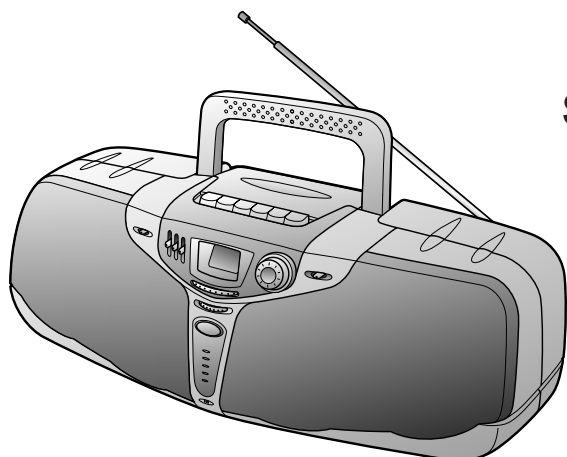


SHARP SERVICE MANUAL

No. S6143QT90W///



STEREO RADIO CASSETTE RECORDER

MODEL QT-90W

• In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified should be used.

CONTENTS

	Page
SPECIFICATIONS	1
VOLTAGE SELECTION	1
AC POWER SUPPLY CORD AND AC PLUG ADAPTOR	2
NAMES OF PARTS	2
HOW TO SET THE POINT "0" ON TUNER DIAL MEMORY	2
DISASSEMBLY	3
REMOVING AND REINSTALLING THE MAIN PARTS	4
ADJUSTMENT	6
NOTES ON SCHEMATIC DIAGRAM	9
TYPES OF TRANSISTOR AND LED	9
VOLTAGE	9
SCHEMATIC DIAGRAM	10
WIRING SIDE OF P.W.BOARD	12
BLOCK DIAGRAM OF IC	14
PARTS GUIDE/EXPLODED VIEW	

SPECIFICATIONS

■ General

Power source	AC 110-127/220-240 V, 50/60 Hz DC 15 V ["D" size (UM/SUM-1, R20 or HP-2) battery x 10]
Power consumption	40 W
Output power	MPO: 36 W (18 W + 18 W) (AC operation, 10 % T.H.D) RMS: 20 W (10W + 10W) (DC operation, 10 % T.H.D)
Speakers	8 cm (3-1/8") full range speaker x 4
Output terminal	Headphones: 16 - 50 ohms (recommended: 32 ohms)
Input terminal	Mixing microphone: 600 ohms Line input: 350 mV/47 kohms
Dimensions	Width: 520 mm (20-1/2") Height: 191 mm (7-1/2") Depth: 216 mm (8-1/2")
Weight	4.7 kg (10.4 lbs.) without batteries

Specifications for this model are subject to change without prior notice.

■ Radio

Frequency range	FM: 88 - 108 MHz SW1: 2.3 - 7.3 MHz SW2: 7.3 - 22 MHz MW: 526.5 - 1,606.5 kHz
------------------------	--

■ Tape recorder

Frequency response	60 - 12,000 Hz (Normal tape)
Signal/noise ratio	40 dB
Wow and flutter	0.3 % (WRMS)
Motor	DC 12 V electric governor
Bias system	AC bias
Erase system	Magnet erase

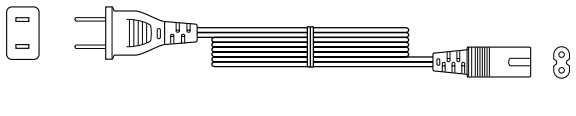
VOLTAGE SELECTION

Before operating the unit on mains, check the preset voltage. If the voltage is different from your local voltage, adjust the voltage as follows. Slide the selector with a screwdriver to the appropriate voltage number. (AC 110 - 127 V or AC 220 - 240 V)

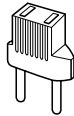
FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

AC POWER SUPPLY CORD AND AC PLUG ADAPTOR

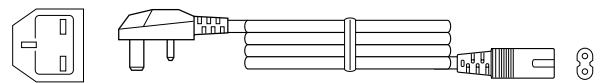
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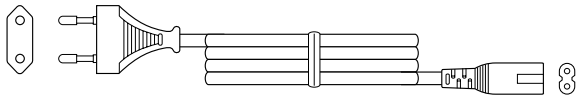
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QACCB0012AW00



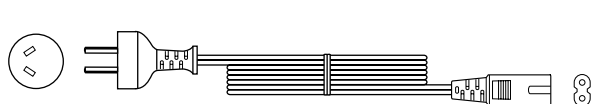
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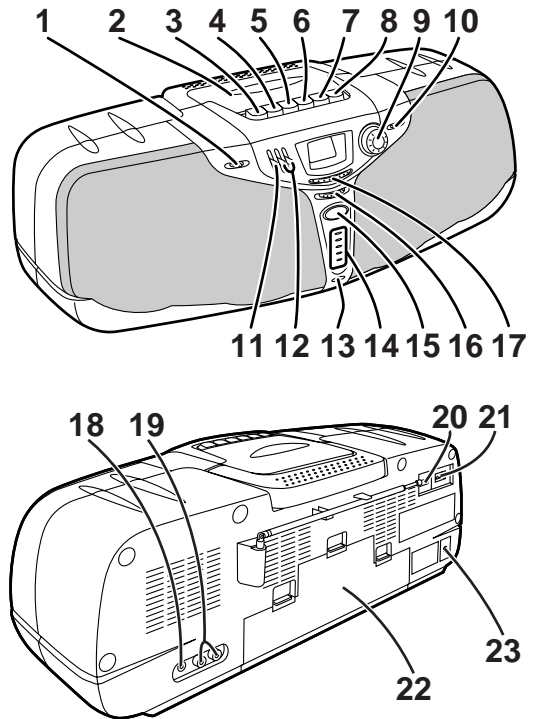


QACCL0002AW00/QACCL0008AW00



NAMES OF PARTS

1. Function/Beat Cancel Switch
2. Cassette Compartment
3. Record Button
4. Play Button
5. Rewind Button
6. Fast Forward Button
7. Stop/Eject Button
8. Pause Button
9. Volume Control
10. Band Selector
11. Extra Bass Control
12. Graphic Equalizer Controls
13. Built-in Microphone
14. Sound Level Meter
15. Surround Button
16. Fine Tuning Control
17. Tuning Control
18. Mixing Microphone Socket
19. Line Input Sockets
20. AC Voltage Selector
21. AC Input Socket
22. Battery Compartment
23. Headphone Socket



HOW TO SET THE POINT "0" ON TUNER DIAL MEMORY

1. Remove the front cabinet and main PWB. (Refer to page 3, of disassembly section.)
2. Turn the gear dial in the arrowed direction until it stops so that the "▼" mark comes to the front of main PWB.
3. When the tuning knob is set at 2, adjust it from above so that its "0" point rib comes to the right of "0" point rib of the dial drum when you face the unit.
4. Check the tuning display label by turning the tuning knob. The frequency band will be FM 88 - 108 MHz when the dial is turned counter-clockwise.
5. Reassemble the front cabinet.

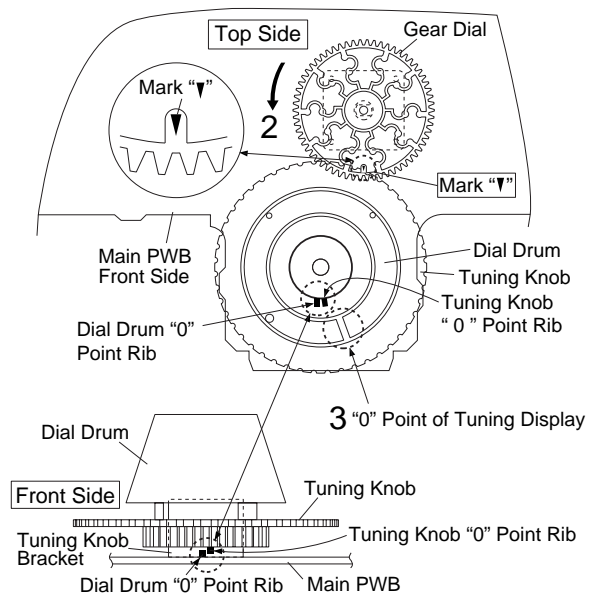


Figure 2

DISASSEMBLY

Caution on Disassembly

Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep it safe and ensure excellent performance:

1. Take cassette tape out of the unit.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need to be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Rear Cabinet	1. Battery Lid (A1) x1 2. Screw (A2) x6 3. Screw (A3) x4	3-1
2	Front Cabinet	1. Knob (B1) x1 2. Nut (B2) x1 3. Socket (B3) x4	3-1 3-2
3	Jack PWB	1. Socket (C1) x2 2. Screw (C2) x2	3-2
4	Volume PWB	1. Socket (D1) x1	3-2
5	Battery PWB	1. Socket (E1) x1 2. Hook (E2) x1	3-2
6	Headphones PWB	1. Socket (F1) x2 2. Screw (F2) x1	3-2
7	Main PWB with Tape Mechanism	1. Screw (G1) x2 2. Screw (G2) x1	3-2
8	Main PWB	1. Socket (H1) x2 2. Screw (H2) x4 3. Solder (H3) x2	3-3
9	Tape Mechanism	1. Open the cassette holder. 2. Screw (J1) x4	4-1
10	Surroun PWB	1. Screw (K1) x3	4-2
11	Graphic Equalizer PWB	1. Screw (L1) x2	4-2

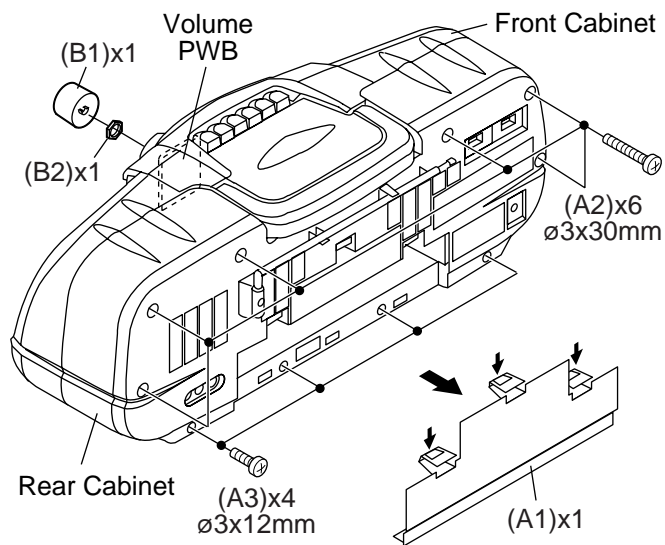


Figure 3-1

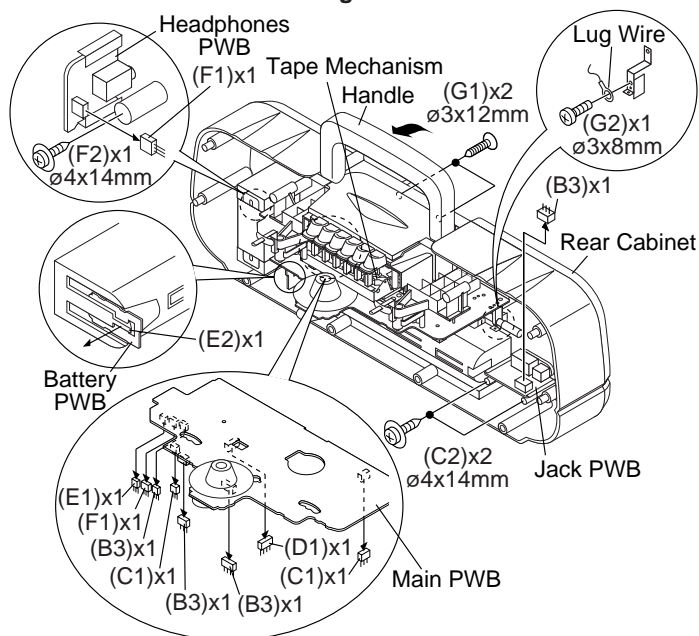


Figure 3-2

How to attach the tuning display label (See Fig. 3-4.)

