

TEAC

SERVICE MANUAL

LT-1/LT-1B

CD / RADIO
WITH REMOTE CONTROL



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.
[T/C]: UL/CSA (LT-1) [EX/T]: UNI (LT-1)
[EUR]: VDE (LT-1B)

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LT-1/LT-1B

1 SAFETY INFORMATION

SAFETY INFORMATION

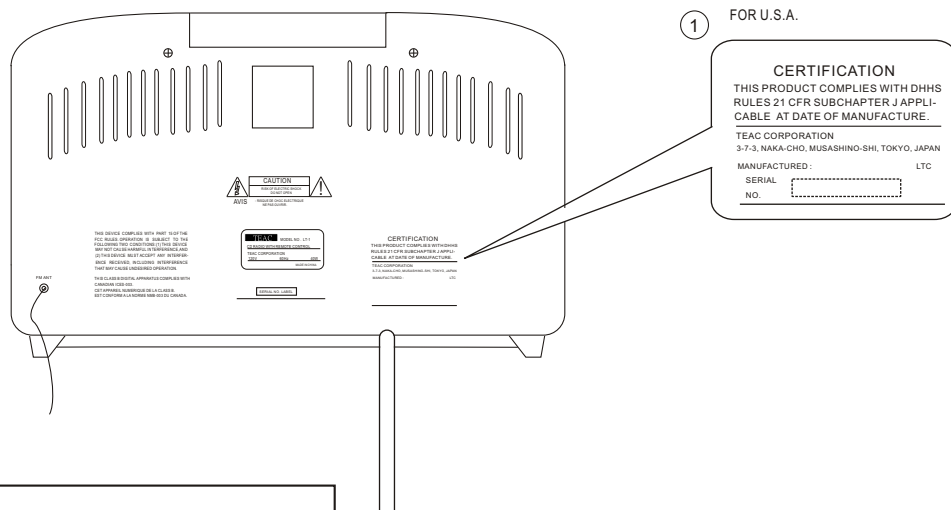
This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on The Radiation Control for Health and Safety Act of 1968" and is classified as class 1 laser product. There is not hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings. The label required in this regulation is shown ①.

• **CAUTION**

USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT REMOVE THE PROTECTIVE HOUSING USING SCREWDRIVER.

IF THIS PRODUCT DEVELOPS TROUBLE, MAKE A CONTACT WITH OUR SERVICEMAN, AND DO NOT USE THE PRODUCT A TROUBLED STATE.



Optical pickup:
Type : KSM-213CDM
Manufacturer : SONY Corporation
Laser output : Less than 0.5 mW on the objective lens
Wavelength : 770 -795 nm

2 SPECIFICATIONS

TUNER Section

Frequency Range (FM): 87.5MHz to 108.00 MHz (100kHz step) - U.S.A
87.5MHz to 108.00 MHz (50kHz step) - EUR

Frequency Range (AM): 520kHz to 1710 kHz (10kHz step) - U.S.A
522kHz to 1620 kHz (9kHz step) - EUR

CD PLAYER Section

Frequency Response: 20 Hz to 20 kHz (+/- 1dB)

Wow and Flutter: Unmeasurable

SPEAKER SYSTEM Section

Type: 1-way

Impedance: 8 ohms (L & R)
8 ohms (subwoofer)

GENERAL

Power Requirements: 120V AC,60Hz (U.S.A/Canada Model)
120/230V AC,50-60Hz (General Export Model)
230V AC,50Hz (EUR)

Power Consumption: 40 W

Total Output Power : 15 W

Dimension (W x H x D): 357 x 205 x 247.5 mm
(14-1/18 x 8-1/16 x 9-3/4) inches

Weight: 5.8 kg (12-13/16 lb)

Standard Accessories: Owner's Manual x 1
Warranty Card x 1
Remote Control (RC-910) x 1

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

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3 ADJUSTMENTS AND CHECKS

3-1 TUNER SECTION

- Use a screwdriver with a plastic or ceramic grip for all adjustment.

3-1-1 AM adjustment

1. Set the function switch to the TUNER position.
2. Set the BAND switch to the AM position.
2. Connect the test loop antenna across the output of the signal generator.
3. Connect the oscilloscope to the PHONE JACK terminal.
4. Set the signal generator as listed in the alignment chart.

3-1-2 FM adjustment

1. Set the function switch to the TUNER position.
2. Set the BAND switch to the FM position.
3. Connect the signal generator output through a 75 ohm dummy antenna to "ANT" on TUNER PCB.CN8.
3. Connect the oscilloscope to the PHONE JACK terminal.
4. Set the signal generator as listed in the alignment chart.

3-2 Adjustment and Test Points

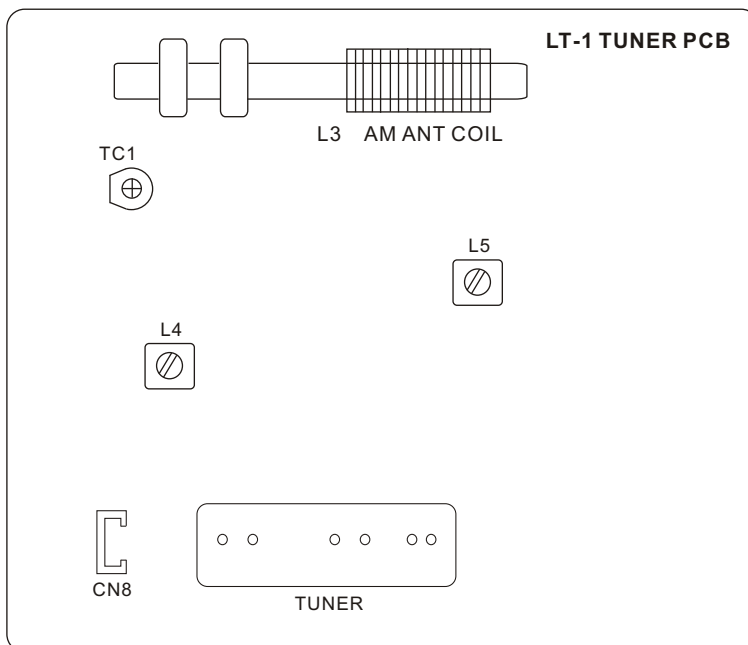


Fig. 3-2-1

3-2-2 AM Tuner

ITEM	SG SETTING	TUNER SETTING	ADJUSTMENT POINT	ADJUSTMENT
AM				
1. VOLTAGE adjustment		1710kHz (USA) 1620kHz (EUR)	L4	VT 8.0V
		520kHz (USA) 522kHz (EUR)	Check	VT 1.5V
2. IFT adjustment	450kHz 1kHz, 30% mod	600kHz (USA) 603kHz (EUR)	L5	Adjust for max. output.
3. ANT COIL adjustment	600kHz (USA) 603kHz (EUR) 1kHz, 30% mod	600kHz	L3 AM ant coil	Adjust for max. output.
4. TC1 adjustment	1400kHz (USA) 1404kHz (EUR) 1kHz, 30% mod	1400kHz	TC1 repeat step 3 and 4	Adjust for max. output and best waveform.
	Repeat step 3			

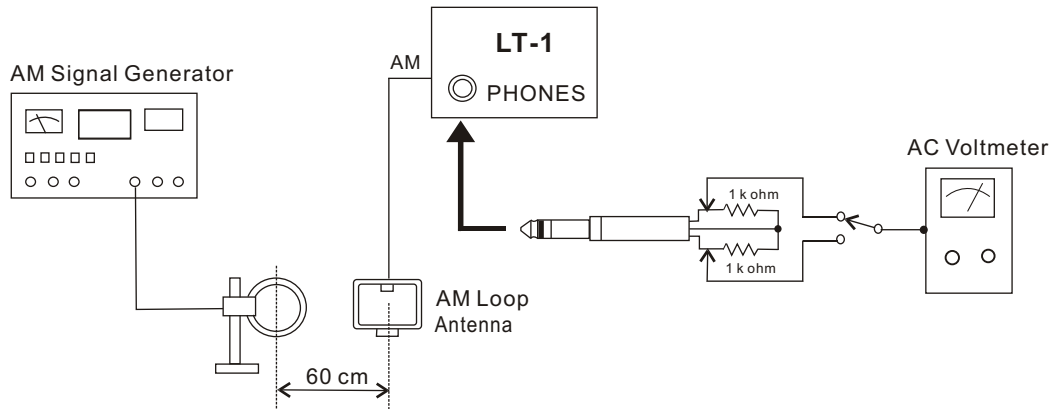


Fig. 3-2-3

LT-1/LT-1B

3-2-4 FM Tuner

ITEM	SG SETTING	TUNER SETTING	ADJUSTMENT POINT	ADJUSTMENT
FM				
1. VOLTAGE adjustment		106.1MHz	Check	VT 5.5-5.9V
		90.1MHz	Check	VT 1.2-1.6V

