

# TEAC

## SERVICE MANUAL

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# ST-C150

## PLL TUNING SUITCASE TYPE TURNTABLE

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### 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.

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# ST-C150

## 1 SAFETY INFORMATION

### SAFETY INFORMATION

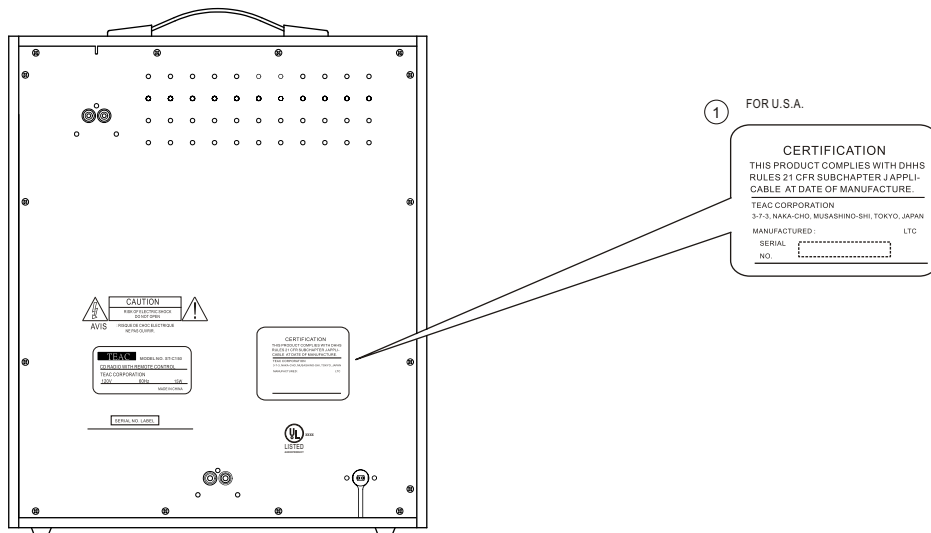
This product has been designed and manufactured according to FDA regulations " title 21, CFR, chapter 1, subchapter J, based on The Radiation Control for Health and Safety Act of 1968" and is classified as class 1 laser product. There is not hazardous invisible laser radiation during operation because 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.



## 2 SPECIFICATIONS

### Amplifier Section

Frequency Response : 60 Hz to 20 kHz

### Tuner Section

FM Frequency : 87.5 MHz to 108.0 MHz

AM Frequency : 530 kHz to 1710 kHz

### Record Player Section

Motor : DC servo motor

Drive System : Belt Drive

Speed : 33-1/3 rpm, 45 rpm, 78 rpm

Wow & Flutter : Less than 0.35% (WTD)

Catridge Type : Ceramic Stereo Catridge

Stylus : STL-153

### SPEAKER SYSTEM Section

Type : 1-ways

Impedance : 4 ohms

### GENERAL

Power Requirements: 120v , 60Hz

Power Consumption: 15 W

Dimension (W x H x D): Main Unit 379 x 463 x 249 mm  
Speaker 136 x 452 x 230 mm

Weight: (net) Main Unit 7.95 kg  
Speaker 2.85 kg x 2

Standard Accessories: Owner's Manual x 1  
Warranty Card x 1  
Adaptor 45 rpm 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.