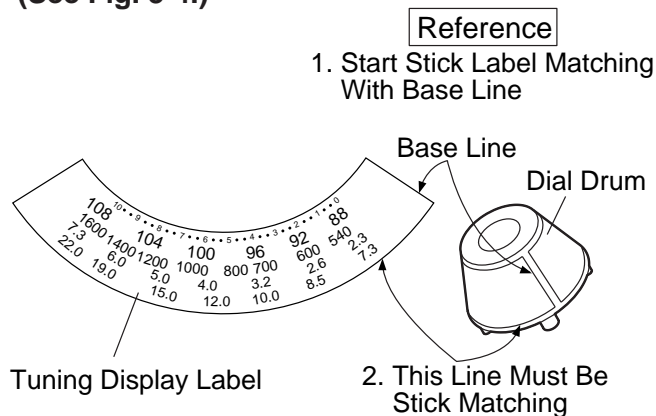


Figure 3-4

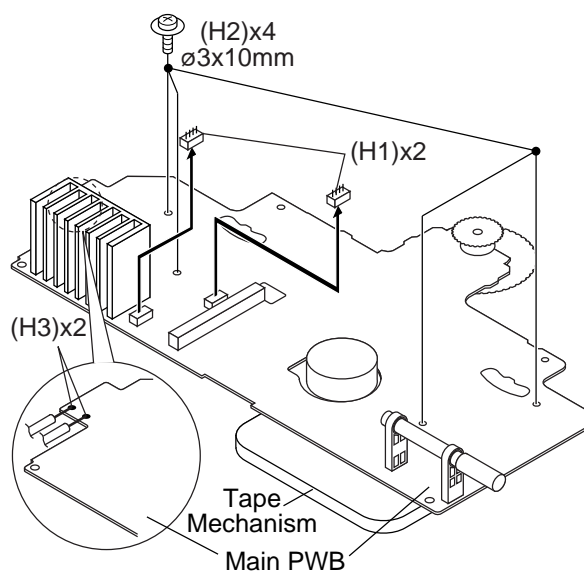


Figure 3-3

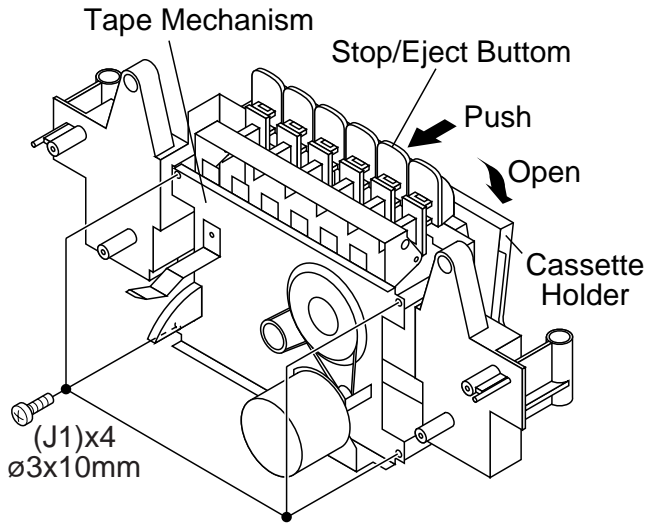


Figure 4-1

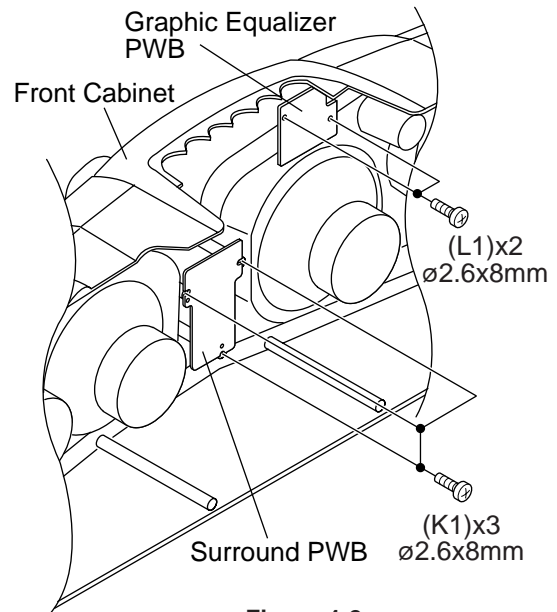


Figure 4-2

REMOVING AND REINSTALLING THE MAIN PARTS

TAPE MECHANISM SECTION

Perform steps 1 to 9 of the disassembly method to remove the tape mechanism. (See page 3.)

How to remove the record / playback and erase heads (See Fig. 4-3.)

1. Remove the screws (A1) x 2 pcs., to remove the record/playback head.
2. Remove the hooks (A2) x 2 pcs., toward the center position as shown in Fig. 4-3. and then extract the erase head upward.

Note:

After replacing the heads and performing the azimuth adjustment, be sure to apply screwlock.

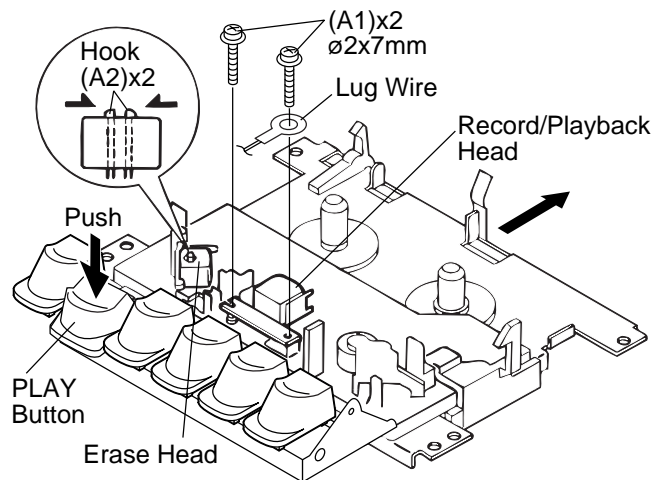


Figure 4-3

How to remove the pinch roller (See Fig. 4-4.)

1. Remove the screw (B1) x 1 pc., and remove the pinch roller upwards.

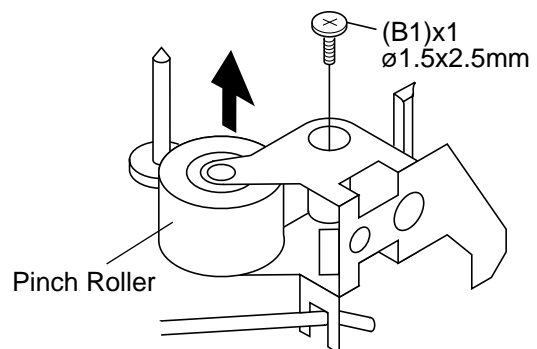


Figure 4-4

How to remove the belts (See Fig. 5-1.)

1. Remove the main belt (C1) x 1 pc., from the motor pulley.
2. Remove the FF/REW belt (C2) x 1 pc., from the REW/FF roller.
3. Put on the belts in the reverse order of removal.

Note:

When putting on the belt, ascertain that the belt is not twisted, and clean it.

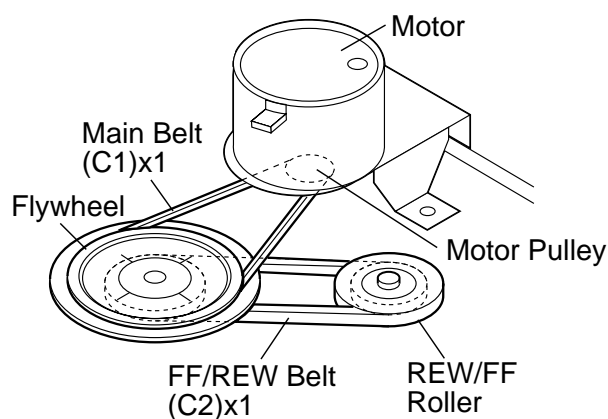


Figure 5-1

How to remove the motor (See Fig. 5-2.)

1. Remove the main belt. (See Fig. 5-1.)
2. Remove the screws (D1) x 2 pcs., to remove the motor bracket.
3. Remove the screws (D2) x 2 pcs., to remove the motor.

Note:

When mounting the motor, pay attention to the motor bracket angle.

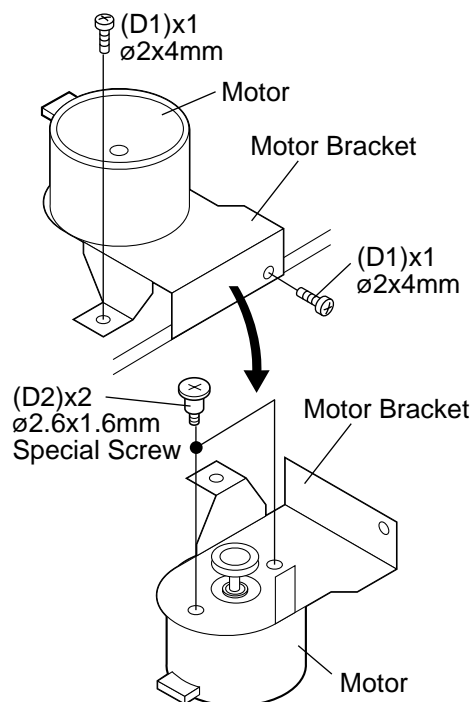


Figure 5-2

How to remove the flywheel (See Fig. 5-3.)

1. Remove the belt. (See Fig. 5-1.)
2. Remove the stop washer (E1) x 1 pc., with a small precision screwdriver to extract the flywheel from the capstan metal.

Note:

When the stop washer is deformed or damaged, replace it with a new one.

