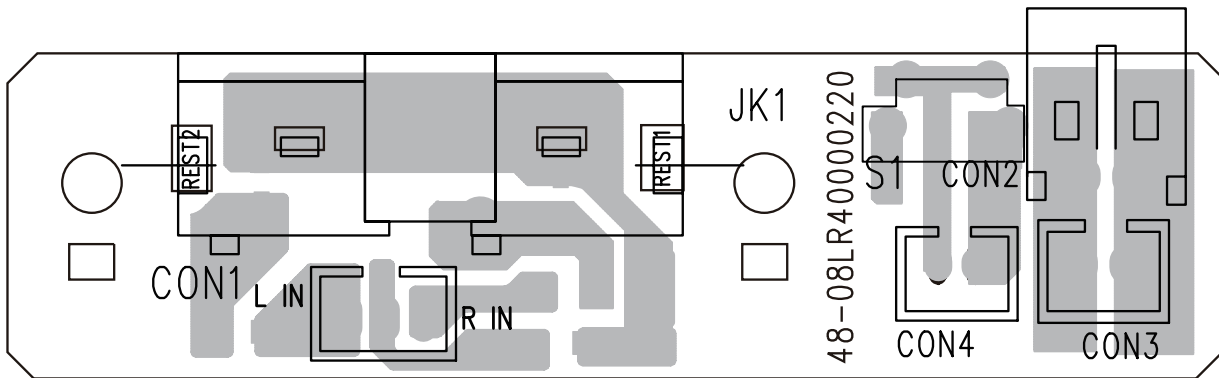
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C405,C424	05-LR4000100000	PCBA-MAIN [USA]	
	05-LR4000100020	PCBA-MAIN [EUR/UK]	
	05-LR4000100010	PCBA-MAIN [JPN]	
	48-01LR40000121	MAIN PCB 180X220X1.6MM 94V0 R1	
	26-017470850311	E.CAP 4700UF 25V ±20% (16x25mm) 105C	
CN102	43-012100217120	F.F.C.WAFER 1mm 17P 180C	
CN103	44-565345056620	6P SHIELD WIRE L=450mm TML+HSG(2)2547#28	
CN104	43-012200150120	WAFER 2mm 5P 180C	
CN301			
CN302	44-565326053620	3P SHIELD WIRE L=260mm HSG+MTL(2) AA	
SPEAK L, SPEAK R	43-012250120120	WAFER 2.5mm 2P 180C	
IC1	16-LM78L0500121	IC (LIBERAL) LM78L05 (933510720676)	
IC201	16-TB2132FN0021	IC (TOSHIBA) TB2132FNG	
U7	16-LM1117S00021	IC LM1117S-3.3 SOT-223	
U101	16-BA4558F00021	IC (ROHM) BA4558F SOP8	
U301	16-TC4052BP0021	IC (TOSHIBA) TC4052BP (DIP)	
U302	16-HEF4066B0121	IC (PHILIPS) HEF4066BP	
U303	16-TC9260P00021	IC (TOSHIBA) TC9260PAG	
U304	16-BA5417000021	IC (ROHM) BA5417	
U401,U403	16-KA7805000121	IC (SAMSUNG) KA7805E (TO-220)	
U402	16-AP1501AD0121	IC AP1501-ADJUST (TO263-5L)	
CF201	31-028107000110	CERAMIC FILTER SFE10.7MA5-A(3PIN)RED	
CF202	31-026450010110	CERAMIC FILTER (MURATA) SFU450B	
CF203	31-038107040120	DISCRIMINATOR FILTER JT10.7MG80-A(2PIN)	
CT201,203	27-501602202020	TRIMMER 20PF 6mm (RED)	
CT202	27-501602101020	TRIMMER 10PF 6mm (WH)	
D101,409,410, 411,412	12-1N4001000021	RECTIFIER DIODE 1N4001 1A 50V	
D201,202	12-BAS316000021	SMD DIODE BAS316 (319801010630)	
D401,402,403, 404	12-1N5401000021	RECTIFIER DIODE 1N5401 3A 100V	
D405~408	12-RL2020000021	RECTIFIER DIODE RL-202 2A 100V	