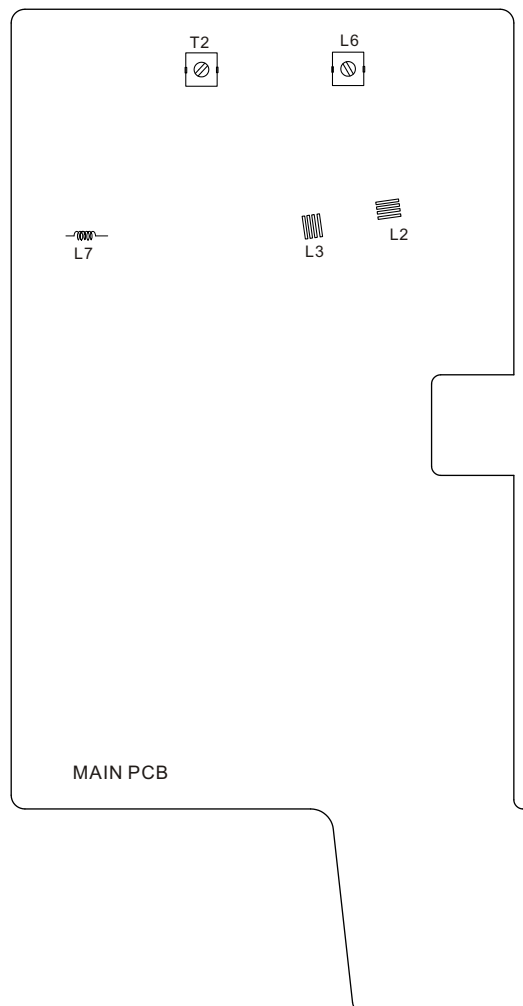
#### 3-1-1 FM adjustment

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

#### 3-1-2 AM adjustment

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

### 3-2 Adjustment and Test Points



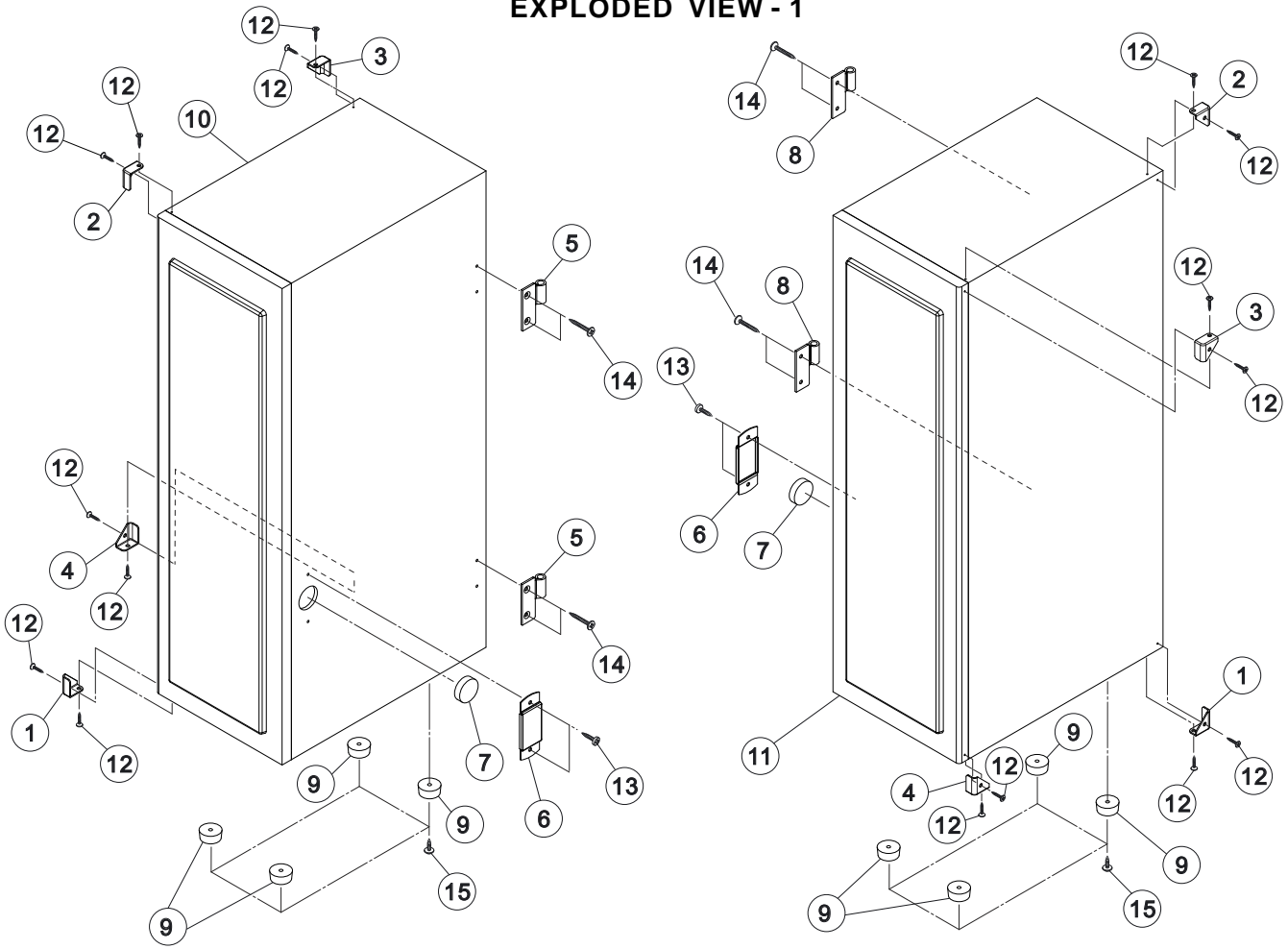
## 3-2-1 FM/AM alignment chart

ITEM	SG SETTING	TUNER SETTING	ADJUSTMENT POINT	ADJUSTMENT
<b>FM</b>				
<b>1. IF adjustment</b>	10.7MHz	108MHz	L7	Adjust for max. output.
<b>2. FM band</b>	87.5MHz 1kHz, +/-22.5kHz dev.	87.5MHz	L3	
	108MHz 1kHz, +/-22.5kHz dev.	108MHz	PVC CT003	
<b>3. Tracking</b>	90MHz 1kHz, +/-22.5kHz dev.	90MHz	L2	Adjust for max. output and best waveform.
	106MHz 1kHz, +/-22.5kHz dev.	106MHz	PVC CT002	
	Repeat step 3			
<b>AM</b>				
<b>1. IF adjustment</b>	455 kHz 1kHz, 30% mod	1710kHz	T2	Adjust for max. output.
<b>2. AM band</b>	530kHz 1kHz, 30% mod	530kHz	L6	Adjust for max. output.
	1710kHz 1kHz, 30% mod	1710kHz	PVC CT004	
<b>3. Tracking</b>	600kHz 1kHz, 30% mod	600kHz	AM ANT COIL	Adjust for max. output and best waveform.
	1400kHz 1kHz, 30% mod	1400kHz	PVC CT001	
	Repeat step 3			