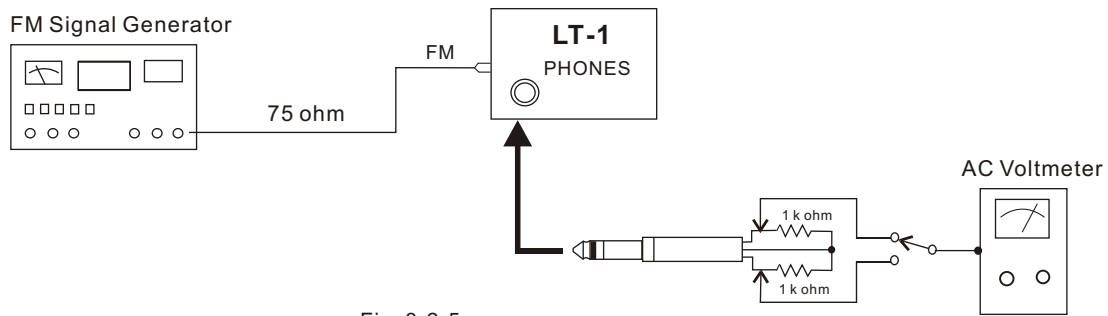
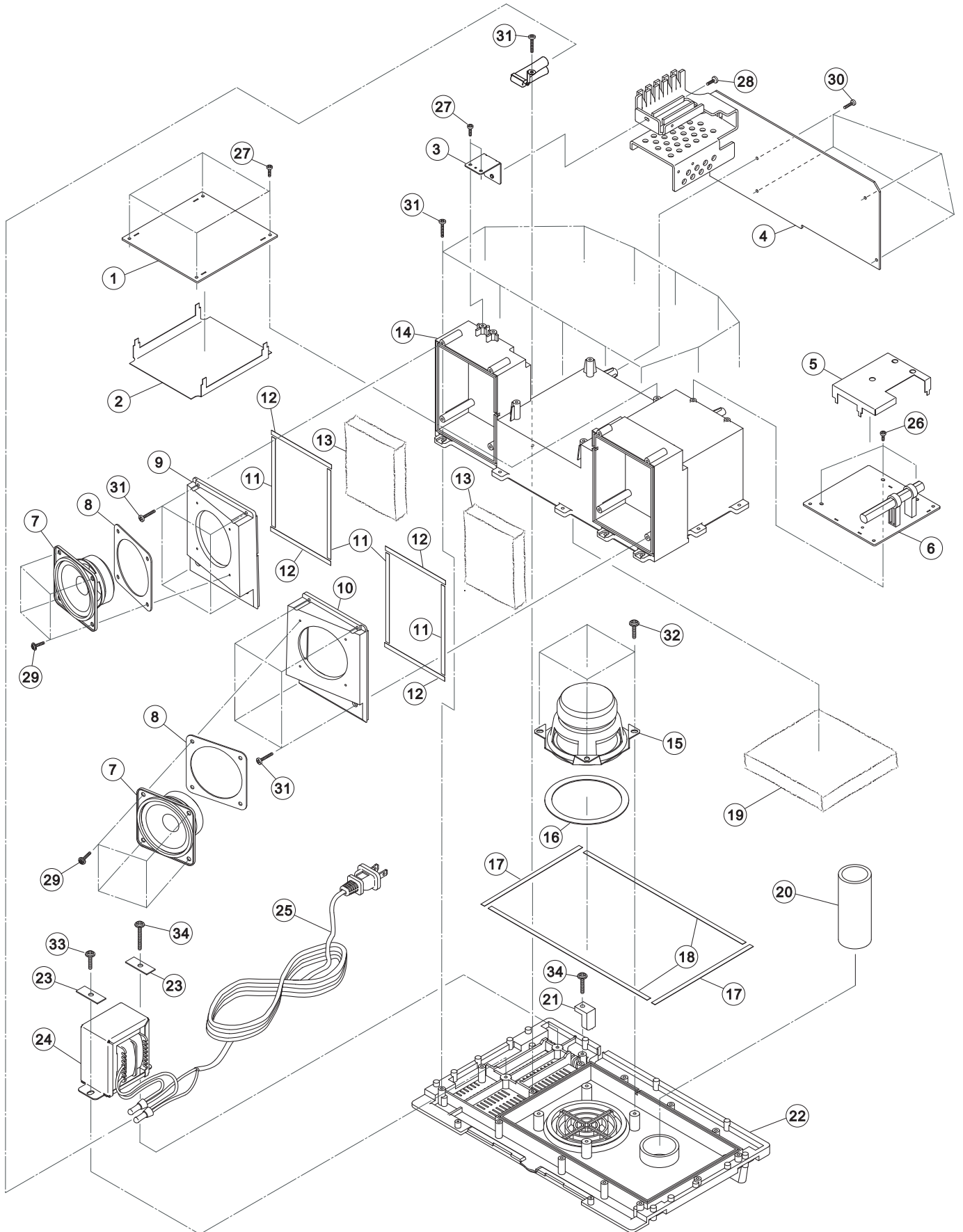


