

# SHARP SERVICE MANUAL

OUTSTANDING RECEPTION THE WORLD OVER

GF-4646  
GF-4646A

ATSM682082RCS



(PHOTO: GF-4646)

**GF-4646**  
**GF-4646A**

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

For the mechanical adjustment, refer to the RD-620/A Service Manual already issued.

## SPECIFICATIONS

### GENERAL

Power source:  
(GF-4646)

AC 120V 60Hz  
DC 9V ("D" type x 6)  
AC 240V 50/60 Hz  
DC 9V (UM/SUM-1 type x 6)

Speakers:

10 cm (4") woofer x 2  
Ceramic type tweeter x 2  
MPO; 3.9W (1.95W + 1.95W)  
(AC operation)

Output power:  
(GF-4646)

PMPO; 10W (5W + 5W)  
(AC operation)  
MPO; 7.2W (3.6 + 3.6W) (AC  
operation)

Output power:  
(GF-4646A)

RMS; 4.6W (2.3 + 2.3W) (DC  
operation, 10% distortion)

Semiconductors:

5 ICs  
4 transistors  
11 diodes  
2 LEDs

Dimensions: Width;  
Depth;  
Height;

426mm (16-3/4")  
96mm (3-3/4")  
212mm (8-3/8")

Weight:

2.8 kg (6.1 lbs.) without batteries

### TAPE RECORDER

Tape: Compact cassette tape  
Frequency response: 50Hz ~ 10,000Hz  
Signal/noise ratio: 45dB  
Input sensitivity and impedance:  
External mic.; 600 ohms  
Loaded impedance:  
Headphones; 8 ohms ~ 25 ohms

### RADIO

Frequency range: FM; 87.6 MHz ~ 108 MHz  
AM; 525 kHz ~ 1,605 kHz

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

**SHARP CORPORATION**  
**SHARP ELECTRONICS CORPORATION**

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

## NAMES OF PARTS

- |                                |                               |
|--------------------------------|-------------------------------|
| 1. Built-in Microphone (L-ch)  | 13. AC Power Supply Socket    |
| 2. Power/Battery indicator     | 14. Cassette Holder           |
| 3. FM Stereo Indicator         | 15. Record Button             |
| 4. Band Selector               | 16. Rewind Button             |
| 5. Function Selector           | 17. Playback Button           |
| 6. Volume Control              | 18. Fast-forward Button       |
| 7. Tone Control                | 19. Stop Button               |
| 8. Balance Control             | 20. Eject Button              |
| 9. Tuning Control              | 21. Beat Cancel Switch        |
| 10. Telescopic Rod Antenna     | 22. External Microphone Jacks |
| 11. Built-in Microphone (R-ch) | 23. Battery Compartment Lid   |
| 12. Headphones Jack            |                               |

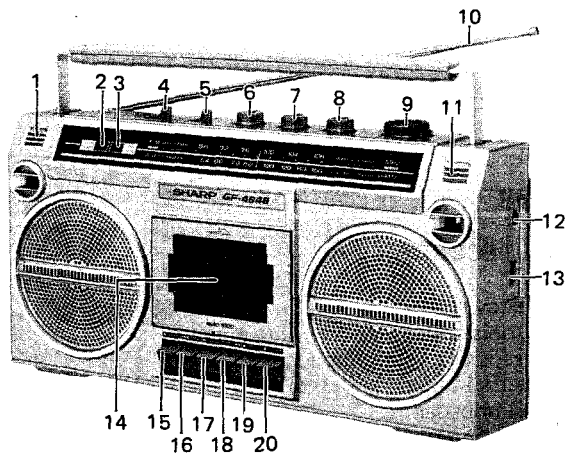


Figure 2-1

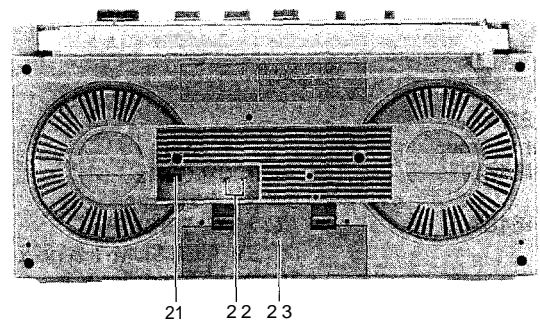


Figure 2-2

## AC POWER SUPPLY CORD

QACCL0050AF00 (GF-4646A)	QACCD0051AFOO (GF-4646)

## DISASSEMBLY

### Caution:

Prior to the disassembly, be sure to remove the AC power supply cord, cassette tape and batteries from the unit.