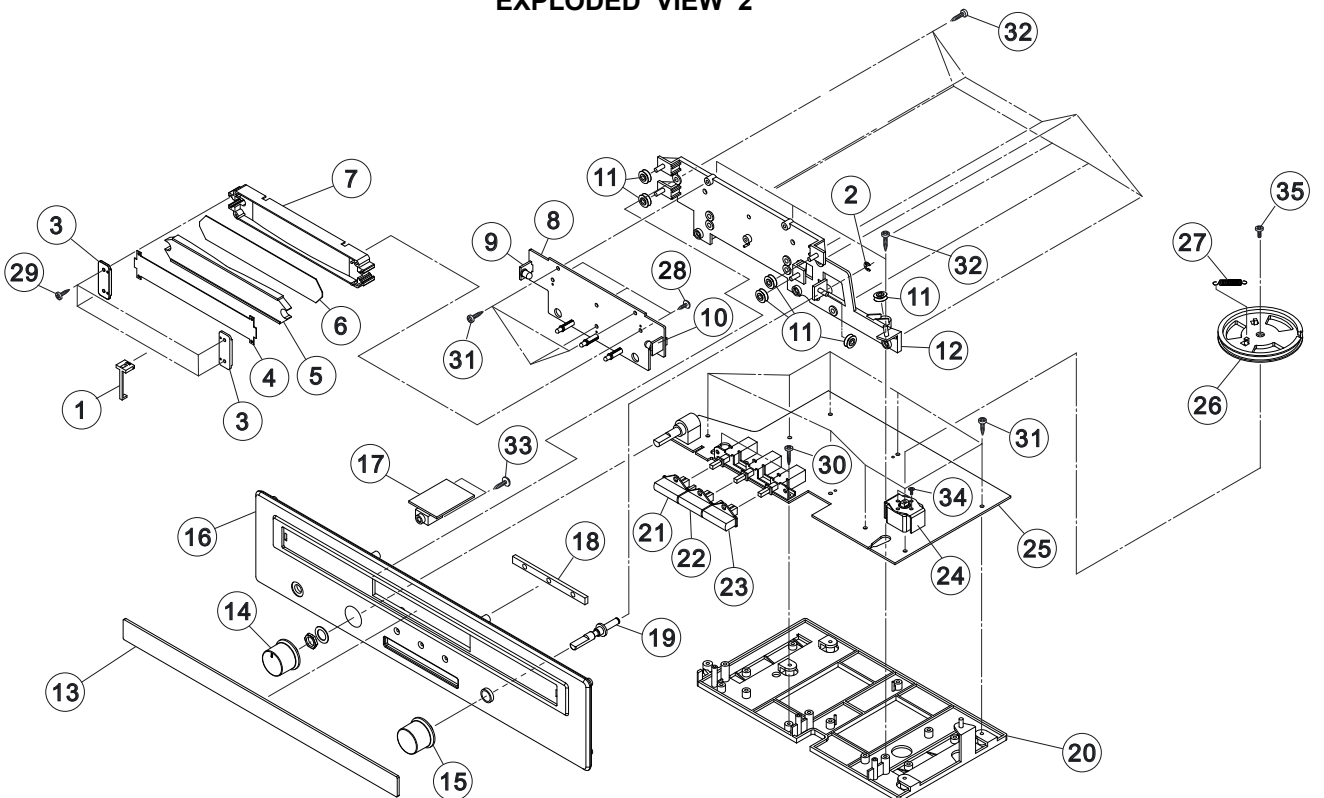
# ST-C150

## 4 EXPLODED VIEWS AND PARTS LIST

### EXPLODED VIEW - 1



### EXPLODED VIEW 2



## EXPLODED VIEW-1

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
1-1	61-11ST15000620	CORNER - FRONT - R	
1-2	61-11ST15000520	CORNER - FRONT - L	
1-3	61-11ST15000720	CORNER - REAR 2	
1-4	61-11ST15000421	CORNER - REAR 1	
1-5	61-57ST15000220	LOOSE LEAF (A) - L	
1-6	61-11ST15000220	MAGNET COVER	
1-7	32-052201550020	MAGNET 20X5.5MM	
1-8	61-57ST15000420	LOOSE LEAF (A) - R	
1-9	58-263172750020	RUBBER FOOT D17.5MM	
1-10	58-73ST15000020	WOODEN BOX - SPEAKER - L	
1-11	58-73ST15000120	WOODEN BOX - SPEAKER - R	
1-12	66-140520180121	SCREW TA/KH 2X8MM (BLACK)	
1-13	66-140230210121	SCREW TA/BH 3X10MM (BLACK)	
1-14	66-140530216121	SCREW TA/KH 3X16MM (BLACK)	
1-15	66-150830180121	SCREW TB/WH 3X8MM (BLACK)	