D413	12-SS1400000025	SMD DIODE SS14 SMA/DO-214AC	
F1,F2	46-015200300010	AXIAL FUSE 4x10mm W/LEAD 2A/250V	
L1,2,3,4,5,6	38-013100060220	CHIP INDUCTOR 10UH 1.15Ω (0805)	
L202	38-014100050120	AXIAL INDUCTOR 100UH ±10% 275mA EC-36	
L203	40-351450145020	FM COIL 4.5x4.5T (0.8mm) [USA/EUR]	
	40-351550145020	FM COIL 5.5x4.5T (0.8mm) [JPN]	
L204	40-351500135020	FM COIL 5.0x3.5T (0.8mm) [USA/EUR]	
	40-351550145020	FM COIL 5.5*4.5T (0.8mm) [JPN]	
L206	40-351450125020	FM COIL 4.5x2.5T (0.8mm) [USA/EUR]	
	40-351500125020	FM COIL 5.0x2.5T (0.8mm) [JPN]	
L402	38-103100050320	CHOKE COIL 10UH ±10% D6x8mm 1A	
L401	38-103330060120	CHOKE COIL 33UH ±10% 3A 0.1Ω	
Q101	11-PMBT39060021	SMD TRANSISTORS PMBT3906 SOT23 (PHILIPS)	
Q102	11-8550C0000021	TRANSISTORS 2W 8550C	
Q103,104,203, 204,205,210,221, 222,311,312,321, 353,402,403,503	11-MMBT39040221	SMD TRANSISTORS MMBT3904 SOT23	
Q201,Q404	11-9015C0000021	PNP TRANSISTORS 9015C	
Q351.Q352	11-2SD1936T0125	TRANSISTORS 2SD1936T-AC (SANYO) (TAPING)	
Q405	11-KSD882Y00021	TRANSISTORS KSD882Y (SAMSUNG)	
T201	40-022490004020	I.F.T 7mm 7AC-249S0 (YELLOW)	
T202	40-023120000020	I.F.T 7mm 312A (BLACK)	
T203	40-022720002020	I.F.T 7mm 7AL-272HM (RED)	
VD201,VD202	12-SVC201SPA021	VARACTOR DIODE (SANYO) SVC201SPA	
VD204,VD205	12-SVC321SPA021	VARACTOR DIODE (SANYO) SVC321SPA	
X201	31-015750000020	CRYSTAL 75KHZ 12.5PF±20PPM 3x8mm	
ZD341	12-011270320125	ZENER DIODE ±5% 2.7V 1/2W (T=52mm)	
ZD401,ZD402	12-011510320125	ZENER DIODE ±5% 5.1V 1/2W (T=52mm)	
ZD403	12-012100320125	ZENER DIODE ±5% 10V 1/2W (T=52mm)	