### ■ FRONT CABINET REMOVAL

(Refer to Figures 3-1 and 3-2)

1. Remove the six screws (A) and the six knobs (B).
2. Push the eject button to open the cassette holder.
3. Pull the front cabinet frontward by holding its upper part and disconnect the three tips (C).

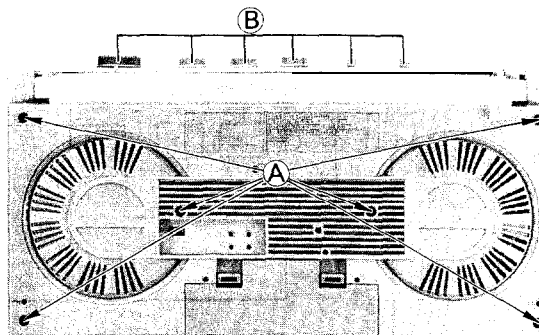


Figure 3-1

### ■ MECHANISM BLOCK REMOVAL

(Refer to Figure 3-2)

1. Remove the three screws (D).
2. Disconnect the two sockets (E).
3. Unsolder the two tips (F), then the mechanism block can be removed.

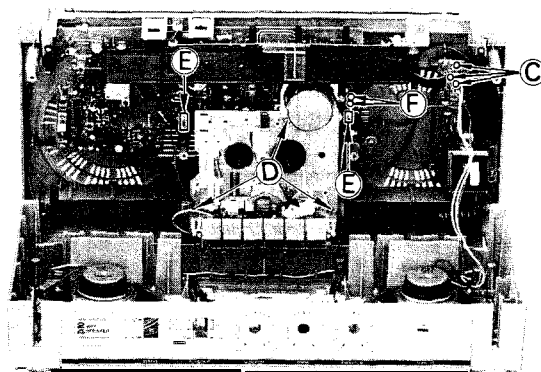


Figure 3-2

### ■ MAIN P.W.B. REMOVAL

(Refer to Figure 3-3)

1. Remove the eleven screws (G).
2. Remove the LED P.W.B. from the two stoppers (H), then the main P.W.B. can be removed from the back cabinet.

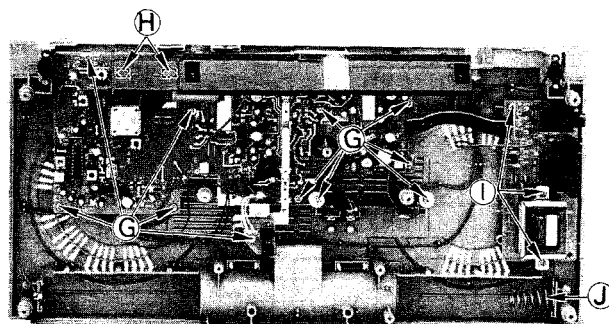


Figure 3-3

### ■ POWER P.W.B. REMOVAL

(Refer to Figure 3-3)

1. Remove the three screws (I).
2. Remove the battery spring (J), then the power P.W.B. can be removed from the back cabinet.

## DIAL CORD STRINGING

- 1) Turn the drum fully clockwise and stretch its cord cover the parts in the numerical order-as shown in Figure 3-4.
- 2) Turn the tuning control shaft fully counterclockwise, and fix it with the pointer aligned with the zero (0) point on the frame. See Figure 3-5.