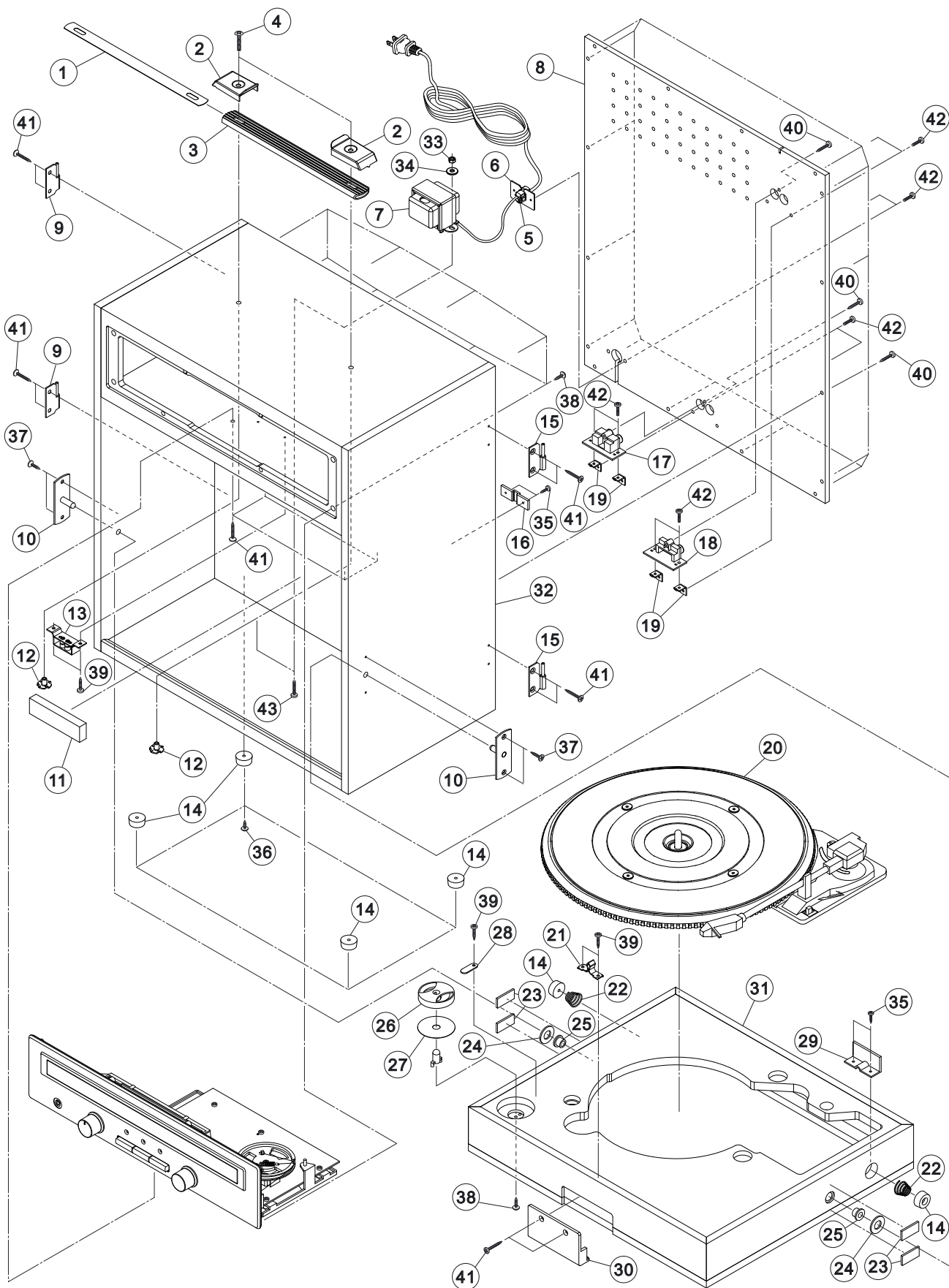
# ST-C150

## EXPLODED VIEW-2

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
2-1	56-75ST15003000	POINTER	
2-2	68-412300000000	RING (E) TYPE 3MM	
2-3	56-69ST1500B000	COVER PLATE	
2-4	57-26ST15000020	FILTER SHEET 127.3x21.2X0.5MM	
2-5	56-57ST15010010	BACKLIGHT LENS	
2-6	57-26ST15000120	FILTER SHEET 126.4x24.8MM	
2-7	56-07ST15019000	LCD BRACKET	
2-8	05-04ST15000000	DISPLAY PCB ASSY	
2-9	05-17ST15000000	LED PCB ASSY (1)	
2-10	05-17ST15000010	LED PCB ASSY (2)	
2-11	56-76ST1500B000	DIAL PULLEY	
2-12	56-07ST1502B000	DIAL BRACKET	
2-13	56-57ST15000010	DIAL LENS	
2-14	56-54ST1501A000	VOLUME KNOB	
2-15	56-54ST1500A000	TUNING KNOB	
2-16	56-04ST15018010	FRONT CABINET	
2-17	05-09ST15000000	H.P JACK PCB ASSY	
2-18	58-58ST15000120	ROUND RUBBER	
2-19	56-79ST1500B000	TUNING SHAFT	
2-20	56-07ST15008000	MAIN PCB HOLDER	
2-21	56-54ST1504A000	PHONE KNOB	
2-22	56-54ST1502A000	AM BAND KNOB	
2-23	56-54ST1503A000	FM BAND KNOB	
2-24	27-010000130120	PVC T126/4MM	
2-25	05-01ST15000000	MAIN PCB ASSY	
2-26	56-25ST1500B000	DIAL DRUM	
2-27	61-96ST15000020	TENSION SPRING DIA 4MM	
2-28	66-140826160321	SCREW TA/WH 2.6X6MM	
2-29	66-140226180121	SCREW TA/BH 2.6X8MM (BLACK)	
2-30	66-140226210321	SCREW TA/BH 2.6X10MM	
2-31	66-140330180321	SCREW TA/PH 3X8MM	
2-32	66-140330210321	SCREW TA/PH 3X10MM	
2-33	66-141430210321	SCREW TA/WH 3X10MM	
2-34	66-120526140321	SCREW MS/KH 2.6X4MM	
2-35	66-120226150321	SCREW MS/BH 2.6X5MM	




## EXPLODED VIEW 3



# ST-C150

## EXPLODED VIEW-3

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
3-1	61-11ST15000320	STAINLESS STEEL PLATE	
3-2	61-11ST15000120	HANDLE HOLDER	
3-3	58-24ST15000020	HANDLE RUBBER TUBE	