LCD DISPLAY PCB ASSY

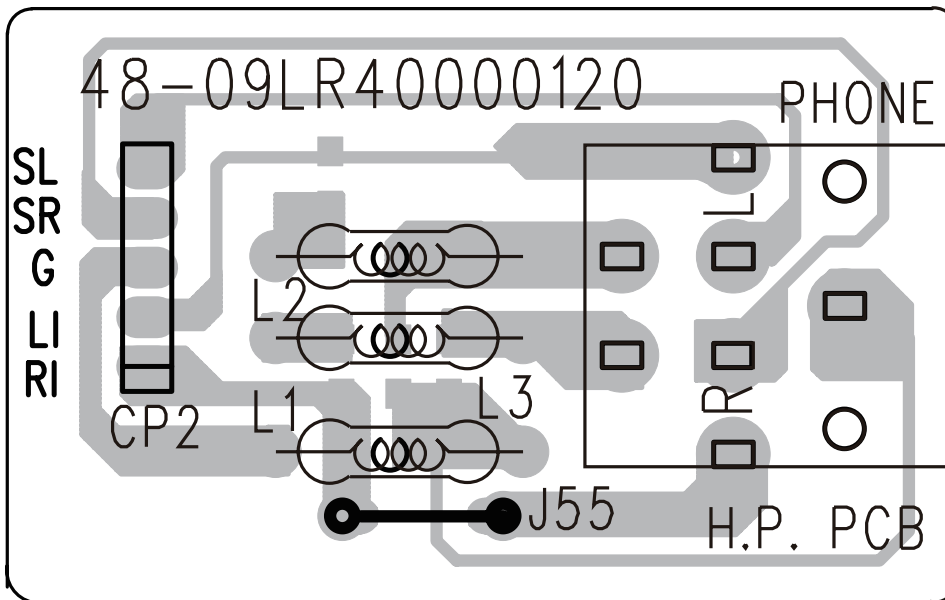
REF.NO	PARTS NO.	DESCRIPTION	REMARKS
	05-LR4000400000	PCBA-DIS [USA]	
	05-LR4000400020	PCBA-DIS [EUR/UK]	
	05-LR4000400010	PCBA-DIS [JPN]	
	48-04LR40000220	DISPLAY PCB 188X112X1.6 94HB	
CN501	43-012100217530	SMD FFC.WAFER 1MM 17P 90C W/LOCK (BY CEC)	
CN502	43-012100190530	SMD FFC.WAFER 1MM 9P 90C W/LOCK (BY CEC)	
CN504	43-022200160120	WAFER 2mm 6P 90C	
D500	12-DAN217000021	DIODE DAN217	
D501	13-011292121020	LED LAMP (MICRO) MSC32D-C 2.94mm (RED)	
D502.503	13-011200022020	LED LAMP 2x5x7mm (WHITE) MT-513UWC/W120	
LCD501	13-05LR40000020	LCD DISPLAY SDT-DA1633-TP-1	
Q501	11-DTA124EK0021	SMD TRANSISTORS DTA124EKA-T146 (ROHM)	
S500.501	22-501200001620	ROTARY ENCODER E1211A3BV1NG0037	
SW511,512,513, 514,515,516,517, 521,522,523,524, 525,526,527,528	41-150010030020	TACT SWITCH 6x6mm 5mm (160g ±30g) 4LEGS	
U501	16-LC87F7CC0321	IC (SANYO) LC87F7CC8A-TQFP (FLASH)	
U502	17-05HM33800120	IR RECEIVER MODULE HM338RS T-16M2	
U503	16-PST600D00021	IC (MITSUMI) PST600D	
U504	16-BR93L46F0021	IC BR93L46F-W (SOP8) (ROHM)	
X501	31-047450000020	CERAMIC RESONATOR 4.5MHZ	