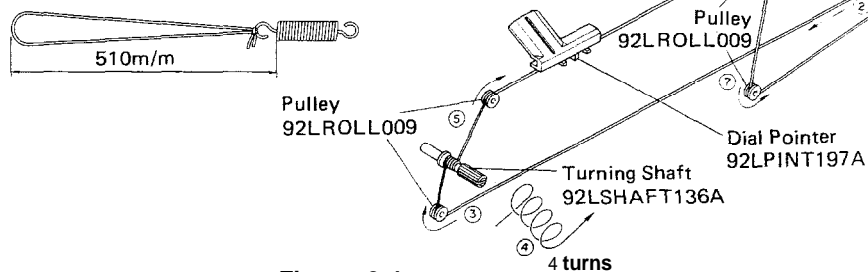


Figure 3-4

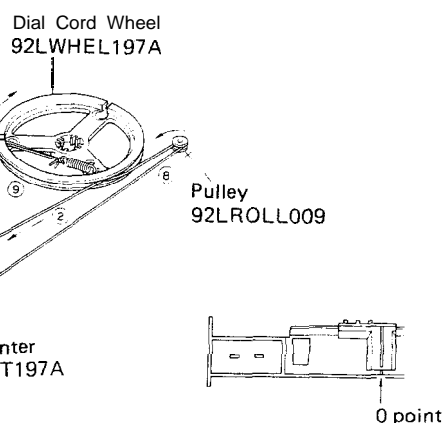


Figure 3-5

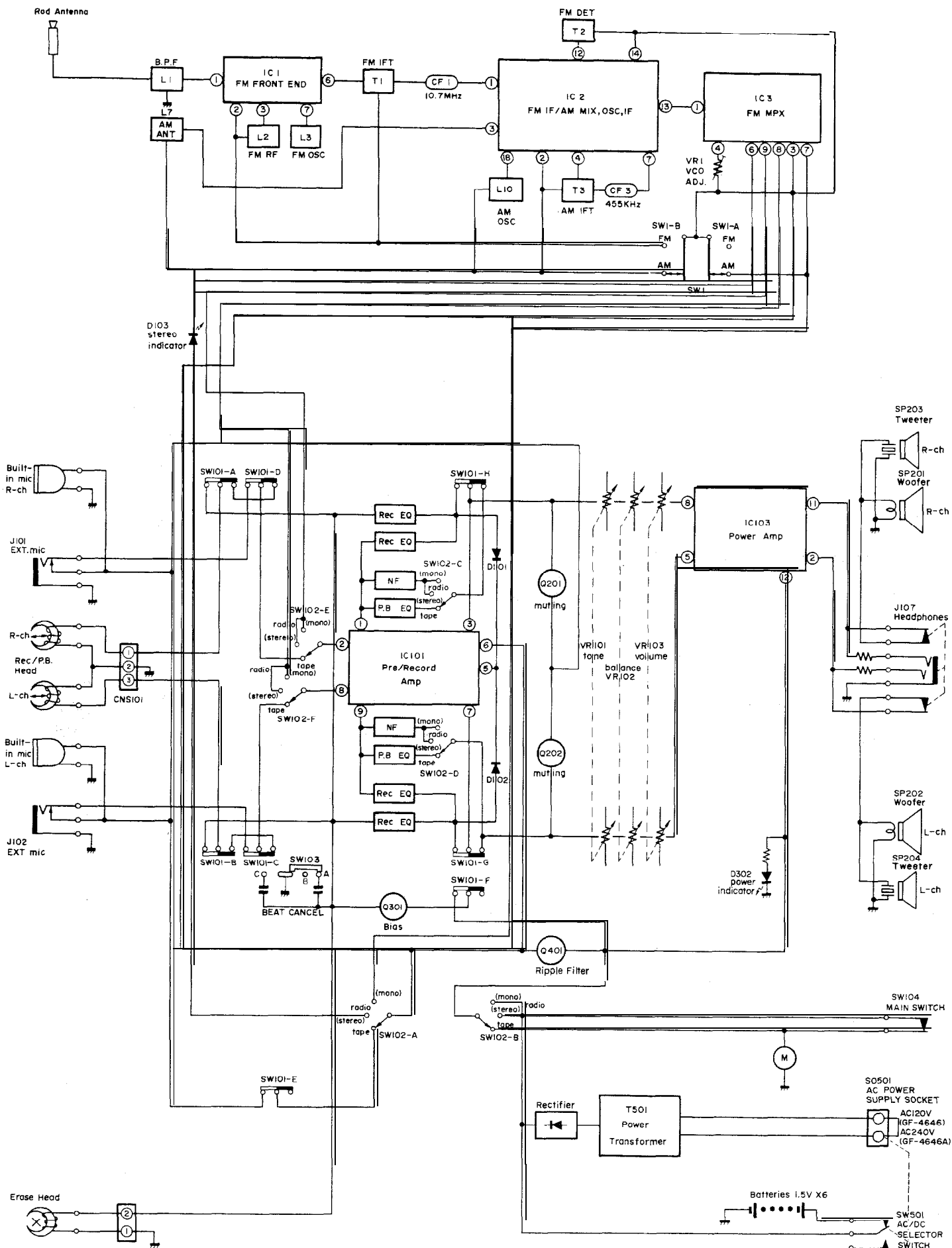


Figure 4 BLOCK DIAGRAM

## MECHANICAL ADJUSTMENT

Except for the following item, refer to the RD-620/A Service Manual already issued.

### RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT

As shown in Figure 5-1, make connection of instrument, and adjust the head azimuth adjusting screw so that the output signals from both channels will have maximum waveform with the same phase in right and left.