Fig. 3-2-5








4 EXPLODED VIEWS AND PARTS LIST

EXPLODED VIEW - 1

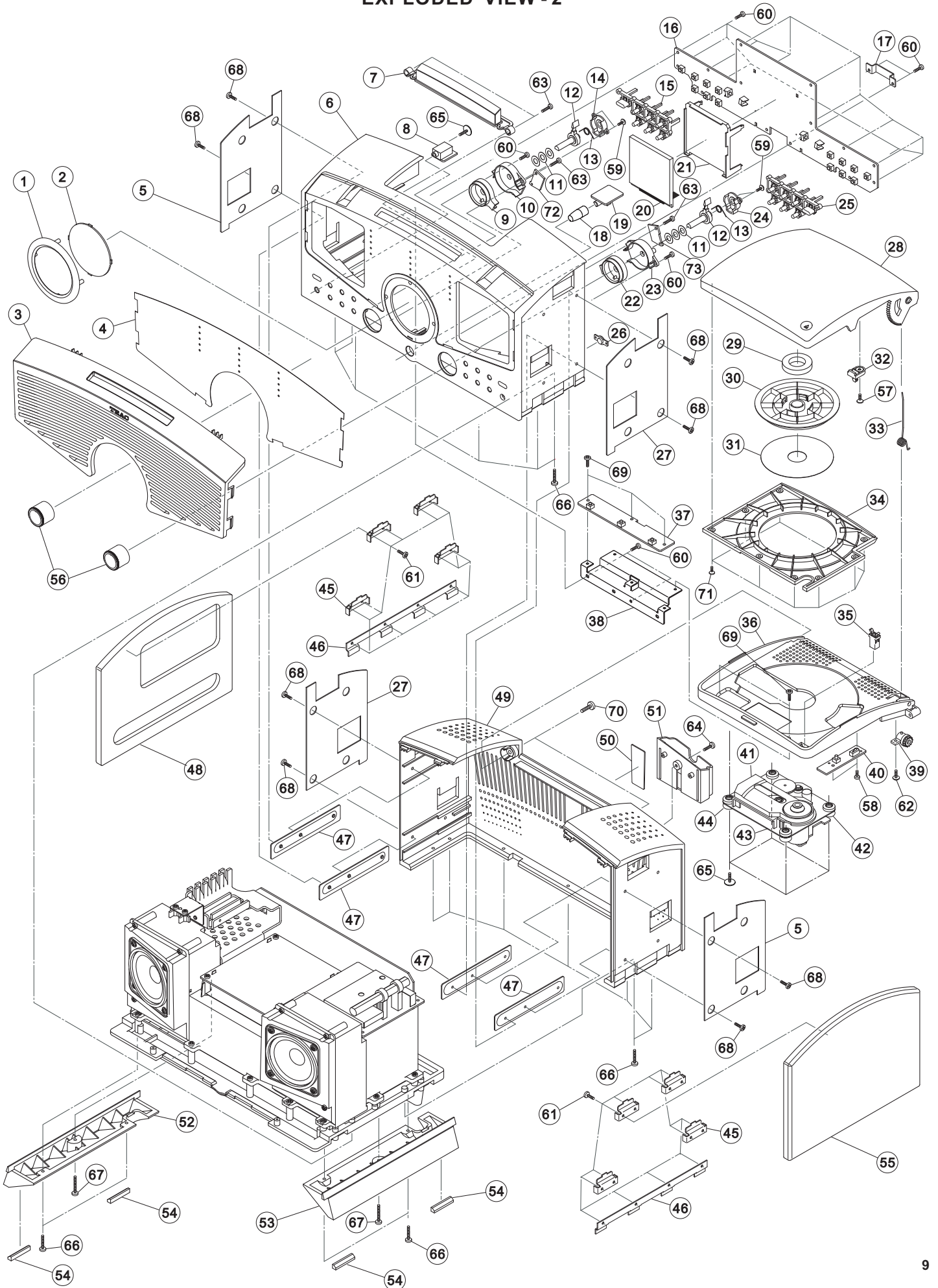


LT-1/LT-1B

EXPLODED VIEW-1

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
1-1	100-0LT12100 100-LT1B1010	CD PCB ASSY [T/C], [EX/T] CD PCB ASSY [EUR]	
1-2	011-SD900100	CD PCB SHIELD PLATE	
1-3	011-0LT10100	HEAT SINK BKT	
1-4	100-0LT02000 100-LT1B1000	MAIN PCB ASSY [T/C], [EX/T] MAIN PCB ASSY [EUR]	
1-5	011-0LT10200	TUNER PCB SHIELD PLATE	
1-6	100-0LT12020 100-LT1B1020	TUNER PCB ASSY [T/C], [EX/T] TUNER PCB ASSY [EUR]	
1-7	061-0LT10800	SPEAKER 2 INCHES 8 OHM	
1-8	035-SD900082	R/L SPEAKER EVA WASHER	
1-9	010-0LT10100	LEFT SPEAKER BOX COVER	
1-10	010-0LT10200	RIGHT SPEAKER BOX COVER	
1-11	035-00LT1042	EVA SHEET (G)	
1-12	035-SLD90052	EVA SHEET (D)	
1-13	099-39SLD902	ABSORB COTTON-C	
1-14	010-0LT10300	WOODEN BOX	
1-15	061-0LT10801	SPEAKER 3 INCHES 8 OHM	
1-16	035-00LT1052	WOOFER SPEAKER EVA WASHER	
1-17	035-SLD90032	EVA SHEET (B)	
1-18	035-SLD90022	EVA SHEET (A)	
1-19	099-39SLD901	ABSORB COTTON - A	
1-20	044-SLD90040	SPEAKER PAPER TUBE (BOTTOM)	
1-21	 010-SD900600	CORD STOP	
1-22	001-0LT10100 001-0LT10300	BOTTOM CABINET [T/C], [EUR] BOTTOM CABINET [EX/T]	
1-23	011-SD900401	TRANSFORMER BKT	
1-24	 084-SD900200  084-SD900100  084-SD900700	TRANSFORMER UL 120V/60HZ [T/C] TRANSFORMER VDS 230V/50HZ [EUR] TRANSFORMER 120/ 230 [EX/T]	
1-25	 087-00000007  087-00000027  087-00000001	AC CORD UL [T/C] AC CORD UL [EX/T] AC CORD UL [EUR]	
1-26	023-13006032	SCREW 3x6MM PB ZMC	
1-27	021-13008032	SCREW 3x8MM PT ZMC	
1-28	022-23008033	SCREW 3x8MM BM BLK	
1-29	024-43010033	SCREW 3X10MM PWA BLK	
1-30	021-13010032	SCREW 3x10MM PT ZMC	
1-31	021-23014033	SCREW 3X14MM BT BLK	
1-32	021-44010032	SCREW 4x10MM PWT ZMC	
1-33	021-44015032	SCREW 4x15MM PWT ZMC	
1-34	021-44185032	SCREW 4x18MM PWT ZMC	

EXPLODED VIEW - 2



LT-1/LT-1B

EXPLODED VIEW-2

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
2-1	010-0LT10500	LCD LENS RING	
2-2	007-0LT10000	LCD LENS	
2-3	010-0LT10000	FRONT GRILL	
2-4	051-00LT1000	SPEAKER NET NIMERON	
2-5	035-00LT1032	SIDE PANEL CUSHION - B	
2-6	001-0LT10000	FRONT CABINET	
2-7	004-0LT10400	SNOOZE KNOB	
2-8	100-0LT12040	HEAD PHONE JACK PCB ASSY	
2-9	007-0LT10100	VOLUME LENS - L	
2-10	010-0LT10700	SW COVER - L	
2-11	012-02120612	PVC WASHER 12x6.1x0.2MM	
2-12	009-28000000	TUNER/VOLUME SWITCH LEVER	
2-13	031-28000010	VOLUME SPRING	
2-14	010-SD900800	TUNER SPRING COVER	
2-15	004-0LT10300	CD CONTROL KEY	
2-16	100-0LT12010	CONTROL PCB ASSY	
2-17	011-0LT10600	BBS KNOB BRACKET	
2-18	004-0LT10500	BASS VOLUME KNOB	
2-19	100-0LT12090	WOOFER VR PCB ASSY	
2-20	080-00LT1021	LCD DISPLAY	
2-21	009-0LT10200	LCD BACK LIGHT HOLDER	
2-22	007-0LT10200	TUNER LENS - R	
2-23	010-0LT10800	SW COVER - R	
2-24	010-SD900700	VOLUME SPRING COVER	
2-25	004-0LT10100	SELECTOR KEY	
2-26	007-0LT10300	RC SENSOR COVER	
2-27	035-00LT1022	SIDE PANEL CUSHION - A	
2-28	006-0LT10000	CD DOOR	
2-29	052-SLD90000	CD MIGNET	
2-30	010-SD900500	CD CLAMPER	
2-31	051-SLD90000	CD CLAMPER HIMERON (A)	
2-32	010-0LT10400	CD DOOR CATCH	
2-33	031-0LT10010	CD DOOR SPRING	
2-34	010-0LT10900	CD DOOR COVER	
2-35	010-SD901200	CD DOOR LOCK	
2-36	002-0LT10000	CD TRAY	
2-37	100-0LT12050	SNOOZE PCB ASSY	
2-38	011-0LT10300	CD BRACKET	
2-39	008-0GP18000	GEAR DUMPER ASSY	
2-40	100-0LT12030	CD SWITCH PCB ASSY	
2-41	009-00800000	CD PICK UP COVER	
2-42	037-0LT10200	CD RUBBER CUSHION - PINK	
2-43	039-SD901210	CD MECHA - SONY	
	039-LT980130	CD MECHA - SAMSUNG	
2-44	037-0LT10100	CD RUBBER CUSHION - BLACK	
2-45	011-0LT10500	SIDE PANEL BRACKET - B	
2-46	011-0LT10400	SIDE PANEL BRACKET - A	
2-47	011-0LT10000	CABINET BKT	
2-48	016-0LT10100	SIDE BOARD - L [T/C],[EX/T]	
	016-LT1B0100	SIDE BOARD - L [EUR]	

EXPLODED VIEW-2

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
2-49	001-0LT10200	REAR CABINET [T/C]	
	001-0LT10400	REAR CABINET [EX/T]	
	001-LT1B0100	REAR CABINET [EUR]	
2-50	015-0LT10100	REAR CABINET PVC SHEET	
2-51	003-0LT10200	HANDSET HOLDER	
2-52	009-0LT10000	STAND - L	
2-53	009-0LT10100	STAND - R	
2-54	037-0LT10000	RUBBER FOOT	
2-55	016-0LT10200	SIDE BOARD - R [T/C],[EX/T]	
	016-LT1B0200	SIDE BOARD - R [EUR]	
2-56	004-0LT10000	VOLUME/TUNER KNOB	
2-57	023-33006033	SCREW 3x6MM KB BLK HD	
2-58	023-13006032	SCREW 3x6MM PB ZMC	
2-59	023-42606032	SCREW 2.6x6MM PWB ZMC	
2-60	021-13008032	SCREW 3x8MM PT ZMC	
2-61	024-23008033	SCREW 3x8MM BA BLK	
2-62	023-43008033	SCREW 3x8MM PWB BLK	
2-63	021-13010032	SCREW 3x10MM PT ZMC	
2-64	021-23010031	SCREW 3x10MM BT NI	
2-65	021-43010032	SCREW 3x10MM PWTZMC	
2-66	021-23014033	SCREW 3x14MM BT BLK	
2-67	021-23020033	SCREW 3x20MM BT BLK	
2-68	022-93008033	SCREW 3x8MM CM BLK	
2-69	022-23008033	SCREW 3x8MM BM BLK	
2-70	023-24012033	SCREW 4x12MM BB BLK	
2-71	023-32606031	SCREW 2.6x6MM KB ZMC	
2-72	100-0LT12070	TUNER LED PCB ASSY	
2-73	100-0LT12080	VOLUME LED PCB ASSY	