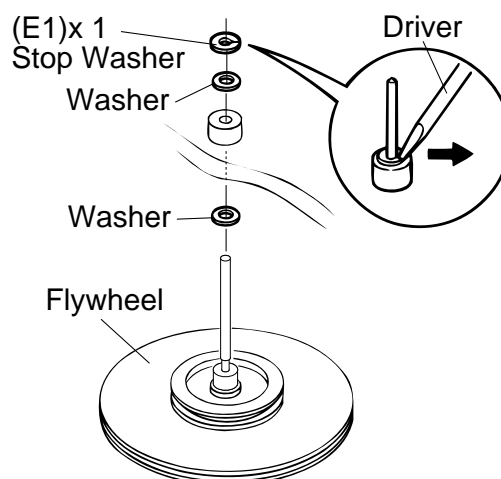


Figure 5-3

How to reinstall the parts

Install each part in the reverse order of the removal with care.

ADJUSTMENT

TUNER SECTION

fL: Low-range frequency
fH: High-range frequency

FM Section						
Step	Alignment Frequency	Test Equipment	Signal-in	Signal-out	Adjust	Remark
1	FM IF: 10.7 MHz (T108) FM DETECTION: (T106)	(1) FM IF sweep generator (2) Alignment oscilloscope (3) Power supply	Inject the IF sweep signal through 300 pF capacitor to point TP2	Signal are taken out from point TP3	Adjust T106, T108 and repeat to get best "S" curve with center at 10.7 MHz	(1) Band SW in FM. (2) VOL. & TONE control in MIN. position (3) Tune P.V.C. to high end
2	FM BAND COVERAGE fH: 108.2 MHz	(1) FM RF sweep generator (2) Alignment oscilloscope (3) Power supply	Inject the RF signal directly to point TP1	Same as step 1	Adjust P.V.C. (TC1) get MAX. output	Same as step 1
3	FM BAND COVERAGE fL: 87.4 MHz	Same as step 2	Same as step 2	Same as step 1	Adjust L103 to get MAX. output	Tune P.V.C. to low end
4	Repeat step 2, 3 until no further improvement can be made.					
5	FM TRACKING fH: 106 MHz	Same as step 2	Same as step 2	Same as step 1	Adjust P.V.C. (TC2) to get MAX. output	Tune P.V.C. to 106 MHz
6	FM TRACKING fL: 90 MHz	Same as step 2	Same as step 2	Same as step 1	Adjust L102 to get MAX. output	Tune P.V.C. to 90 MHz
7	Repeat step 5, 6 and then step 2, 3, 5, 6 until no further improvement can be made.					

FM Stereo Section						
Step	Alignment Frequency	Test Equipment	Signal-in	Signal-out	Adjust	Remark
1	VCO: 75 kHz	(1) Frequency counter (2) Power supply (3) FM Signal generator	Inject MONO signal at 98 MHz directly to point TP1 and ground	Through test circuit as Fig 6.	Adjust VR102 let Frequency counter value: 76 K ± 200 Hz.	(1) FM and stereo position (2) Tune radio to 98 MHz

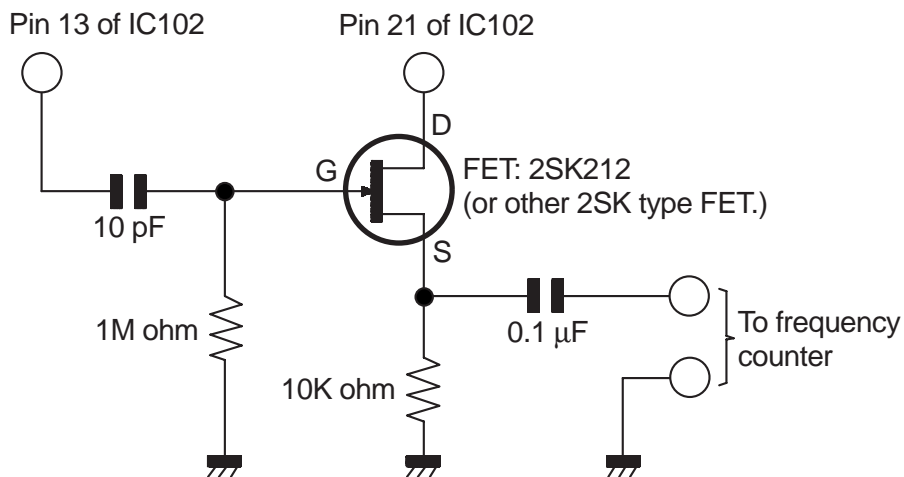


Figure 6

MW Section						
Step	Alignment Frequency	Test Equipment	Signal-in	Signal-out	Adjust	Remark
1	MW IF: 455 kHz	(1) AM IF sweep generator with loop antenna (2) Alignment oscilloscope (3) Power supply	Let the MW ANT coil close to the generator ANT.	Take out the signal from point TP4	Adjust T107 get MAX. output at 455 kHz	(1) Band SW in MW position (2) VOL. control in MIN. position (3) Tune P.V.C. to high end
2	MW TRACKING fH: 1,650 kHz	(1) MW sweep generator with antenna (2) Alignment oscilloscope (3) Power supply	Same as step 1	Same as step 1	Adjust P.V.C. (TC3) get MAX. output at 1,650 kHz	Same as step 1
3	MW BAND COVERAGE fL: 515 kHz	Same as step 2	Same as step 1	Same as step 1	Adjust T103 to get MAX. output at 515 kHz	Tune P.V.C. to low end
4	Repeat step 2, 3 until no further improvement can be made.					
5	MW BAND COVERAGE fH: 1,400 kHz	Same as step 2	Same as step 1	Same as step 1	Adjust P.V.C. (TC4) get MAX. output at 1,400 kHz	Tune P.V.C. to 1.400 kHz
6	MW TRACKING fL: 600 kHz	Same as step 2	Same as step 1	Same as step 1	Adjust L109 get MAX. output at 600 kHz	Tune P.V.C. to 600 kHz
7	Repeat step 5, 6 and then step 2, 3, 5, 6 until no further improvement can be made.					

SW1 Section						
Step	Alignment Frequency	Test Equipment	Signal-in	Signal-out	Adjust	Remark
1	SW1 BAND COVERAGE fH: 7.4 MHz	(1) SW1 sweep generator with antenna (2) Alignment oscilloscope (3) Power supply	Let the MW ANT coil close to the generator ANT. point TP1	Take out the signal from point TP4	Adjust CT102 get MAX. output at 7.4 MHz	(1) Band SW in SW1 position (2) VOL. control in MIN. position (3) Tune P.V.C. to high end
2	SW1 BAND COVERAGE fL: 2.25 MHz	Same as step 1	Same as step 1	Same as step 1	Adjust T104 get MAX. output at 2.25 MHz	Tune P.V.C. to low end
3	Repeat step 1, 2 until no further improvement can be made.					
4	SW1 TRACKING fH: 6 MHz	Same as step 1	Same as step 1	Same as step 1	Adjust CT104 get MAX. output at 6 MHz	Tune P.V.C. to 6 MHz
5	SW1 TRACKING fL: 2.6 MHz	Same as step 1	Same as step 1	Same as step 1	Adjust T101 get MAX. output at 2.6 MHz	Tune P.V.C. to 2.6 MHz
6	Repeat step 4, 5 and then step 1, 2, 4, 5 until no further improvement can be made.					

SW2 Section						
Step	Alignment Frequency	Test Equipment	Signal-in	Signal-out	Adjust	Remark
1	SW2 BAND COVERAGE fH: 22.5 MHz	(1) SW2 sweep generator (2) Alignment oscilloscope (3) Power supply	Inject the RF signal directly to point TP1	Take out the signal from point TP4	Adjust CT101 get MAX. output at 22.5 MHz	(1) Band SW in SW2 position (2) VOL. control in MIN. position (3) Tune P.V.C. to high end
2	SW2 BAND COVERAGE fL: 7.2 MHz	Same as step 1	Same as step 1	Same as step 1	Adjust T105 get MAX. output at 7.2 MHz	Tune P.V.C. to low end
3	Repeat step 1, 2 until no further improvement can be made.					
4	SW2 TRACKING fH: 19 MHz	Same as step 1	Same as step 1	Same as step 1	Adjust CT103 get MAX. output at 19 MHz	Tune P.V.C. to 19 MHz
5	SW2 TRACKING fL: 8.5 MHz	Same as step 1	Same as step 1	Same as step 1	Adjust T102 get MAX. output at 8.5 MHz	Tune P.V.C. to 8.5 MHz
6	Repeat step 4, 5 and then step 1, 2, 4, 5 until no further improvement can be made.					