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AUX PCB



H.P. PCB ASSY



AUX PCB ASSY

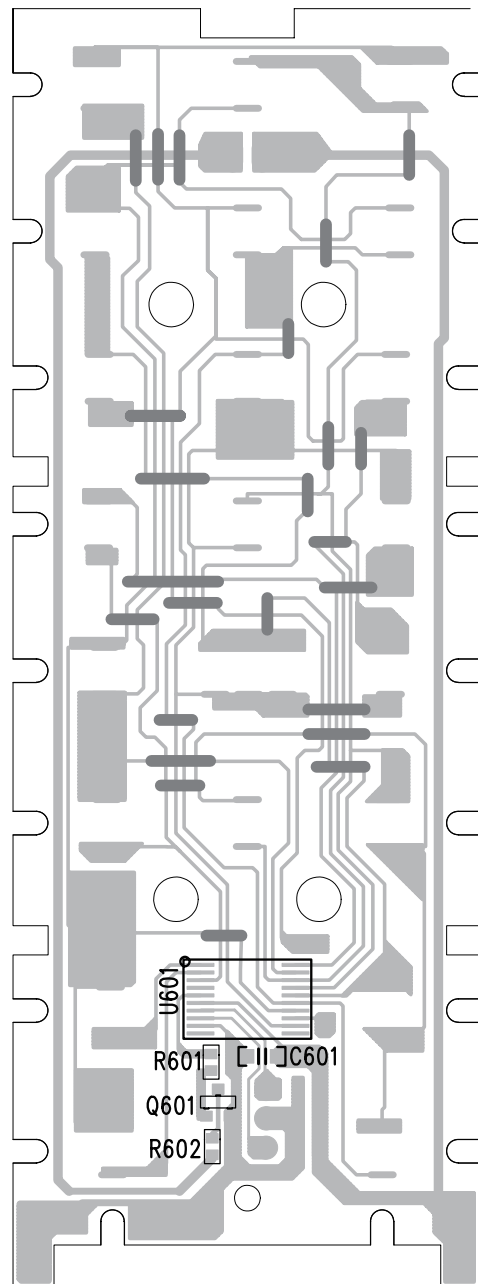
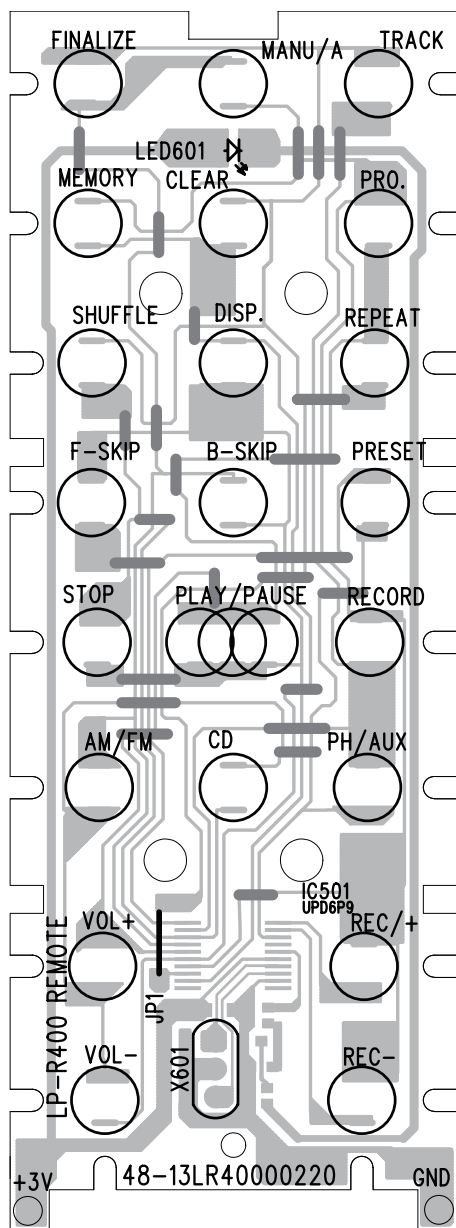
REF.NO	PARTS NO.	DESCRIPTION	REMARKS
	48-08LR40010220	AUX IN/AUX OUT PCB 94HB 76.2x22x1.6mm	
CL1,2,3	38-013100060220	CHIP INDUCTOR 10UH 1.15Ω (0805)	
CON1	43-012200160120	WAFER 2mm 6P 180C	
CON2	43-0222501202P0	WAFER 2.5mm 2P 90C (WHITE)	
CON3	43-012250120120	WAFER 2.5mm 2P 180C	
JK1	43-451400002020	RCA JACK 4P (W/W/R/R) TC58-118-01	

H.P. PCB ASSY

REF.NO	PARTS NO.	DESCRIPTION	REMARKS
	05-LR4000900000	PCBA-H.P	
	04-LR4000900000	ACP-H.P.	
	48-09LR40000120	H.P. PCB 94V0	
CP2	44-515316055520	5P WIRE L=160mm HSG+TML(2)(UL1007#26)	
L1,2,3	38-013100050120	AXIAL INDUCTOR 10UH ±10% 350mA EC-24	
PHONE	43-431360006020	PH 3.6mm JY353507001/PJ322A/HTJ03513AB	