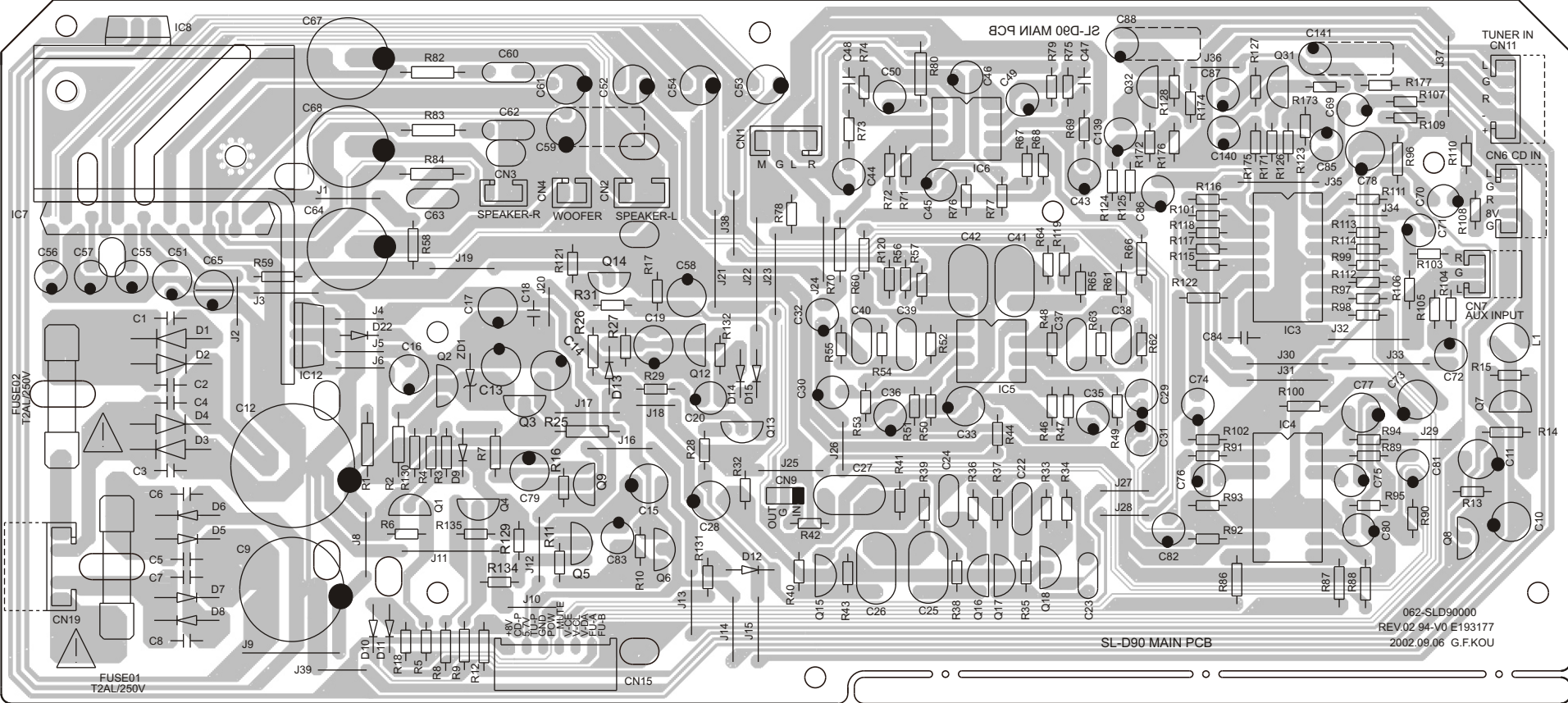
LT-1/LT-1B

5 PC BOARDS AND PARTS LIST

MAIN PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	100-0LT02000	MAIN PCB ASSY [T/C],[EX/T]	
	100-LT1B1000	MAIN PCB ASSY [EUR]	
	062-SLD90000	MAIN PCB	
C64,67,68	⚠ 072-30100251	CE, 25V 1000UF	
C9	⚠ 072-30220251	CE, 25V 2200UF	
C12	⚠ 072-30470251	CE, 25V 4700UF	
CN1	082-10440100	CONNECTOR 4P P=2.5MM	
CN2	082-10340100	CONNECTOR 3PIN P=2.5MM	
CN3,9	082-10300100	CONNECTOR 3PIN P=2MM	
CN4	082-10240100	CONNECTOR 2PIN P=2.5MM	
CN6	082-20500100	CONNECTOR 5PIN P=2MM	
CN11,19	082-20540100	CONNECTOR 5PIN P=2.5MM	
CN15	082-21250100	FPC CONNECTOR 12PIN P=1.25MM	
D1-4	⚠ 077-10539201	DIODE IN5392	
D5-8	⚠ 077-10400201	DIODE IN4002	
D9-15,22	077-00414801	DIODE IN4148	
FUSE01,02	⚠ 090-22520022	FUSE T2AL 250V [EX/T],[EUR]	
	⚠ 090-22520023	FUSE SLA 2A 250V [T/C]	
IC3	075-00405201	IC-TC4052BP	
IC4	075-00926001	IC-TC9260P	
IC5,6	075-01521808	IC-BA15218	
IC7	075-00821841	IC-TA8218AH	
IC8	075-00780801	IC-AN7808	
IC12	075-00780501	IC-KIA7805PI	
L1	078-06301952	FM COIL D3x19.5Tx0.5MM	
Q1,2,4,5,8, Q12-18	076-00C94500	TR-2SC945	
Q3	076-C2001L00	TR-2SC2001L	
Q6,9	076-00A73300	TR-2SA733	
Q7	076-00B54400	TR-2SB544F	
ZD1	077-3011B20H	ZENER DIODE 10V HZ11B2	