QT-90W

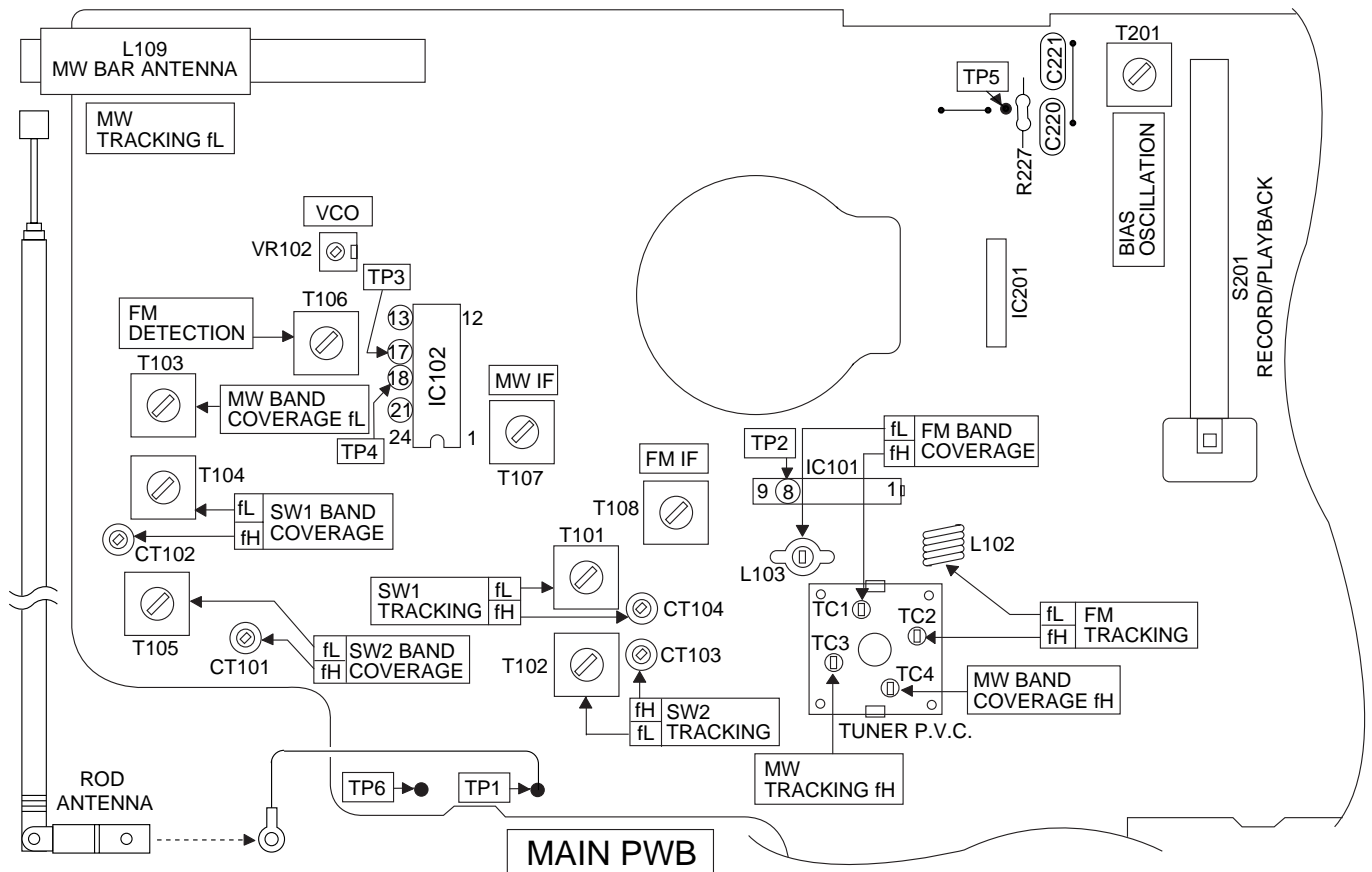


Figure 8-1 ADJUSTMENT POINTS

MECHANISM SECTION

TAPE Section					
Step	Item	Condition	Connection	Adjust	Output
1	Head adjustment	Playback test tape MTT-113 6.3 kHz	Connect VTVM and oscilloscope to speaker output	Head fixing screw (see Fig 8-3.)	Adjust to get MAX. audio output
2	Bias Frequency adjustment	Record position	Connect frequency counter to TP5 and ground	Adjust T201 (Bias Oscillation)	80 kHz \pm 1 kHz
3	Beat cancel	Record position	Same as step 3	S201 from playback to record	75 kHz \pm 0.5 kHz

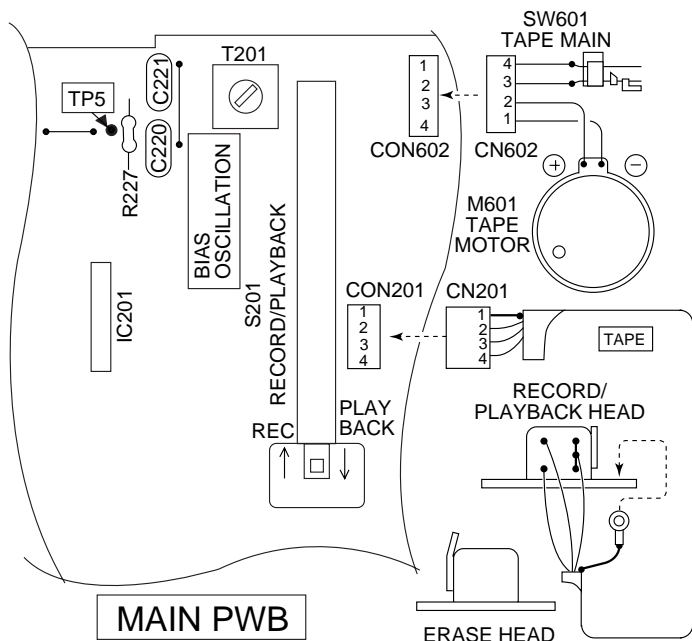


Figure 8-2 ADJUSTMENT POINTS

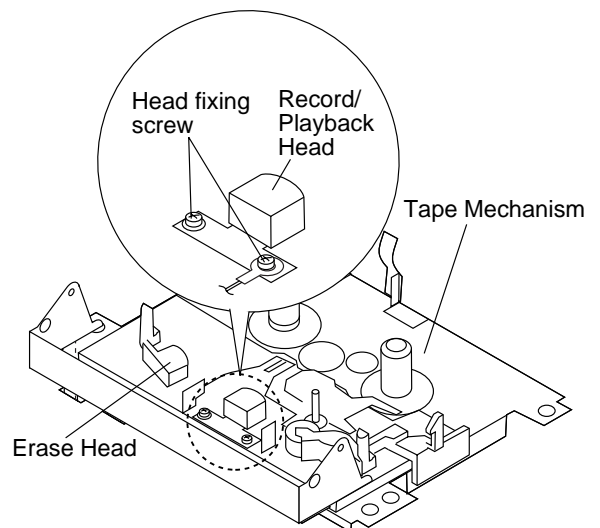


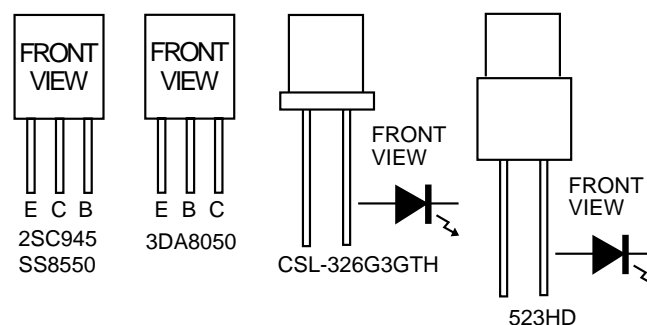
Figure 8-3

NOTES ON SCHEMATIC DIAGRAM

- Resistor:
To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with "Fusible" is a fuse type.
- Capacitor:
To indicate the unit of capacitor, a symbol P is used: this symbol P means pico-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression "capacitance/withstand voltage" is used.
(CH), (TH), (RH), (UJ): Temperature compensation
(ML): Mylar type
(P.P.): Polypropylene type
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.
- Parts marked with "⚠" (⎓) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.

REF. NO	DESCRIPTION	POSITION
S101	BAND SELECTOR	FM—MW—SW1—SW2
S201	RECORD/PLAYBACK	REC—P.B.
S301	FUNCTION/ BEAT CANCEL	LINE
S501	VOLTAGE SELECTOR	AC 220-240 V— AC 110-127 V
SW501	SURROUND	OFF—ON
SW601	TAPE MAIN	OFF—ON

TYPES OF TRANSISTOR AND LED



VOLTAGE

IC101: LA1186N [FM]

Pin No.	1	2	3	4	5	6	7	8	9
Voltage	0.9V	1.5V	5.3V	0V	0V	5.3V	0V	4.7V	5.3V

IC102: LA1805 [FM]

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
Voltage	1.5V	1.5V	5.5V	2.2V	1.5V	0V	0V	0V	2V	2V	4.8V	0.8V
Pin No.	13	14	15	16	17	18	19	20	21	22	23	24
Voltage	1.1V	1.5V	1.5V	1.2V	2.3V	0.22V	0.12V	5.5V	5.5V	0V	1.6V	0.8V

IC102: LA1805 [MW/SW1/SW2]

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
Voltage	1.55V	1.55V	6.7V	0.8V	1.55V	0V	0V	0V	2V	2V	6.5V	0.8V
Pin No.	13	14	15	16	17	18	19	20	21	22	23	24
Voltage	0V	1.65V	1.1V	1.2V	1.65V	0.8V	0.55V	6.7V	6.5V	1.6V	1.6V	1.6V

IC201: BA3313L [PLAYBACK]

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
Voltage	2.7V	0.25V	6.6V	0V	6.9V	0V	0V	0V	0V	5.2V	0V	3V

IC201: BA3313L [REC]

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
Voltage	2.8V	0.26V	6.4V	0V	6.8V	0V	0V	0V	0V	0.265V	0V	3V

IC401/IC402: BA5415A

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
Voltage	15V	7.7V	15V	0.6V	5V	5.2V	15V	0V	0.6V	15V	7.8V	0V