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REMOTE CONTROL PCB



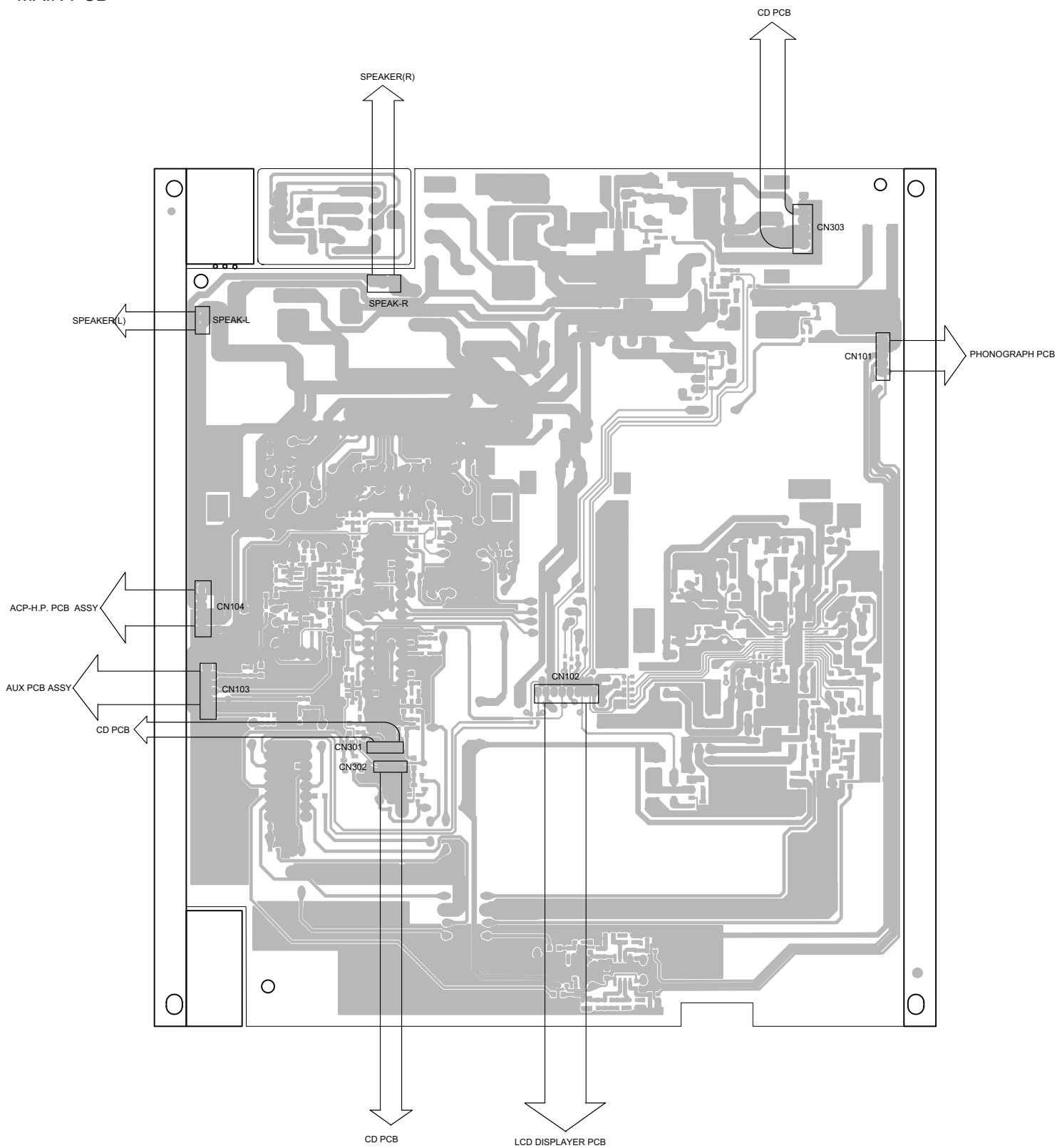
REMOTE CONTROL PCB ASSY

REF.NO	PARTS NO.	DESCRIPTION	REMARKS
	07-00000020000	INDIRECT MATERIAL	
	48-13LR40000220	REMOTE PCB	
LED601	13-021500020020	INFRARED LED 5mm #SIR-563-ST-3F	
U601	16-UPD6P9000021	IC (NEC) UPD6P9M1MC-5A4-A (OTP)	
X601	31-047364000110	RESONATOR (FARGO) ZTT 3.64MHZ	

LP-R400

6 WIRING DIAGRAM

MAIN PCB



7 INCLUDED ACCESSORIES

INCLUDED ACCESSORIES

REF.NO	PARTS NO.	DESCRIPTION	REMARKS
	51-011150300010	BATTERY 1.5V (SANYO) AA/UM-3 2PCS/PACK	
	77-20LR40000220	MANUAL (E/F/S) (CEC6P10501340)	
	77-20LR40000320	MANUAL (G/I/N) (CEC6P10501341)	
	77-21LR40000120	QUICK USER GUIDE (EUR) (CEC6P12014700)	
	77-14CD15000124	WARRANTY CARD TEAC(CEC6P30001702)	
	56-64LR4000B010	HINGE ASSY (BLACK) (705-400-1233)	
	32-07A200000020	AM LOOP ANT(8X2.5mmHSG/L720mm)	
	02-170LR4001700	REMOTE CONTROL RC-1157 USA/EUR/UK	USA/EUR/UK
	02-170LR4001100	REMOTE CONTROL RC-1173 JPN	JPN