MAIN PCB

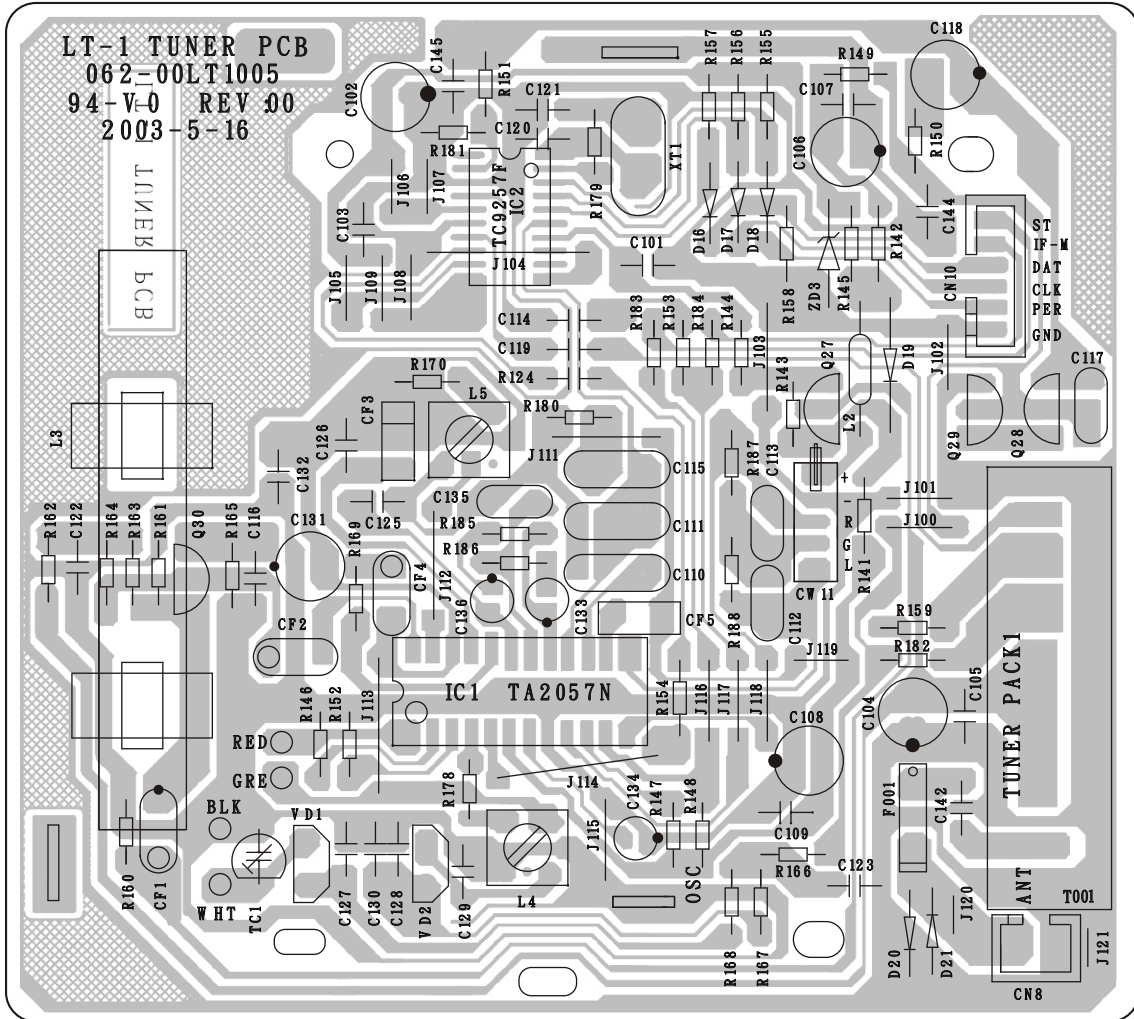


LT-1/LT-1B

TUNER PCB ASSY


REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	100-0LT12020	TUNER PCB ASSY [T/C],[EX/T]	
	100-LT1B1020	TUNER PCB ASSY [EUR]	
	062-00LT1005	TUNER PCB	
	056-10080001	FERRITE BAR 10X80MM	
CN10	082-10600100	CONNECTOR 6PIN P=2MM	
CF1,2	081-31070001	CER.FILTER L10.7MA5-A	
CF3	081-04500000	CER.FILTER SFU450B	
CF4	093-11070003	CERAMIC FILTER JT10.7MG57-A	
CF5	093-A4560001	RESONATOR B456F16	
D16-21	077-00414801	DIODE - 1N4148	
F001	054-0GP18000	FM ANT FILTER GFMB3	
IC1	075-00205701	IC-TA2057N	
IC2	075-09257F21	IC-TC9257F	
L2	095-10220001	INDUCTOR 220UH	
L3	096-D2930010	AM COIL 68:20T	
L4	079-D2930210	AM OSC COIL - RED	
L5	079-D2800011	AM IFT COIL - YELLOW	
Q27	076-00A73300	TR-2SA733	
Q28,29,30	076-00C94500	TR-2SC945	
TC1	073-00020022	TRIMMER CAP 20PF	
T001	055-SLD90000	TUNER PACK - 88-108MHZ	
VD1,VD2	077-50014901	VAR-DIODE ISV149	
XT1	093-04500000	CRYSTAL 4.500MHZ	
ZD3	077-3005B20H	ZENER DIODE 5.2V	

TUNER PCB



LT-1/LT-1B

CD PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARK
	100-0LT12100	CD PCB ASSY [T/C],[EX/T]	
	100-LT1B1010	CD PCB ASSY [EUR]	
	062-00LT1003	CD PCB	
C230	 072-30220101	CE, 10V 2200UF	
CN5	082-21250100	FPC CONNECTOR 12PIN P=1.25MM	
CN12	082-23050100	FPC CONNECTOR 30PIN P=1.25MM	
CN16	082-20400100	CONNECTOR 4PIN P=2MM	
CN17	082-10600100	CONNECTOR 6PIN P=2MM	
CN18	082-21600305	FPC CONNECTOR 16PIN P=1MM	
D201-207	077-00414801	DIODE IN4148	
IC9	075-094A0931	IC-TC94A09F-202	
IC10	075-00209001	IC-TA2092N	
IC11	075-00215301	IC-TA2153FN	
L9,10	095-00100001	INDUCTOR 10UH	
Q201	076-00B54400	TR-2SB544F	
Q202	076-00A73300	TR-2SA733	
Q203	076-00C94500	TR-2SC945	
XT2	093-A0750002	CRYSTAL 75KHZ	
XT3	093-11693440	CRYSTAL 16.9344MHZ	

LT-1/LT-1B

CONTROL PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARK
	100-0LT12010	CONTROL PCB ASSY	
	062-00LT1001	CONTROL PCB	
LCD1	080-00LT1021	LCD DISPLAY	
Q301-303	076-00C94500	TR-2SC945	
Q304	076-C2001L00	TR-2SC2001L	
SW01,04-10,012, SW014-018	063-0GP28020	TACT SW H=5MM	
SW02,03,011,013	063-D2800020	TACT SW SKHHALM	
U01	083-00LT1000	RECEIVER SENSOR	

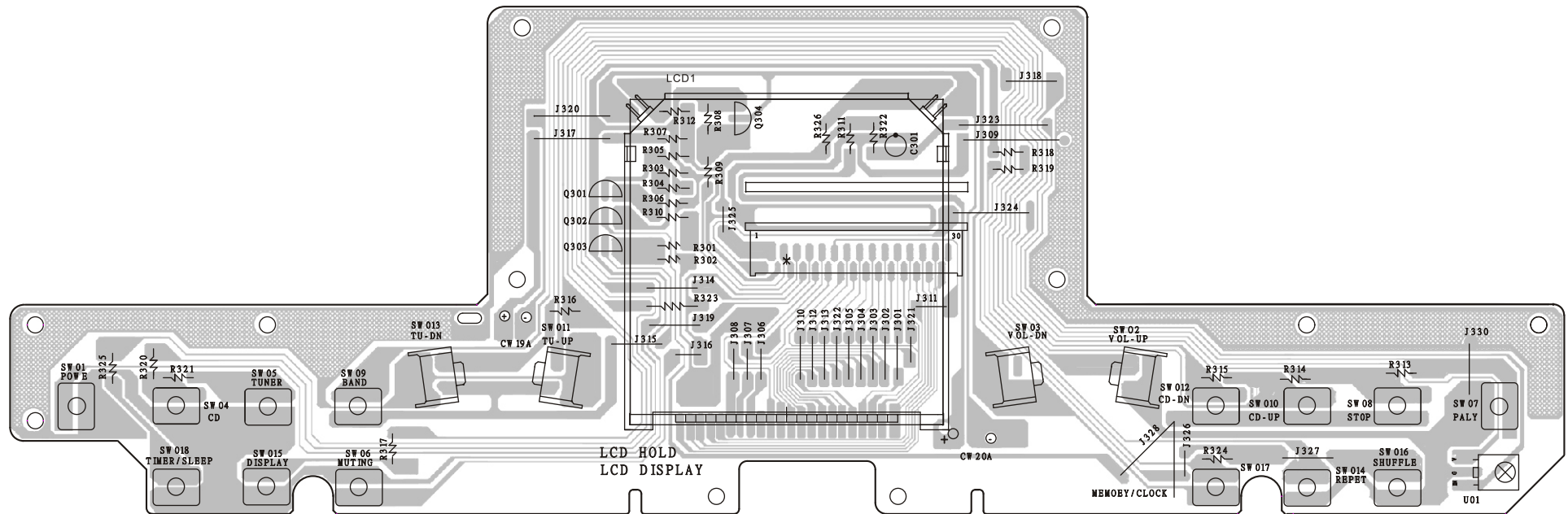
TUNER LED PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARK
	100-0LT12070	TUNER LED PCB ASSY	
LED01	094-06030502	TUNER LED PCB LED 5MM-BLUE	

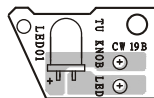
VOLUME LED PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARK
	100-0LT12080	VOLUME LED PCB ASSY	
LED03	094-06030502	VOLUME LED PCB LED 5MM-BLUE	

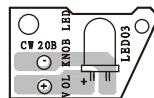
CONTROL PCB



TUNER LED PCB



VOLUME LED PCB



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SNOOZE PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARK
	100-0LT12050	SNOOZE PCB ASSY SNOOZE PCB	
SW019,021	063-SLD90000	TACT SW H=4.3MM	
SW020	063-SLD90001	TACT SW H=5MM	

WOOFER VR. PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARK
	100-0LT12090	WOOFER VR.PCB ASSY WOOFER VR.PCB	
VR1	069-0LT11000	VOLUME 50KB	

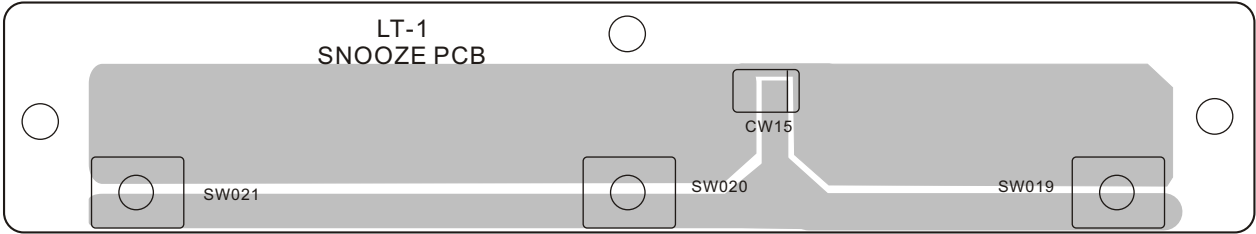
CD SWITCH PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARK
	100-0LT12030	CD SWITCH PCB ASSY CD SWITCH PCB	
SW022	063-SLD80400	CD DOOR ON/OFF SW	
SW023	063-SLD80800	TACT SW H=7.5MM	