Q201: 3DA8050

Pin No.	1	2	3
Voltage	E: 7V	B: 6.7V	C: 7.6V

Q205: 2SC945

Pin No.	1	2	3
Voltage	E: 0V	C: 3.5V	B: 0.5V

Q207: SS8550

Pin No.	1	2	3
Voltage	E: 7.5V	C: 7.5V	B: 0V

Q209: 2SC945

Pin No.	1	2	3
Voltage	E: 0V	C: 0V	B: 5V

Q301: 2SC945

Pin No.	1	2	3
Voltage	E: 0V	C: 4V	B: 0.7V

Q303: 2SC945

Pin No.	1	2	3
Voltage	E: 0V	C: 0V	B: 5V

Q304: 2SC945

Pin No.	1	2	3
Voltage	E: 0V	C: 0V	B: 5V

Q305/Q306: 2SC945

Pin No.	1	2	3
Voltage	E: 0V	C: 4V	B: 0.7V

Q601: 3DA8050

Pin No.	1	2	3
Voltage	E: 7.5V	B: 17V	C: 8.2V

Q602: SS8550

Pin No.	1	2	3
Voltage	E: 17V	C: 17V	B: 17V

Q603: SS8550

Pin No.	1	2	3
Voltage	E: 17V	C: 17V	B: 0V

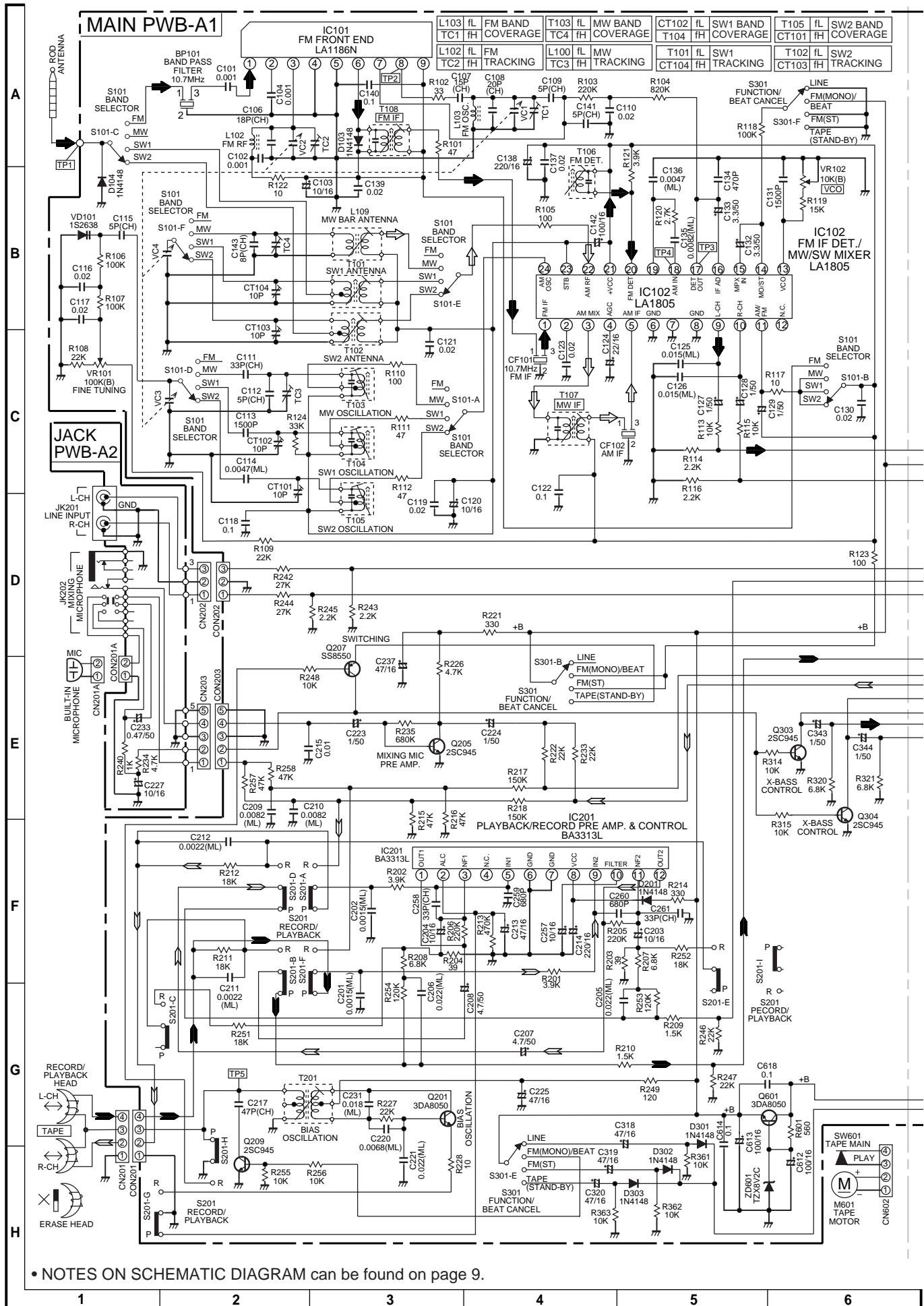


Figure 10 SCHEMATIC DIAGRAM (1/2)

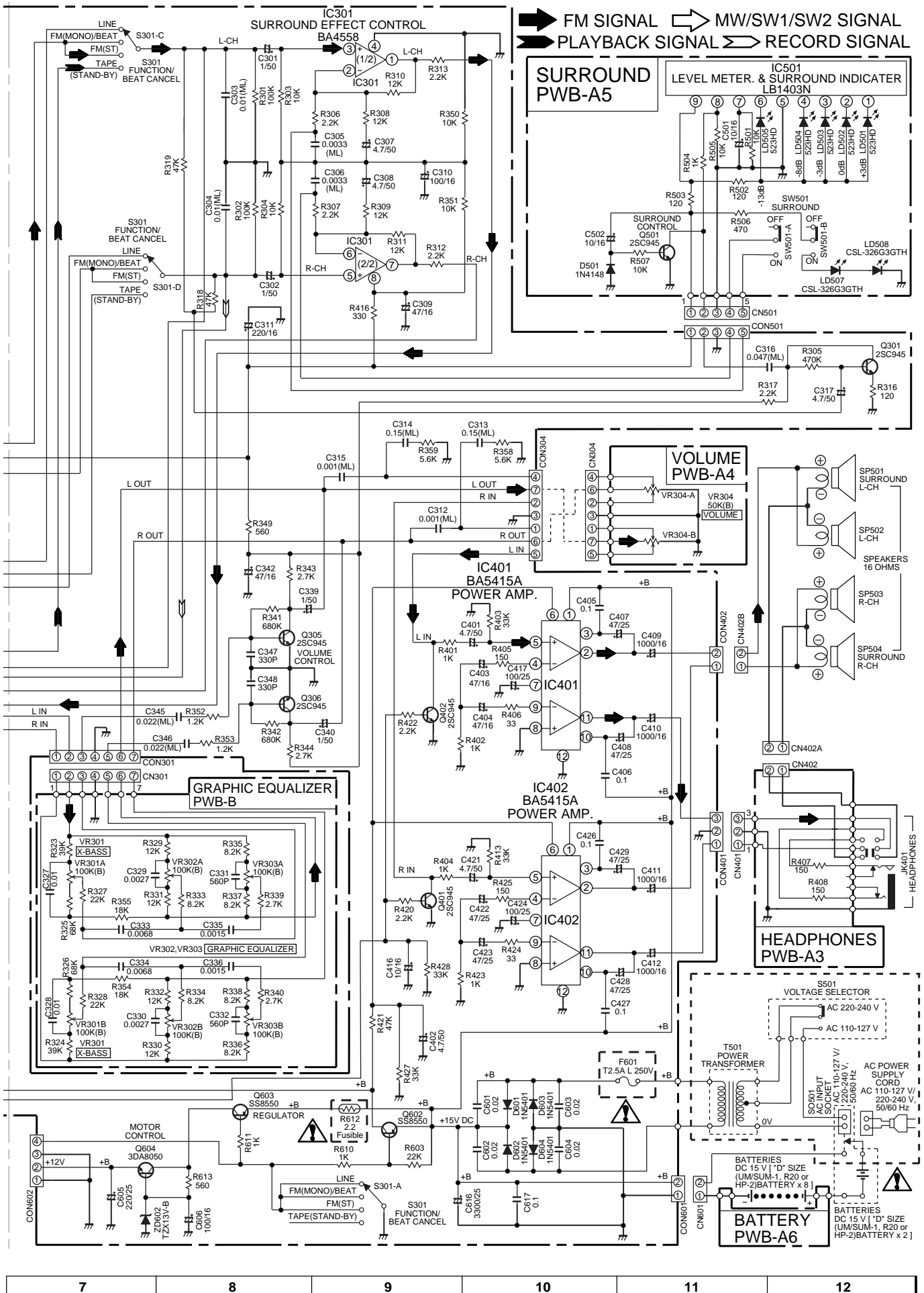


Figure 11 SCHEMATIC DIAGRAM (2/2)

QT-90W

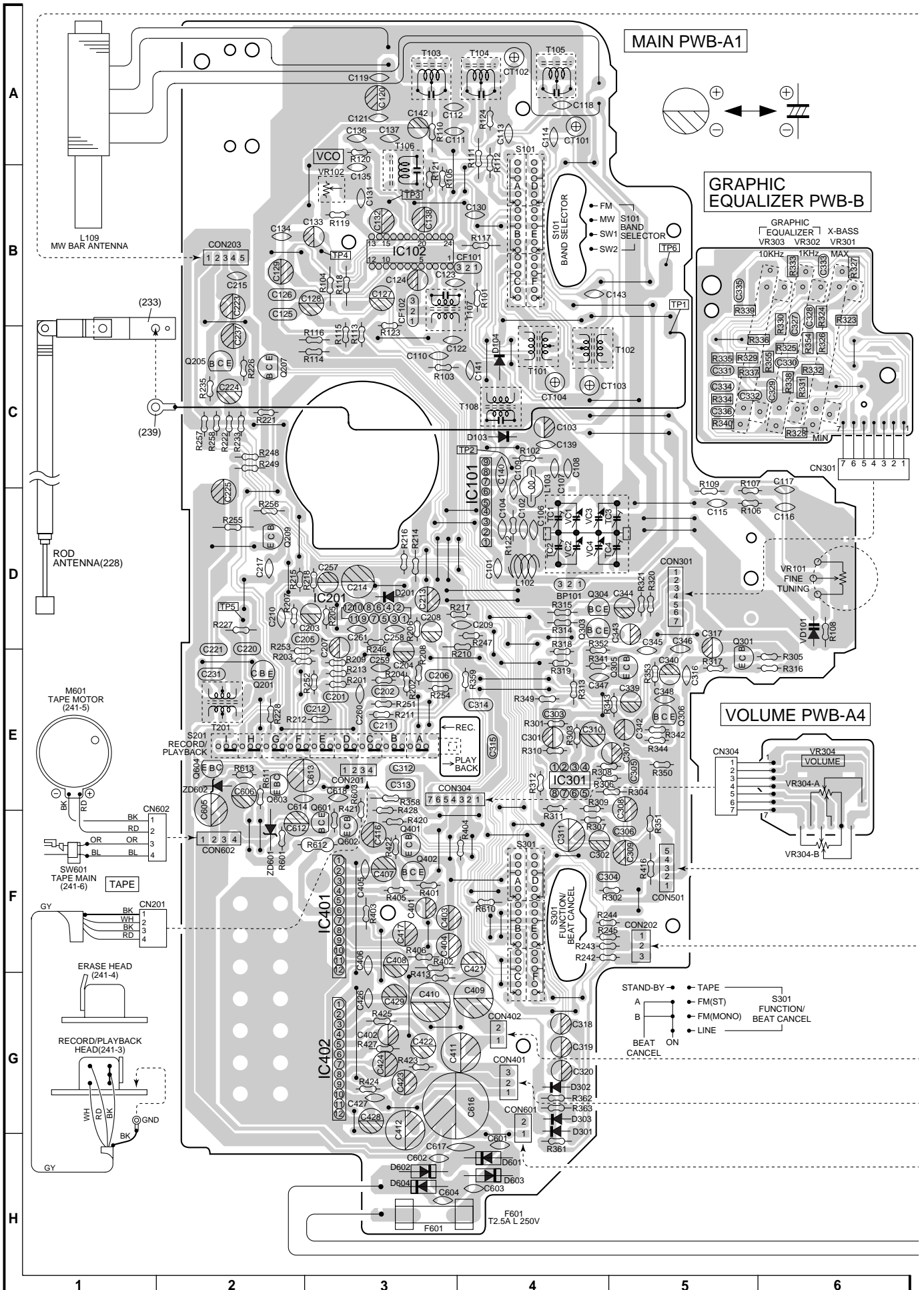
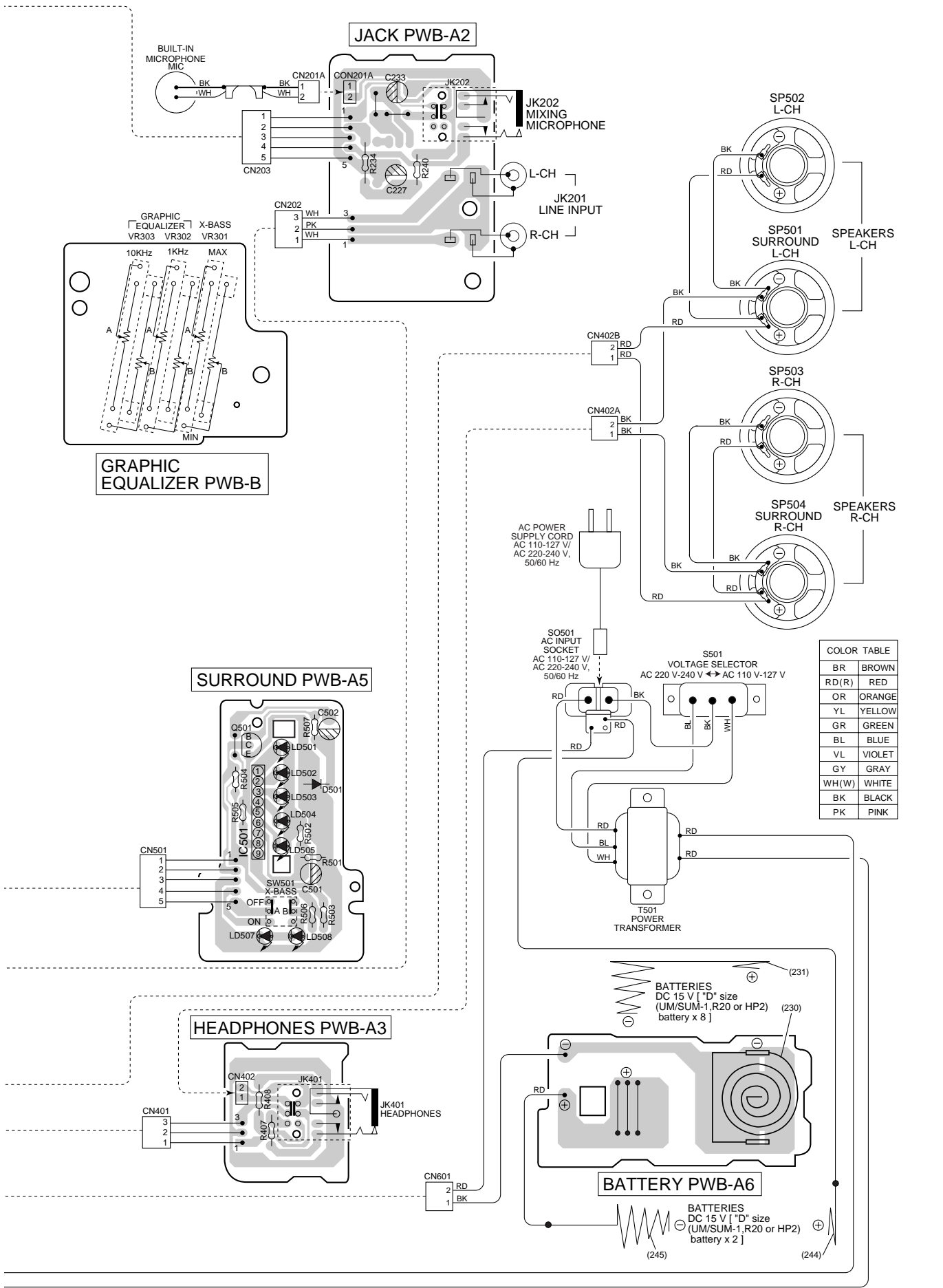