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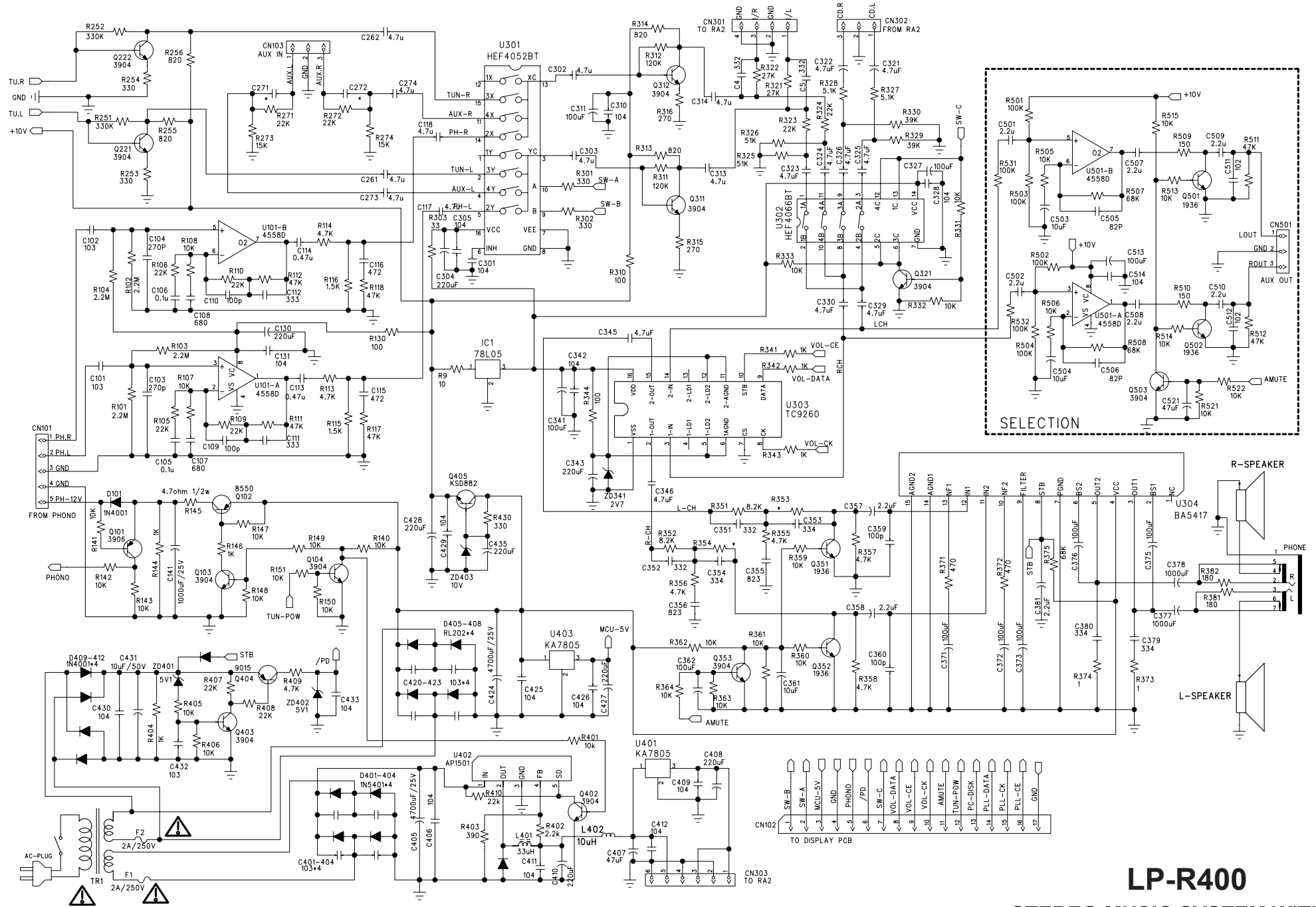
DTE-SM0802001