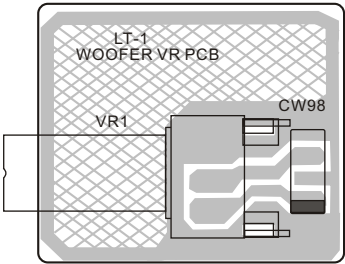
PHONE JACK PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARK
	100-0LT12040	PHONE JACKPCB ASSY PHONE JACK PCB	
JK01	064-35020101	HEAD PHONE JACK 3.5MM	

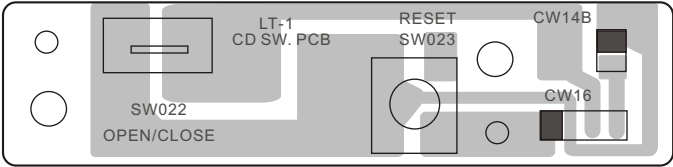
SNOOZE PCB



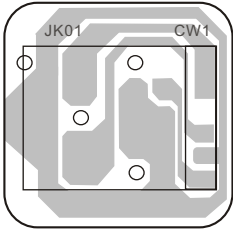
WOOFER VR. PCB



CD SW. PCB

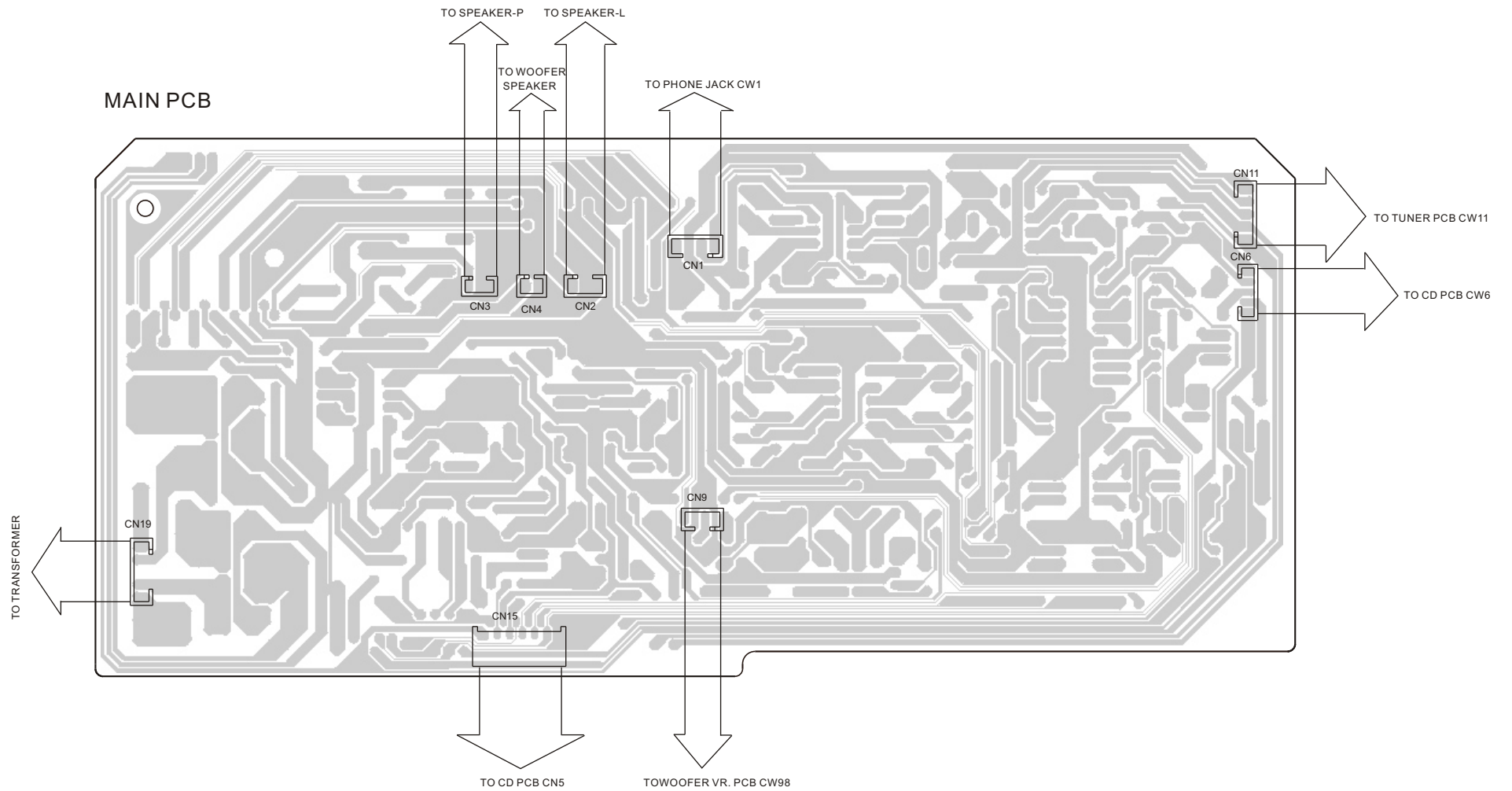


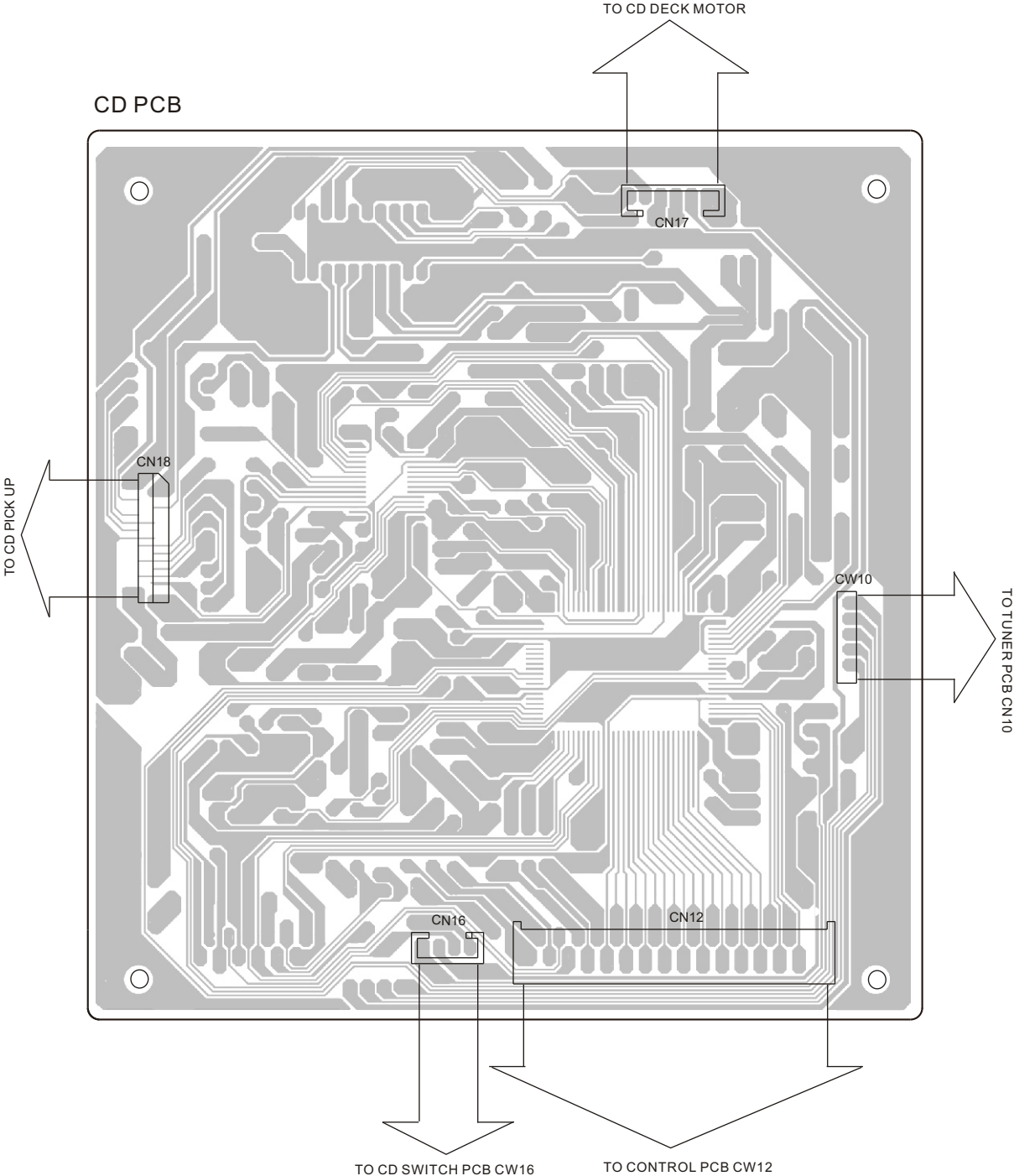
PHONE JACK PCB



LT-1/LT-1B

6 WIRING DIAGRAM





LT-1/LT-1B

7 INCLUDED ACCESSORIES

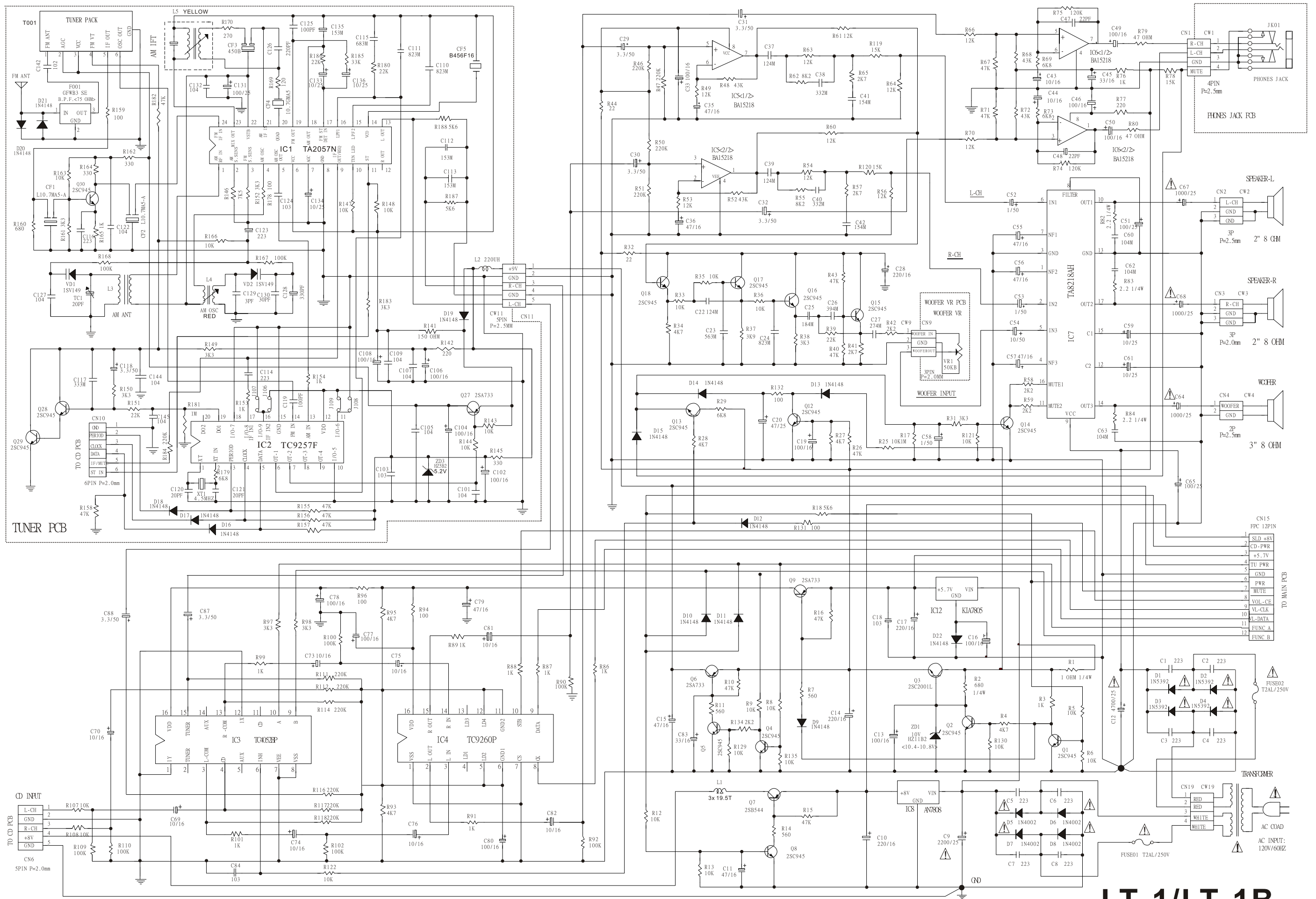
INCLUDED ACCESSORIES

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	046-00LT1000	INSTRUCTION BOOK - ENG [T/C]	
	046-00LT1010	INSTRUCTION BOOK - S/P [EX/T]	
	046-LTIB0000	INSTRUCTION BOOK - E/F/G/H//S [EUR]	
	100-0LT12060	REMOTE CONTROL RC-910	

LT-1/LT-1B

TEAC

TEAC CORPORATION	3-7-3 Nakacho, Musashino-shi, Tokyo 180-8550, Japan Phone:(0422)52-5081
TEAC AMERICA, INC.	7733 Telegraph Road, Montebello, California 90640 Phone: (323)726-0303