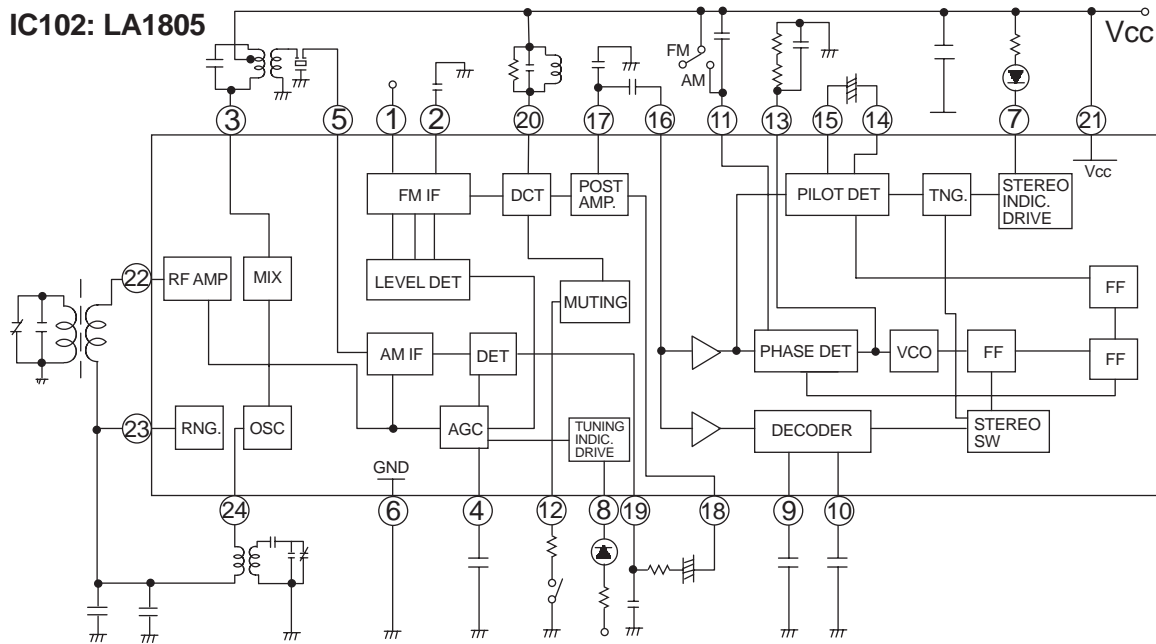
Figure 12 WIRING OF P.W.BOARD (1/2)



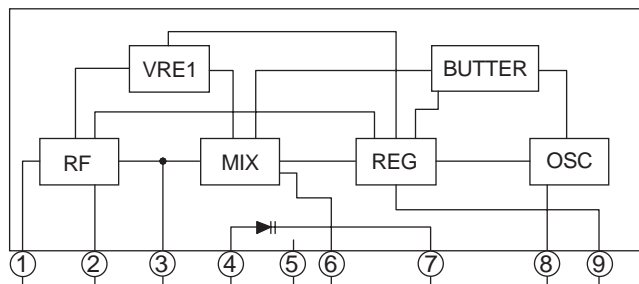
COLOR TABLE	
BR	BROWN
RD(R)	RED
OR	ORANGE
YL	YELLOW
GR	GREEN
BL	BLUE
VL	VIOLET
GY	GRAY
WH(W)	WHITE
BK	BLACK
PK	PINK

Figure 13 WIRING OF P.W.BOARD (2/2)

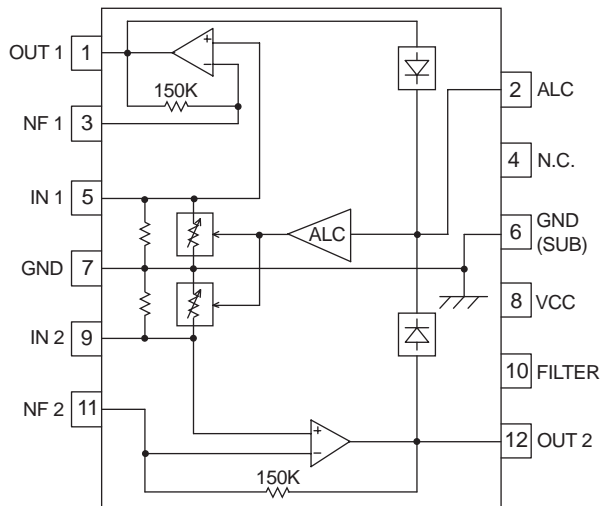
BLOCK DIAGRAM OF IC



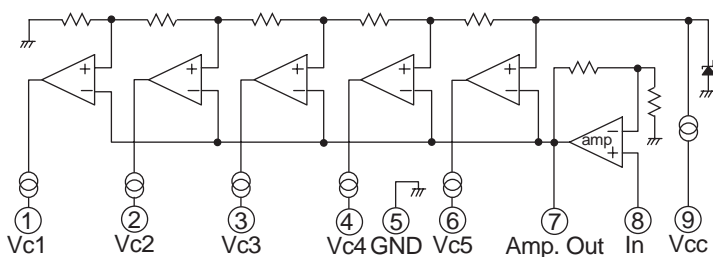
IC101: LA1186N



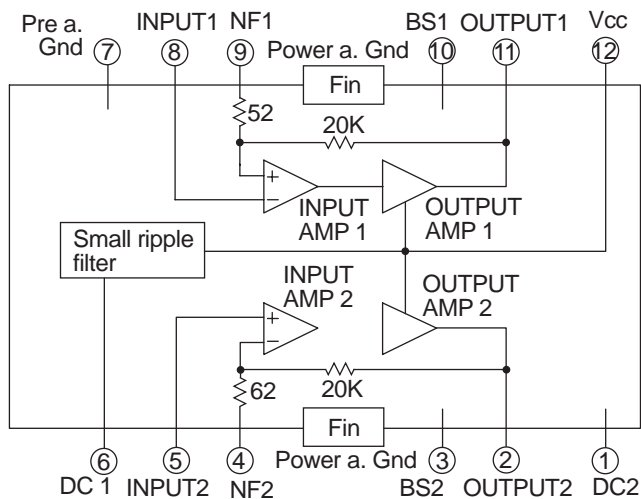
IC201: BA3313L



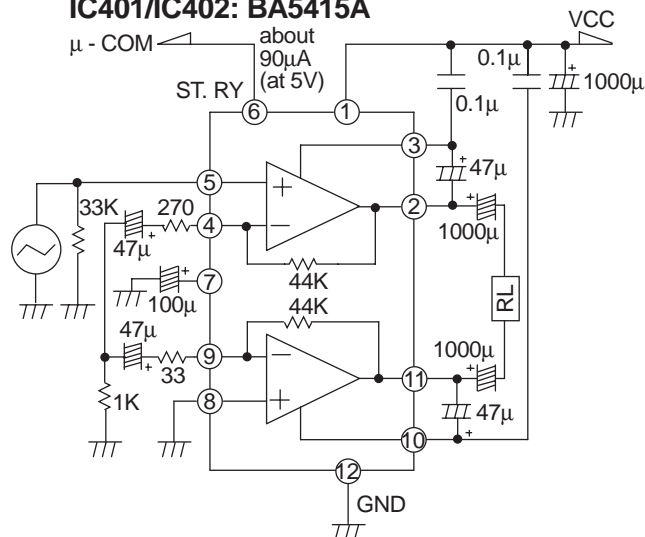
IC501: LB1403N



IC301: BA4558



IC401/IC402: BA5415A



SHARP PARTS GUIDE

STEREO RADIO CASSETTE RECORDER

MODEL QT-90W

“HOW TO ORDER REPLACEMENT PARTS”

To have your order filled promptly and correctly, please furnish the following information.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. No. |
| 3. PART NO. | 4. DESCRIPTION |

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor,
Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

- VCC Ceramic type
- VCK Ceramic type
- VCT Semiconductor type
- VC •• MF Cylindrical type (without lead wire)
- VC •• MN Cylindrical type (without lead wire)
- VC •• TV Square type (without lead wire)
- VC •• TQ Square type (without lead wire)
- VC •• CY Square type (without lead wire)
- VC •• CZ Square type (without lead wire)
- VC J .. The 13th character represents capacity difference.
("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
"C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)


If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

- VRD Carbon-film type
- VRS Carbon-film type
- VRN Metal-film type
- VR •• MF Cylindrical type (without lead wire)
- VR •• MN Cylindrical type (without lead wire)
- VR •• TV Square type (without lead wire)
- VR •• TQ Square type (without lead wire)
- VR •• CY Square type (without lead wire)
- VR •• CZ Square type (without lead wire)
- VR J .. The 13th character represents error.
("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.