3-4	66-121140218121	SCREW MS/RH 4X18MM (BLACK)	
3-5	43-500000002020	AC CORD BUSHING	
3-6	61-22SG19000020	BUSHING MOUNTING PLATE	
3-7	 18-303ST1500190	TRANSFORMER EI41 120V/60HZ	
3-8	58-70ST15000020	REAR CABINET	
3-9	61-57ST15000320	LOOSE LEAF (B) - L	
3-10	61-80ST15000120	SHAFT 2 HOLDER	
3-11	58-58V820000120	RUBBER 75X20X10MM	
3-12	61-11ST15000020	HANDLE FIXING PLATE	
3-13	61-57ST15000120	LOCK BASE	
3-14	58-263172750020	RUBBER FOOT DIA17.5MM	
3-15	61-57ST15000520	LOOSE LEAF (B) - R	
3-16	56-69ST1501B000	PLATE	
3-17	05-09ST15000010	AUX OUT PCB ASSY	
3-18	05-08ST15000000	SPEAKER OUT PCB ASSY	
3-19	61-25SCD6600020	CONTACT PLATE 11X11X8MM	
3-20	20-60ST15000000	PHONOGRAPH MECHANISM #10B	
3-21	61-57ST15000020	LOCK PIN	
3-22	61-96ST15000120	PRESS SPRING	
3-23	58-58ST15000020	RUBBER CUSHION 25X12X2MM	
3-24	58-26ST15000020	HARD RUBBER FOOT D20X10X1.5MM	
3-25	61-80ST15000020	SHAFT 2	
3-26	100-S300-069	45 RPM ADAPTOR	
3-27	57-08ST15000120	PVC PLATE 22X8X1MM (BLACK)	
3-28	56-79ST1501B000	SHAFT ADAPTOR	
3-29	56-69ST1501B000	AC CORD PLATE	
3-30	56-41ST1500B000	HANDLE - PLAY BOX	
3-31	58-73ST15000320	WOODEN BOX - PLAY	
3-32	58-73ST15000220	WOODEN BOX - MAIN	
3-33	67-021300000020	NUT M3MM	
3-34	68-112323101000	METAL WASHER 3.2X10X1MM	
3-35	66-140226180121	SCREW TA/BH 2.6X8MM (BLACK)	
3-36	66-150830180121	SCREW TB/WH 3X8MM (BLACK)	
3-37	66-140530210121	SCREW TA/KH 3X10MM(BLACK)	
3-38	66-141430210321	SCREW TA/WH 3X10MM	
3-39	66-140230212121	SCREW TA/BH 3X12MM (BLACK)	
3-40	66-140230214121	SCREW TA/BH 3X14MM (BLACK)	
3-41	66-140530216121	SCREW TA/KH 3X16MM (BLACK)	
3-42	66-140230210121	SCREW TA/BH 3X10MM (BLACK)	
3-43	66-120830216321	SCREW MS/WH3X16MM	