TEAC CANADA LTD.	5939 Wallace Street, Mississauga, Ontario L4Z 1Z8, Canada Phone: (905)-890-8008
TEAC MEXICO, S.A.De C.V.	Campesinos 184,Col. Granjas Esmeralda, 09810, Mexico Phone: (525)-581-5500
TEAC UK LIMITED	5 Marlin House, Croxley Business Park, Watford, Hertfordshire, WD18 8TE, U.K. Phone: 01923-819699
TEAC DEUTSCHLAND GmbH	Bahnstrasse 12, 65205 Wiesbaden-Erbenheim, Germany Phone:0611-71580
TEAC FRANCE S.A.	17, Rue Alexis-de-Tocqueville, CE 005 92182 Antony Cedex, France Phone:(1)42.37.01.02
TEAC NEDERLAND BV	Oeverkruid 15,NL-4941 W Raamsdonksveer, Nederland Phone:0162-510210
TEAC BELGIUM NV/SA.	c/o TEAC NEDERLAND BV, Oeverkruid 15, NL-4941 W Raamsdonksveer, Nederland Phone:+31-162-510860
TEAC ITALIANA S.p.A.	Via C, Cantu 11, 20092 Cinisello Balsamo, Milano, Italy Phone:02-66010550
TEAC AUSTRALIA PTY., LTD.	280 William Street, Melbourne VIC 3000, Australia Phone:(03)9672-2400
A.B.N.	80 005 408 462