NOTE:

Parts marked with “” are important for maintaining the safety of the set.
Be sure to replace parts with specified ones for maintaining the safety and performance of the set.

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
C345,346	VCQYKA1HM223K	J AB	0.022 μ F,50V,Mylar
C347,348	VCTYP A1HB331K	J	330 pF,50V
C401,402	VCEAZA1HW475M	J AB	4.7 μ F,50V,Electrolytic
C403,404	VCEAZA1CW476M	J AB	47 μ F,16V,Electrolytic
C405,406	VCKYPA1HF104Z	J	0.1 μ F,50V
C407,408	VCEAZA1EW476M	J AB	47 μ F,25V,Electrolytic
C409-412	92L1301A002004	J	1000 μ F,16V,Electrolytic
C416	VCEAZA1CW106M	J AC	10 μ F,16V,Electrolytic
C417	VCEAZA1EW107M	J AB	100 μ F,25V,Electrolytic
C421	VCEAZA1HW475M	J AB	4.7 μ F,50V,Electrolytic
C422,423	VCEAZA1EW476M	J AB	47 μ F,25V,Electrolytic
C424	VCEAZA1EW107M	J AB	100 μ F,25V,Electrolytic
C426,427	VCKYPA1HF104Z	J	0.1 μ F,50V
C428,429	VCEAZA1EW476M	J AB	47 μ F,25V,Electrolytic
C501,502	VCEAZA1CW106M	J AC	10 μ F,16V,Electrolytic
C601-604	92L1321-002005	J	0.02 μ F,50V
C605	VCEAZA1EW227M	J AC	220 μ F,25V,Electrolytic
C606	VCEAZA1CW107M	J AC	100 μ F,16V,Electrolytic
C612,613	VCEAZA1CW107M	J AC	100 μ F,16V,Electrolytic
C614	VCKYPA1HF104Z	J	0.1 μ F,50V
C616	92L1301A002006	J	3300 μ F,25V,Electrolytic
C617,618	VCKYPA1HF104Z	J	0.1 μ F,50V

RESISTORS

R101	VRD-ST2CD470J	J AA	47 ohms,1/6W
R102	VRD-ST2CD330J	J AA	33 ohms,1/6W
R103	VRD-ST2CD224J	J AA	220 kohms,1/6W
R104	VRD-ST2CD824J	J AA	820 kohms,1/6W
R105	VRD-ST2CD101J	J AA	100 ohm,1/6W
R106,107	VRD-ST2CD104J	J AA	100 kohm,1/6W
R108,109	VRD-ST2CD223J	J AA	22 kohms,1/6W
R110	VRD-ST2CD101J	J AA	100 ohm,1/6W
R111,112	VRD-ST2CD470J	J AA	47 ohms,1/6W
R113	VRD-ST2CD103J	J AA	10 kohm,1/6W
R114	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R115	VRD-ST2CD103J	J AA	10 kohm,1/6W
R116	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R117	VRD-ST2CD100J	J AA	10 ohm,1/6W
R118	VRD-ST2CD104J	J AA	100 kohm,1/6W
R119	VRD-ST2CD153J	J AA	15 kohms,1/6W
R120	VRD-ST2CD272J	J AA	2.7 kohms,1/6W
R121	VRD-ST2CD392J	J AA	3.9 kohms,1/6W
R122	VRD-ST2CD100J	J AA	10 ohm,1/6W
R123	VRD-ST2CD101J	J AA	100 ohm,1/6W
R124	VRD-ST2CD333J	J AA	33 kohms,1/6W
R201,202	VRD-ST2CD392J	J AA	3.9 kohms,1/6W
R203,204	VRD-ST2CD390J	J AA	39 ohms,1/6W
R205,206	VRD-ST2CD224J	J AA	220 kohms,1/6W
R207,208	VRD-ST2CD682J	J AA	6.8 kohms,1/6W
R209,210	VRD-ST2CD152J	J AA	1.5 kohms,1/6W
R211,212	VRD-ST2CD183J	J AA	18 kohms,1/6W
R213	VRD-ST2CD474J	J AA	470 kohms,1/6W
R214	VRD-ST2CD331J	J AA	330 ohms,1/6W
R215,216	VRD-ST2CD473J	J AA	47 kohms,1/6W
R217,218	VRD-ST2CD154J	J AA	150 kohms,1/6W
R221	VRD-ST2CD331J	J AA	330 ohms,1/6W
R222	VRD-ST2CD223J	J AA	22 kohms,1/6W
R226	VRD-ST2CD472J	J AA	4.7 kohms,1/6W
R227	VRD-ST2CD223J	J AA	22 kohms,1/6W
R228	VRD-ST2CD100J	J AA	10 ohm,1/6W
R233	VRD-ST2CD223J	J AA	22 kohms,1/6W
R234	VRD-ST2CD472J	J AA	4.7 kohms,1/6W
R235	VRD-ST2CD684J	J AA	680 kohms,1/6W
R240	VRD-ST2CD102J	J AA	1 kohm,1/6W
R242	VRD-ST2CD273J	J AA	27 kohms,1/6W
R243	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R244	VRD-ST2CD273J	J AA	27 kohms,1/6W
R245	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R246,247	VRD-ST2CD223J	J AA	22 kohms,1/6W
R248	VRD-ST2CD103J	J AA	10 kohm,1/6W
R249	VRD-ST2CD121J	J AA	120 ohms,1/6W
R251,252	VRD-ST2CD183J	J AA	18 kohms,1/6W
R253,254	VRD-ST2CD124J	J AA	120 kohms,1/6W
R255,256	VRD-ST2CD103J	J AA	10 kohm,1/6W
R257,258	VRD-ST2CD473J	J AA	47 kohms,1/6W
R301,302	VRD-ST2CD104J	J AA	100 kohm,1/6W
R303,304	VRD-ST2CD103J	J AA	10 kohm,1/6W
R305	VRD-ST2CD474J	J AA	470 kohms,1/6W
R306,307	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R308-311	VRD-ST2CD123J	J AA	12 kohms,1/6W
R312,313	VRD-ST2CD222J	J AA	2.2 kohms,1/6W

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
R314,315	VRD-ST2CD103J	J AA	10 kohm,1/6W
R316	VRD-ST2CD121J	J AA	120 ohms,1/6W
R317	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R318,319	VRD-ST2CD473J	J AA	47 kohms,1/6W
R320,321	VRD-ST2CD682J	J AA	6.8 kohms,1/6W
R323,324	VRD-ST2CD393J	J AA	39 kohms,1/6W
R325,326	VRD-ST2CD683J	J AA	68 kohms,1/6W
R327,328	VRD-ST2CD223J	J AA	2.2 kohms,1/6W
R329-332	VRD-ST2CD123J	J AA	12 kohms,1/6W
R333-338	VRD-ST2CD822J	J AA	8.2 kohms,1/6W
R339,340	VRD-ST2CD272J	J AA	2.7 kohms,1/6W
R341,342	VRD-ST2CD684J	J AA	680 kohms,1/6W
R343,344	VRD-ST2CD272J	J AA	2.7 kohms,1/6W
R349	VRD-ST2CD561J	J AA	560 ohms,1/6W
R350,351	VRD-ST2CD103J	J AA	10 kohm,1/6W
R352,353	VRD-ST2CD122J	J AA	1.2 kohms,1/6W
R354,355	VRD-ST2CD183J	J AA	18 kohms,1/6W
R358,359	VRD-ST2CD562J	J AA	5.6 kohms,1/6W
R361-363	VRD-ST2CD103J	J AA	10 kohm,1/6W
R401,402	VRD-ST2CD102J	J AA	1 kohm,1/6W
R403	VRD-ST2CD333J	J AA	33 kohms,1/6W
R404	VRD-ST2CD102J	J AA	1 kohm,1/6W
R405	VRD-ST2CD151J	J AA	150 ohms,1/6W
R406	VRD-ST2CD330J	J AA	33 ohms,1/6W
R407,408	VRD-ST2EE151J	J AA	150 ohms,1/4W
R413	VRD-ST2CD333J	J AA	33 kohms,1/6W
R416	VRD-ST2CD331J	J AA	330 ohms,1/6W
R420	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R421	VRD-ST2CD473J	J AA	47 kohms,1/6W
R422	VRD-ST2CD222J	J AA	2.2 kohms,1/6W
R423	VRD-ST2CD102J	J AA	1 kohm,1/6W
R424	VRD-ST2CD330J	J AA	33 ohms,1/6W
R425	VRD-ST2CD151J	J AA	150 ohms,1/6W
R427,428	VRD-ST2CD333J	J AA	33 kohms,1/6W
R501	VRD-ST2CD103J	J AA	10 kohm,1/6W
R502,503	VRD-ST2CD121J	J AA	120 ohms,1/6W
R504	VRD-ST2CD102J	J AA	1 kohm,1/6W
R505	VRD-ST2CD103J	J AA	10 kohm,1/6W
R506	VRD-ST2CD471J	J AA	470 ohms,1/6W
R507	VRD-ST2CD103J	J AA	10 kohm,1/6W
R601	VRD-ST2CD561J	J AA	560 ohms,1/6W
R603	VRD-ST2CD223J	J AA	22 kohms,1/6W
R610,611	VRD-ST2CD102J	J AA	1 kohm,1/6W
△ R612	92L1509-006008	J	2.2 ohms,1/4W,Fusible
R613	VRD-ST2CD561J	J AA	560 ohms,1/6W