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FEB 2008

PREPARED IN CHINA

MAIN PCB

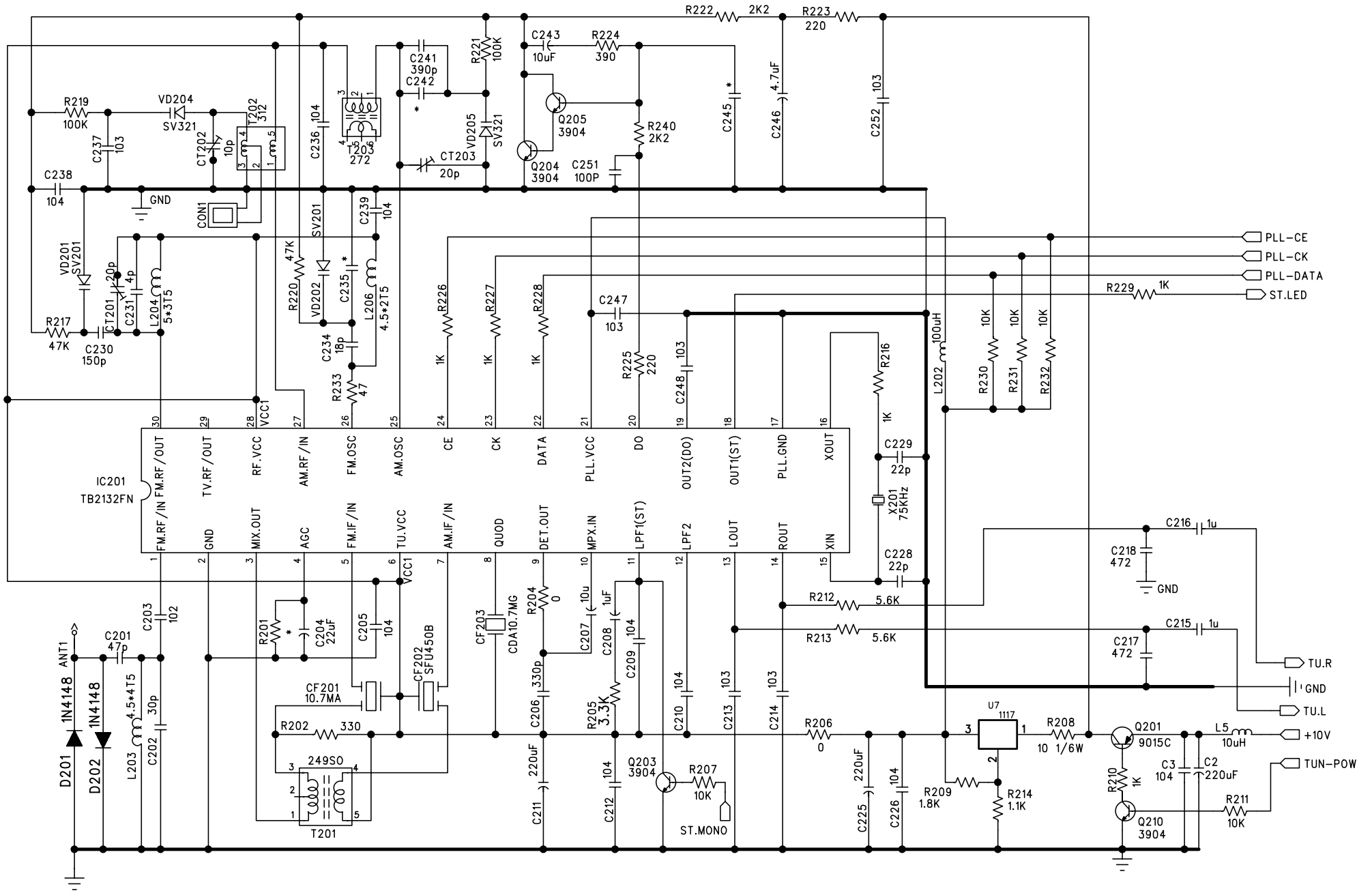


SELECTION

LP-R400

STEREO MUSIC SYSTEM WITH CD RECORDER

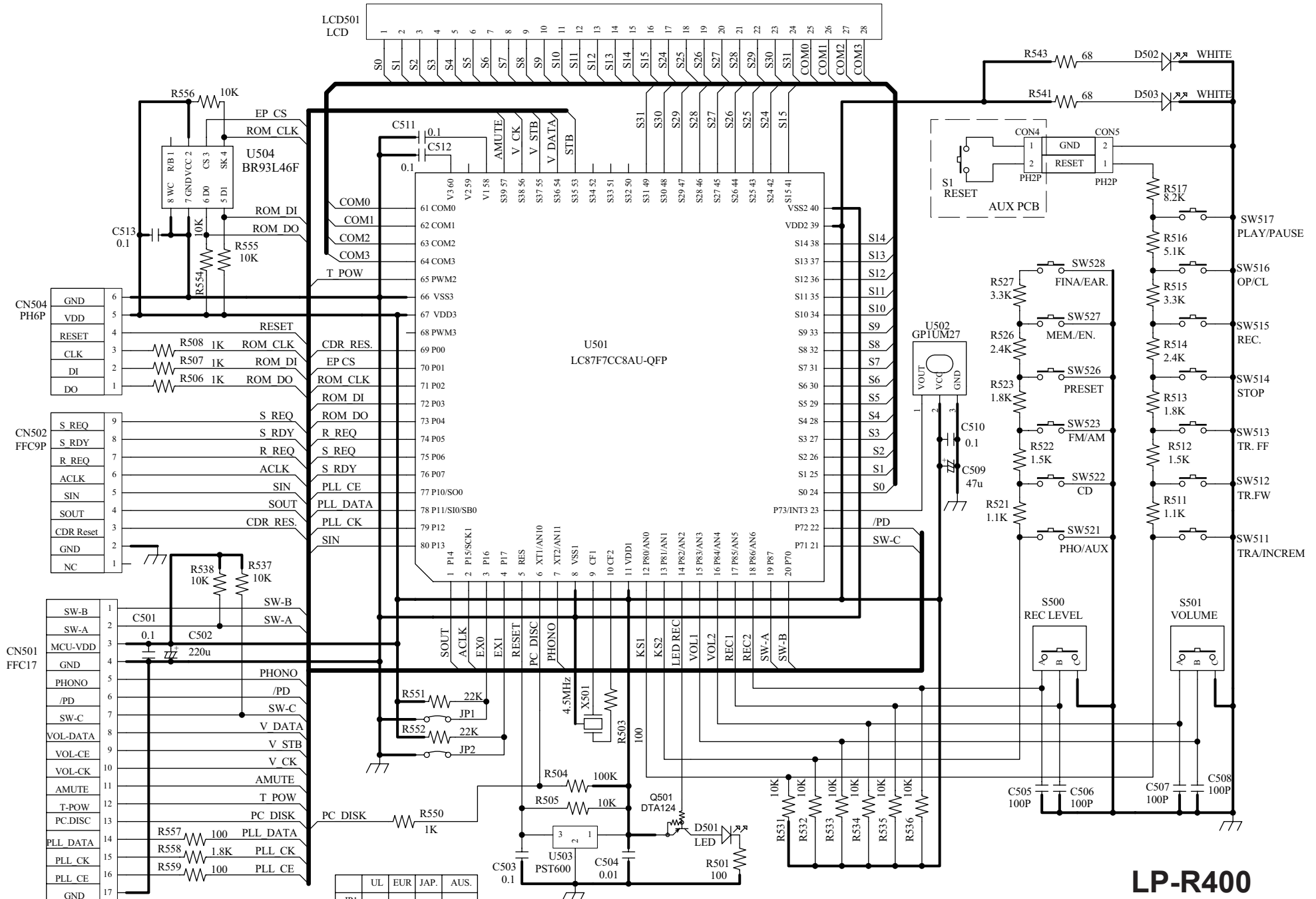
MAIN PCB TUNER PART



LP-R400

**STEREO MUSIC SYSTEM WITH CD
RECORDER**

DISPLAY PCB



	UL	EUR	JAP.	AUS.
JP1	SHORT	OPEN	SHORT	OPEN
JP2	SHORT	SHORT	OPEN	OPEN

LP-R400
STEREO MUSIC SYSTEM WITH CD
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