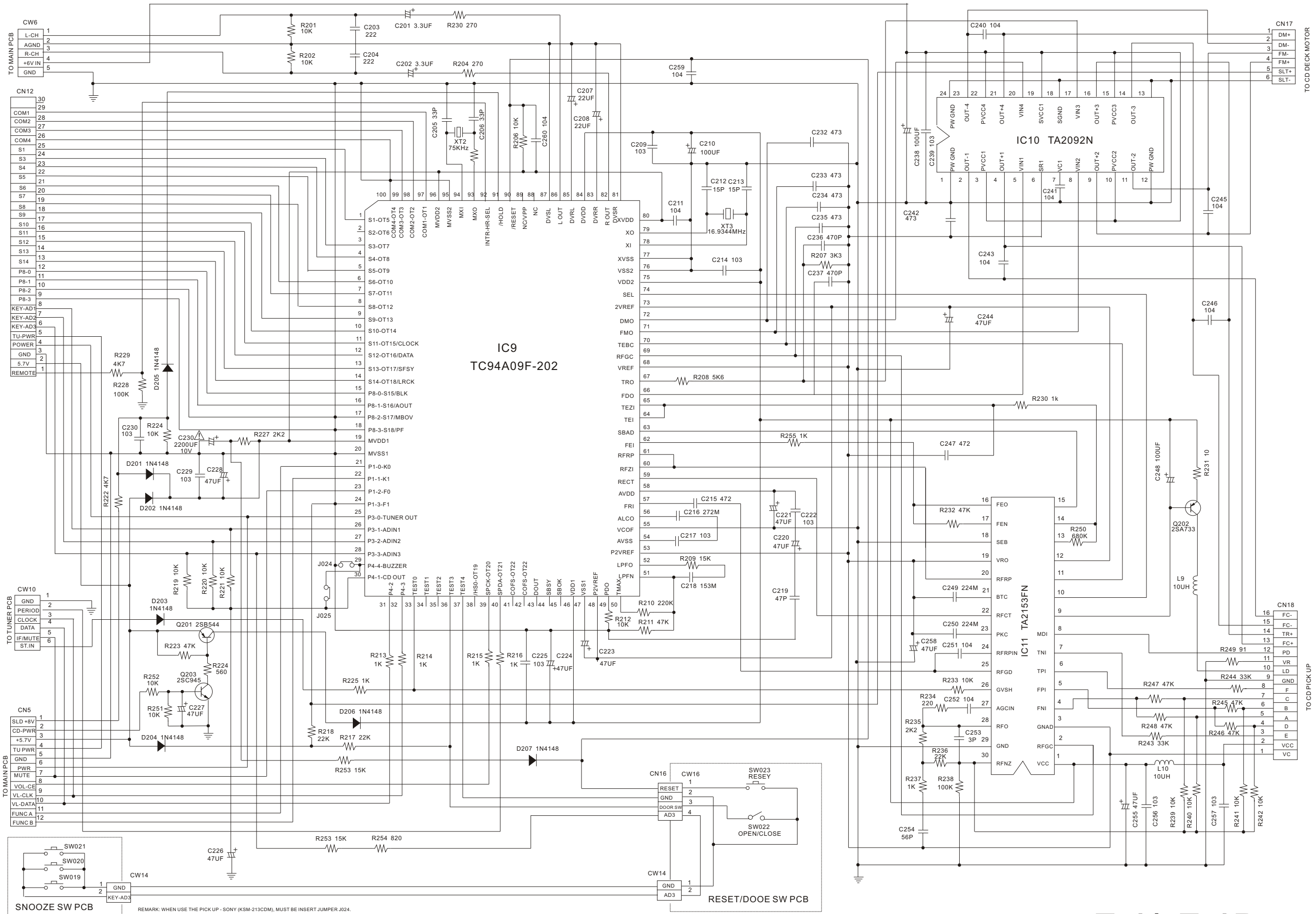


REMARK: UL/CSA(T/C) - INSERT JUMPER J106,J109 ONLY.
 REMARK: VDE(EUR) - INSERT JUMPER J107,J108 ONLY.

LT-1/LT-1B

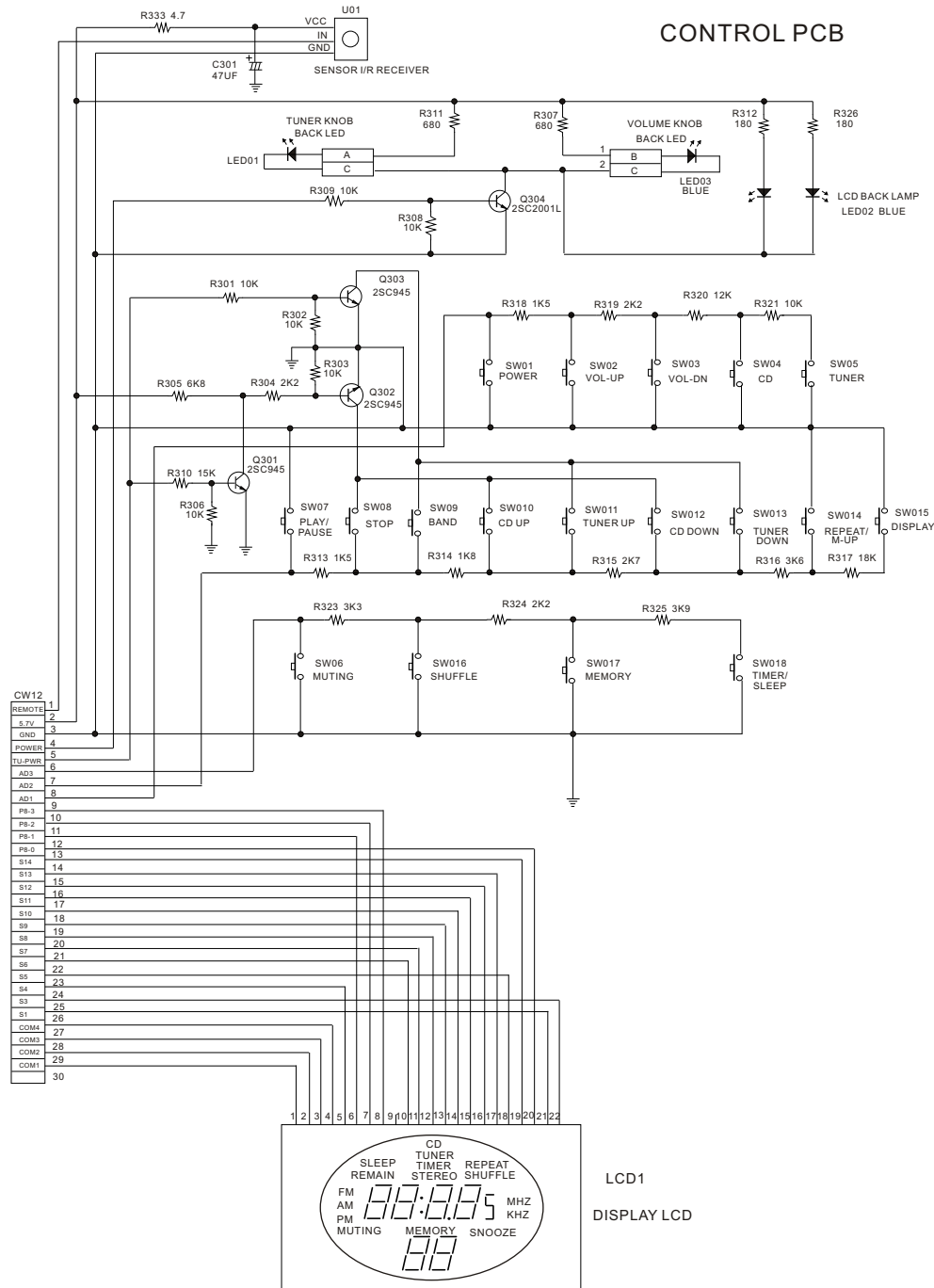
CD/RADIO WITH REMOTE CONTROL

CD PCB

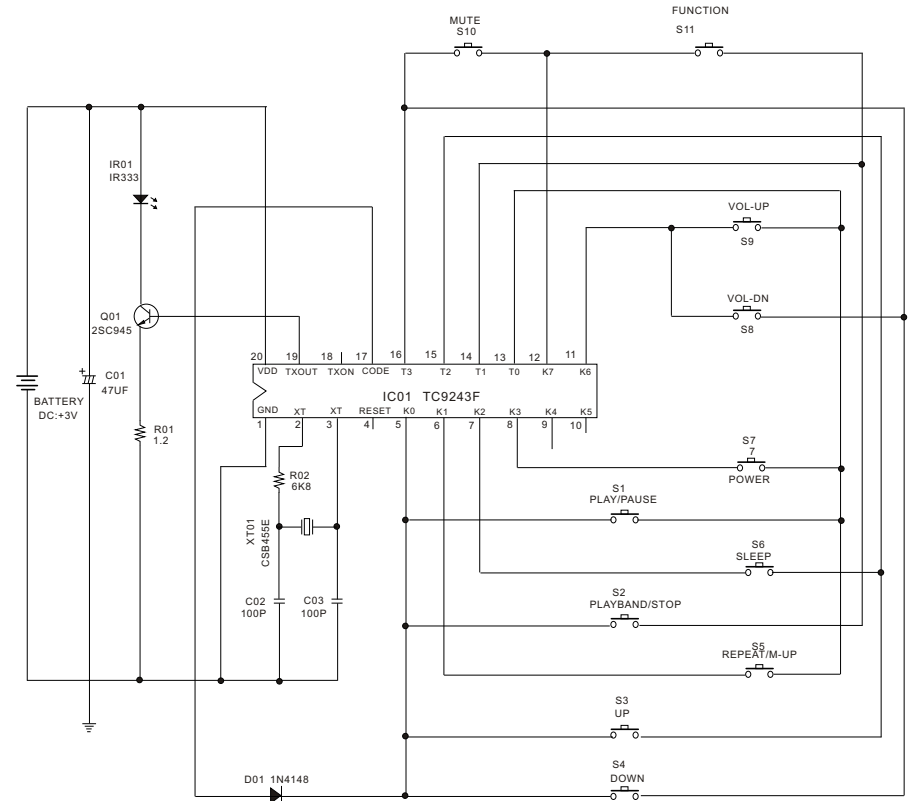


LT-1/LT-1B
CD/RADIO WITH REMOTE CONTROL

CONTROL PCB



HANDSET REMOTE CONTROL PCB



LT-1/LT-1B

CD/RADIO WITH REMOTE CONTROL