OTHER CIRCUITRY PARTS

CN201	92L3421-773001	J	Connector Ass'y,4Pin
CN201A	92L3421-775001	J	Connector Ass'y,2Pin
CN202	92L3421-813001	J	Connector Ass'y,3Pin
CN203	92L3421-822001	J	Connector Ass'y,5Pin
CN301	92L3421-788001	J	Connector Ass'y,7Pin
CN304	92L3421-780001	J	Connector Ass'y,7Pin
CN401	92L3421-803001	J	Connector Ass'y,3Pin
CN402	92L3421-581001	J	Plug,2Pin
CN402A	92L3421-580001	J	Connector Ass'y,2Pin
CN402B	92L3421-580001	J	Connector Ass'y,2Pin
CN501	92L3421-801001	J	Connector Ass'y,5Pin
CN601	92L3421-782001	J	Connector Ass'y,2Pin
CN602	92L3421-774001	J	Connector Ass'y,4Pin
CON201	92L3101-171009	J	Plug,4Pin
CON201A	92L3101-054001	J	Plug,2Pin
CON202	92L3101-171010	J	Plug,3Pin
CON203	92L3101-171008	J	Plug,5Pin
CON301	92L3101-173006	J	Plug,7Pin
CON304	92L3101-171006	J	Plug,7Pin
CON401	92L3101-094002	J	Plug,3Pin
CON402	92L3101-174001	J	Plug,2Pin
CON501	92L3101-171008	J	Plug,5Pin
CON601	92L3101-094001	J	Plug,2Pin
CON602	92L3101-094003	J	Plug,4Pin
△ F601	92L5301-022001	J	Fuse,T2.5A L 250V
JK201	92L3201-073001	J	Jack,Line Input
JK202	92L3202-024001	J	Jack,Mixing Microphones
JK401	92L3202-024001	J	Jack,Headphones
M601(241-5)	92L02103007B-0	J	Motor with Pulley [Tape]
MIC	92L7201-002001	J	Built-in Microphone
S101	92L4103-022001	J	Switch,Slide Type [Band Selector]
S201	92L4104-013001	J	Switch,Push Type [Record/Playback]

QT-90W

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
S301	92L4103-022001	J	Switch,Slide Type [Function/Beat Cancel]
△ S501	92L4106-011001	J	Switch,Slide Type [Voltage Selector]
△ SO501	92L3204-016001	J	AC Input Socket
SP501~504	92L4801-085001	J	Speaker
SW501	92L4104-002001	J	Switch,Push Type [Surround]
SW601(241-6)	92L4110-007001	J	Switch,Leaf Type [Tape Main]

CABINET PARTS

201	92L799QT900101	J	Front Cabinet Ass'y
202	92L202QT900101	J	Rear Cabinet
203	92L799QT900301	J	Top Panel Ass'y
203- 1	92L201QT900101	J	Top Panel
203- 2	92L286QT800101	J	Name Plate,SHARP
204	92L799QT800601	J	Dial Drum Ass'y
204- 1	92L242QT800101	J	Dial Drum
204- 2	92L579QT800101	J	Label,Frequency Range
205	92L210QT800101	J	Cover,Battery
206	92L211QT800102	J	Cover,Cassette Holder
207	92L220QT800101	J	Bracket,Tape Mechanism/ Main PWB
208	92L226QT800101	J	Bracket,Tuning Knob
209	92L227QT800101	J	Bracket,Cassette Holder Cover
210	92L248QT800101	J	Handle
211	92L25133010101	J	Holder,Bar Antenna
212	92L260QT800101	J	Lens,Dial Tuning
213	92L270QT800101	J	Knob,Tuning
214	92L270QT800201	J	Knob,Fine Tuning
215	92L272QT800102	J	Button,Record
216	92L272QT800202	J	Button,Play
217	92L272QT800302	J	Button,Rewind
218	92L272QT800402	J	Button,Fast Forward
219	92L272QT800502	J	Button,Stop/Eject
220	92L272QT800602	J	Button,Pause
221	92L273QT800101	J	Knob,Volume
222	92L273QT800201	J	Button,Surround
223	92L278QT800101	J	Knob,Band Selector
224	92L278QT800101	J	Knob,Function
225	92L289QT800102	J	Ring,Volume Knob
226	92L290QT800101	J	Gear,Dial
227	92L430QT900101	J	Heat Sink
228	92L43330616501	J	Rod Antenna
229	92L471QT800101	J	Spring,Cassette Holder
230	92L47423010101	J	Spring,Battery,-
231	92L47470120101	J	Spring,Battery,+
232	92L476QT800101	J	Spring,Record
233	92L489QT800101	J	Bracket,Rod Antenna
234	92L579QT900103	J	Label,Specifications
235	92L250QT800101	J	Bracket,LED
236	92L70338050101	J	Damper Gear Ass'y
237	92L42838560501	J	Bracket,Tape Mechanism
238	92L7603-002001	J	Ferrite Bar
239	92L3451-000127	J	Lead Wire with Lug
△ 240	92L45670120101	J	Holder,Fuse
241	92L7702-003001	J	Tape Mechanism Ass'y
241- 1	92L02104003A-0	J	Belt,REW/FF
241- 2	92L02104007A-0	J	Belt,Main
241- 3	92L155-2AM	J	Head,Record/Playback
241- 4	92L6PA	J	Head,Erase
241- 5(M601)	92L02103007B-0	J	Motor with Pulley [Tape]
241- 6(SW601)	92L4110-007001	J	Switch,Leaf Type [Tape Main]
243	92L430QT900101	J	Bracket,Heat Sink
244	92L474QT900101	J	Spring,Battery,+
245	92L474QT900201	J	Spring,Battery,-
601	92L60026450800	J	Screw,ø2.6×8mm
602	92L60030500610	J	Screw,ø3×6mm
603	92L60220500410	J	Screw,ø2×4mm
604	92L60620400410	J	Screw,ø2×4mm
605	92L61030010810	J	Screw,ø3×8mm
606	92L61030011010	J	Screw,ø3×10mm
607	92L61030011210	J	Screw,ø3×12mm
608	92L61030023010	J	Screw,ø3×30mm
609	92L61126010800	J	Screw,ø2.6×8mm
610	92L61130011210	J	Screw,ø3×12mm
611	92L61226010810	J	Screw,ø2.6×8mm
612	92L61230010810	J	Screw,ø3×8mm
613	92L61430011010	J	Screw,ø3×10mm
614	92L61530041010	J	Screw,ø3×10mm
615	92L61540021410	J	Screw,ø4×14mm

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
616	92L61540041410	J	Screw,ø4×14mm
617	92L62030011010	J	Screw,ø3×10mm
618	92L66090752012	J	Nut,ø9×ø12×2mm
619	92L62030061070	J	Screw,ø3×10mm
620	92L61440041010	J	Screw,ø4×10mm
621	92L53008003008	J	Washer,ø3×ø8×0.8mm

ACCESSORIES/PACKING PARTS

△	QACCA0004AW00	J	AK	AC Power Supply Cord
△	QACCB0012AW00	J	AS	AC Power Supply Cord
△	QACCE0007AW00	J	AH	AC Power Supply Cord
△	QACCL0002AW00	J	AN	AC Power Supply Cord
△	QACCL0008AW00	J		AC Power Supply Cord
△	QPLGA0003AWZZ	J	AF	Adaptor,AC Plug
△	QPLGA0004AWZZ	J	AF	Adaptor,AC Plug
	92L300QT800102	J		Packing Add.,Left/Right
	92L31020300401	J		Polyethylene Bag,Accessories
	92L31074500401	J		Polyethylene Bag,Unit
	92L510QT900101	J		Packing Case
	92L563184-	J		Label,Serial No.
	92L579QT800201	J		Label,Feature
	92L580QT900104	J		Operation Manual
	92L593QT900101	J		Schematic Diagram

P.W.B. ASSEMBLY (Not Replacement Item)

PWB-A1~6	92L770QT900101	J	—	Main/Jack/Headphones/Volume/ Surround/Battery (Combined Ass'y)
PWB-B	92L771QT900102	J	—	Graphic Equalizer

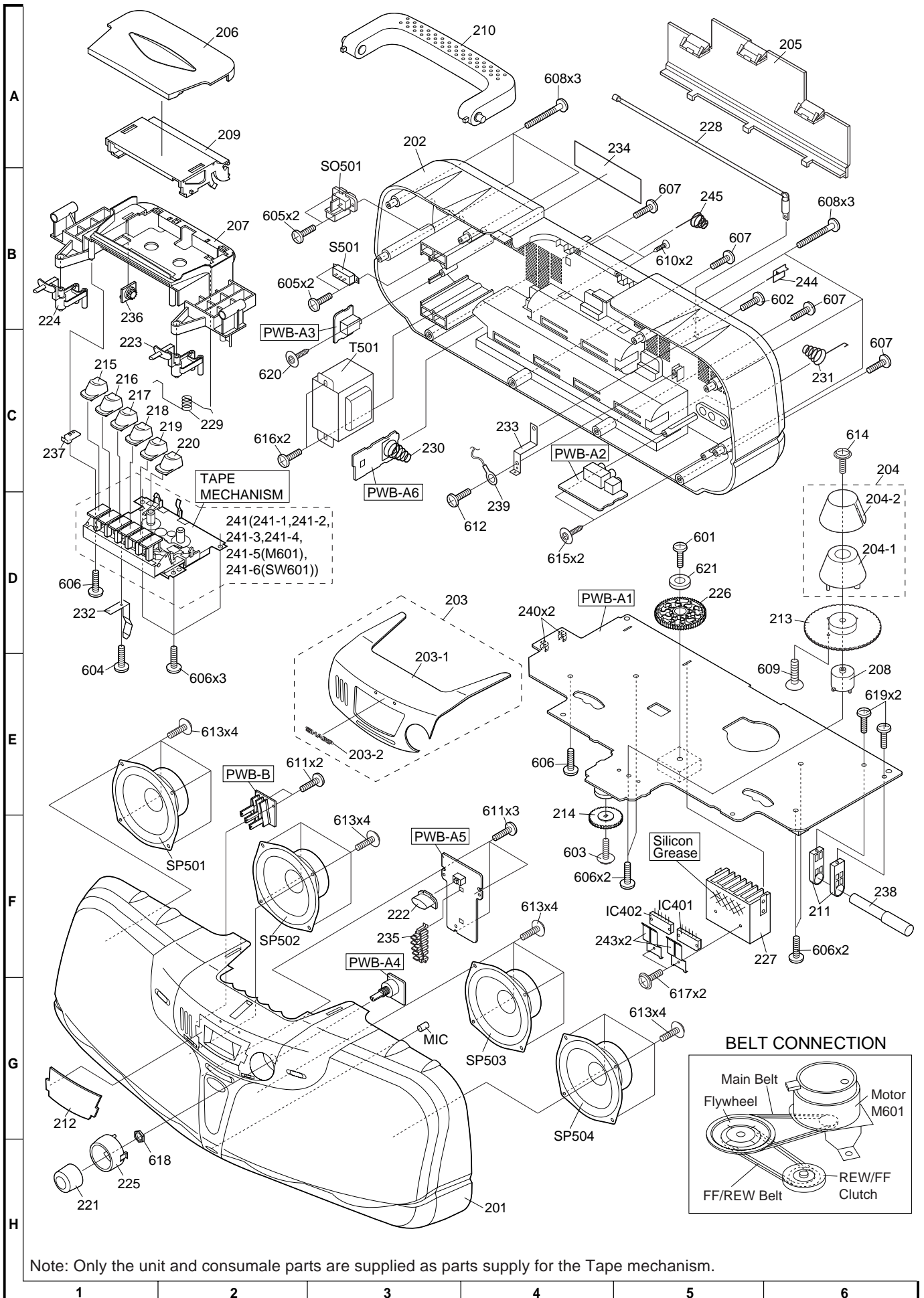


Figure 4 CABINET EXPLODED VIEW

SHARP

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