## 5 PC BOARDS AND PARTS LIST

## MAIN PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	05-01ST15000000	MAIN PCB ASSY	
	48-01ST15000221	MAIN PCB	
	40-213120215120	AM ANT COIL 120:15T	
C87	⚠ 26-017220850121	E.CAP 2200UF/25V	
CF1	31-026455000120	CER. FILTER KTP455Y	
CF2	31-028107000120	CER. FILTER LT10.7MA5-A	
CON1	43-012200130120	WAFER 2MM 3PIN	
CON2,3,4	43-012200150120	WAFWE 2MM 5PIN	
J5	43-012200140120	WAFER 2MM 4PIN	
D1,2,3,9,10	12-BAS32L000021	DIODE - SMD BAS32L	
D4,5,6,7	⚠ 12-1N4001000021	RECTIFIER DIODE 1N4001	
FU1	⚠ 46-015200300010	AXIAL FUSE 2A/250V	
L1,2	40-351450135020	FM COIL 4.5X3.5X0.8MM	
L3	40-351500125020	FM COIL 5X2.5X0.8MM	
L6	40-019100002020	IFT 10MM - 910 (RED)	
L7	38-013100050020	AXIAL INDUCTOR 10UH	
PVC	27-010000130120	PVC T126/4MM (TOMY)	
Q1-5,7,8,10,12,13	11-MMBT39040021	TR - MMBT3904LT1	
Q9	11-KSB772YS0021	TR - KSB772YS	
Q11	11-KSD882Y00021	TR - KSD882Y	
SW	41-192201000120	PUSH BUTTON SWITCH PBS-AE-001	
T2	40-01A049004020	IFT 10MM - A049 (YELLOW)	
T3	40-017400003020	IFT 10MM - 740 (ORANGE)	
U1	16-TA8227P00021	IC - TA8227P	
U2	16-TA2111N00021	IC - TA2111N	
VOL	22-051305500020	ROTARY VOLUME R1220SGAH2A 503FJ	
ZD2	12-011390320121	ZENER DIODE 3.9V	
ZD3	12-012100320121	ZENER DIODE 10V	



**DISPLAY PCB ASSY**

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	05-04ST15000000	DISPLAY PCB ASSY	
	48-04ST15000221	DISPLAY PCB	
LED2,3,4	13-011303011120	LED LAMP 3MM (ORANGE)	
Q6	11-MMBT39040021	TR - MMBT3904LT1	
ZD1	12-011510320121	ZENER DIODE 5.1V	
ZD5	12-011560320121	ZENER DIODE 5.6V	

**SPEAKER OUT PCB ASSY**

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	05-08ST15000000	SPEAKER OUT PCB ASSY	
	48-08ST15000221	SPEAKER OUT PCB	
	43-451200006120	RCA JACK 2P TC58-345-32	

**H.P JACK PCB ASSY**

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	05-09ST15000000	H.P JACK PCB ASSY	
	48-09ST15000220	H.P JACK PCB	
	43-431360006020	PH 3.6MM Jy353507001	

**AUX OUT PCB ASSY**

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	05-09ST15000010	AUX OUT PCB ASSY	
	48-09ST15001220	AUX PCB	
	43-4512000001020	RCA JACK 2P PJB-12V01	

**LED PCB ASSY (1)**

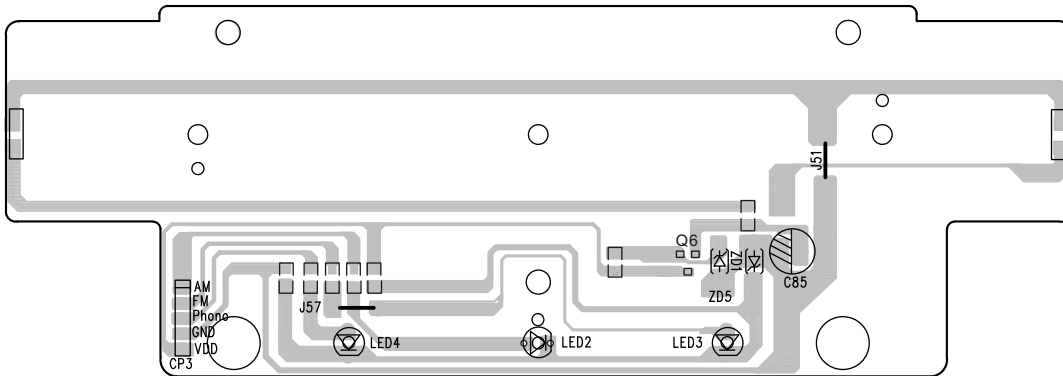
REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	05-17ST15000000	LED PCB ASSY (1)	
	48-17ST15000220	LED PCB	
	13-011506122011	LED LAMP 5MM (WHITE)	

**LED PCB ASSY (2)**

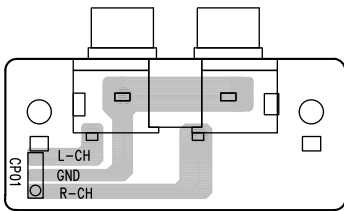
REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	05-17ST150000010	LED PCB ASSY (2)	
	48-17ST15001220	LED PCB	
	13-011506122011	LED LAMP 5MM (WHITE)	

# ST-C150

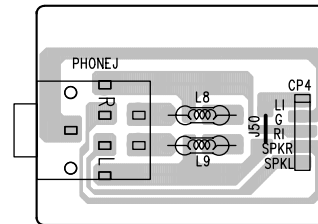
DISPLAY PCB



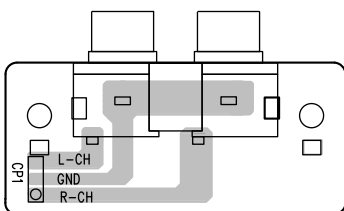
SPEAKER OUT PCB



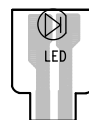
H.P JACK PCB



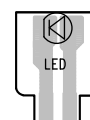
AUX JACK PCB



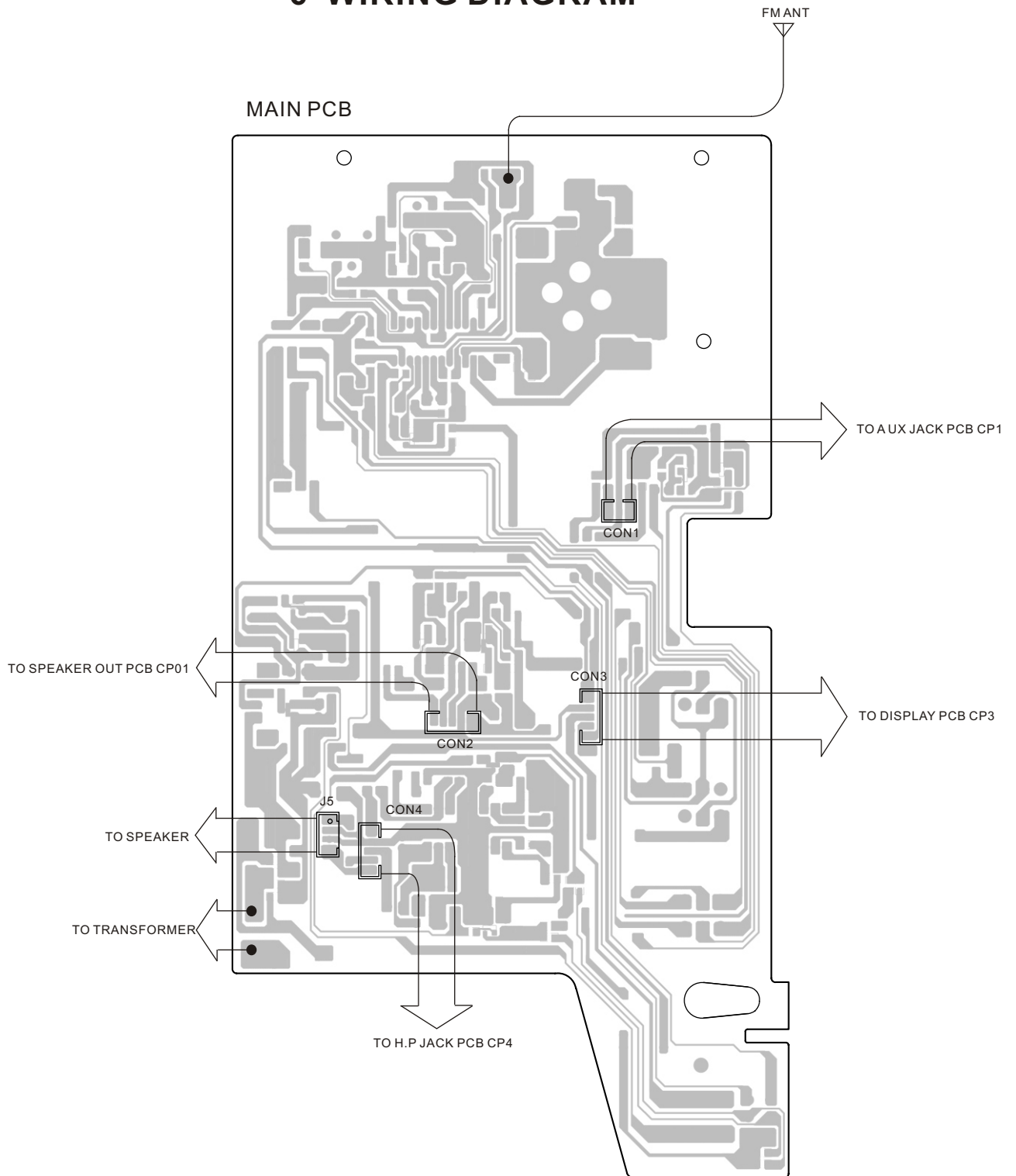
LED PCB 1



LED PCB2



6 WIRING DIAGRAM



# ST-C150

## 7 INCLUDED ACCESSORIES

### INCLUDED ACCESSORIES

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	100-S300-069	ADAPTOR 45 rpm	
	77-20ST15000020	INSTRUCTION MANUAL - E/F	



# ST-C150

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# TEAC

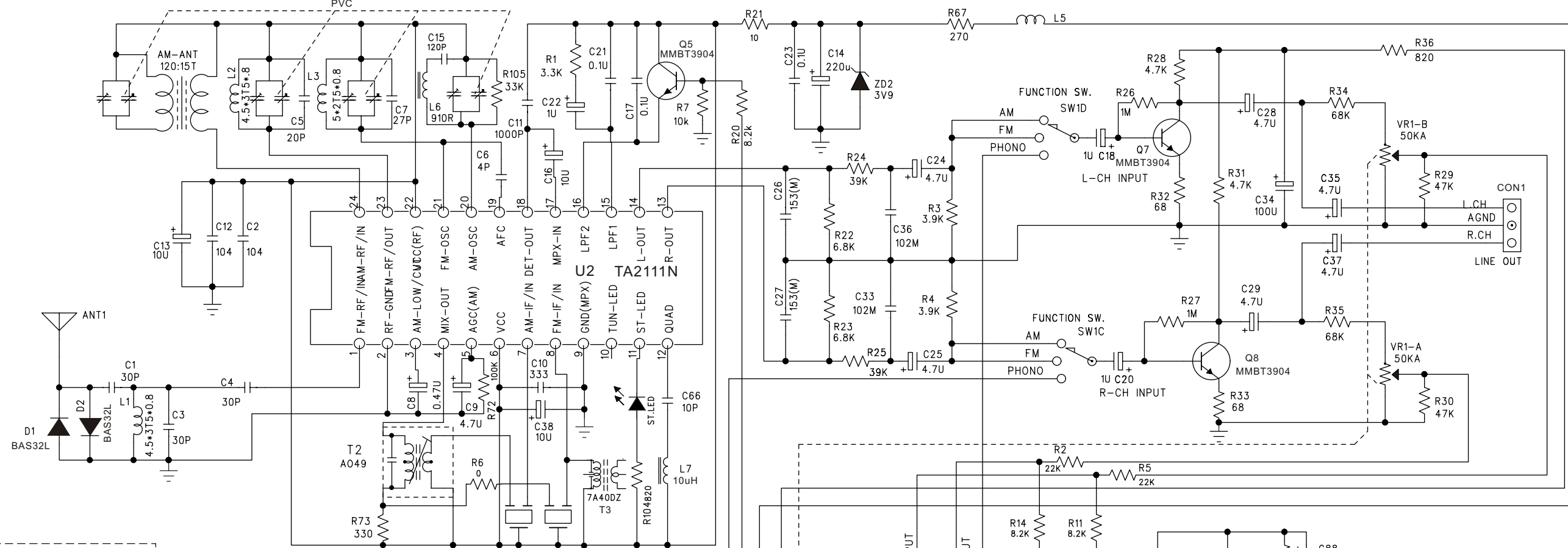
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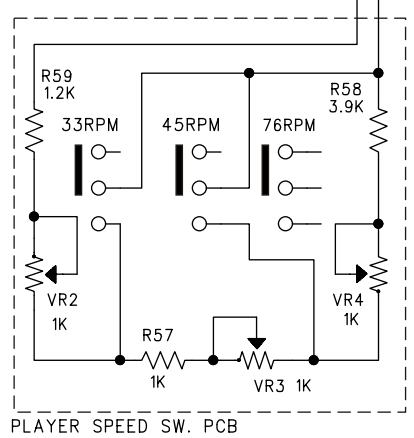
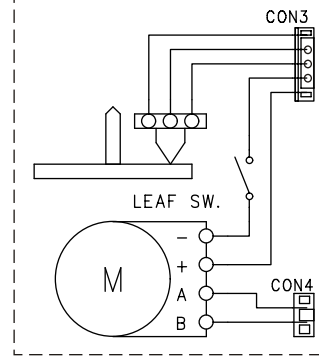
<b>TEAC CORPORATION</b>	3-7-3 Nakacho, Musashino-shi, Tokyo 180-8550, Japan Phone:(0422)52-5081
TEAC AMERICA, INC.	7733 Telegraph Road, Montebello, California 90640 Phone: (323)726-0303
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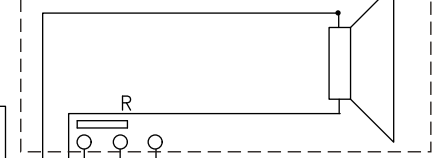
MAIN PCB



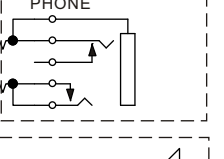
PHONO PLAYER UNIT



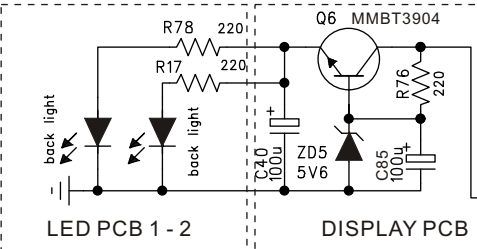
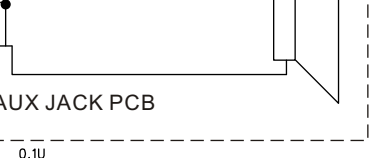
SPEAKER OUT PCB 4" 8 OHM 3W



H.P. JACK PCB



AUX JACK PCB



# ST-C150

## PLL TUNING

### SUITCASE TYPE TURNTABLE