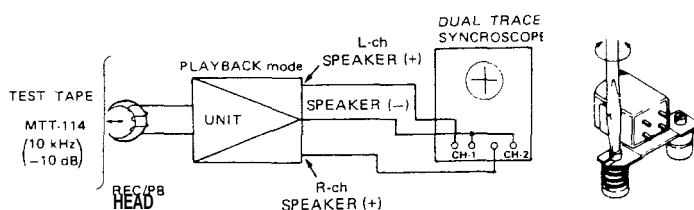


Figure 5-1

## GENERAL ALIGNMENT INSTRUCTION

Should it become necessary at any time to check the alignment of this receiver, proceed as follows;

1. Set the volume control (VR103) to maximum.
2. Attenuate the signals from the generator enough to swing the most sensitive range of the output meter.
3. Use a non-metallic alignment tool.
4. Repeat adjustments to insure good results.
5. Set the Function Selector Switch (SW102) to "radio" position.

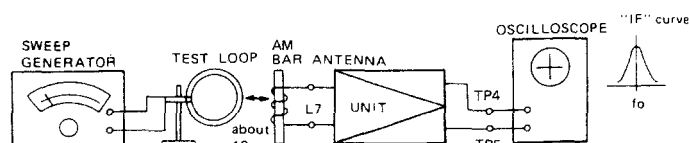


Figure 5-2

### AM IF/RF ALIGNMENT

- Set the signal generator to produce a signal of 400Hz, 30%, AM modulated.
- For adjustments in steps 4, see **Note A**.

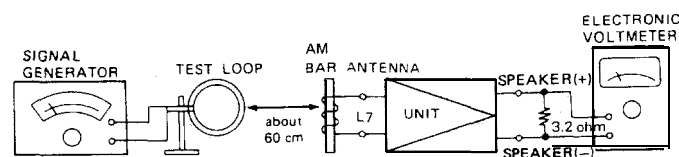


Figure 5-3

STEP	BAND	TEST STAGE	FREQUENCY	DIAL SETTING	ADJUSTMENT	REMARKS
IF (As shown in Figure 5-2, make connection of instruments.)						
1	AM	IF	455 kHz	High end of dial	T3	Adjust for best "IF" curve
RF (As shown in Figure 5-3, make connection of instruments.)						
2	AM	Band coverage	510 kHz	Low end of dial	L10	Adjust for maximum output
3	AM		1650 kHz	High end of dial	TC8	
4	AM	Tracking	600 kHz	600 kHz	L7	
5	AM		1400 kHz	1400 kHz	TC5	
6	Repeat steps 2,3,4 and 5 until no further improvement can be made.					

**Note A** Check the alignment of the receiver antenna coil by bringing a piece of ferrite (such as a coil slug) near the antenna loop stick, then a piece of brass. If ferrite increases output, loop requires more inductance. If brass increases output, loop requires less inductance. Change loop inductance by sliding the bobbin toward the center of ferrite core to increase inductance, or away to decrease inductance.

## FM IF/RF ALIGNMENT

- Set the signal generator to produce a signal of 400Hz, 30%, FM modulated.

STEP	BAND	TEST STA-GE	FRE-QUEN-CY	DIAL SET-TING	AD-JUST-MENT	REMARKS
IF (As shown in Figure 6-1, make connection of instruments.)						
1	FM	IF	10.7 MHz	High end of dial	T1 T2	Adjust for best "S" curve
RF (As shown in Figure 6-2, make connection of instruments.)						
2	FM	Band cover-age	87.1 MHz	Low end of dial	L3	Adjust for maximum output
3	FM		109.0 MHz	High end of dial	TC2	
4	FM		88 MHz	88 MHz		
5	FM	ing	108 MHz	108 MHz	TC1	
6	Repeat steps 2,3,4 and 5 until no further improvement can be made.					

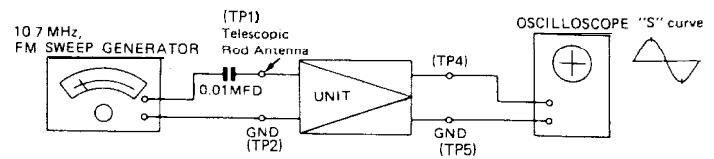


Figure 6-1

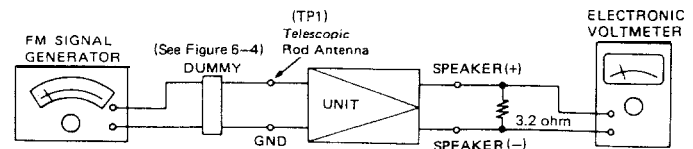


Figure 6-2

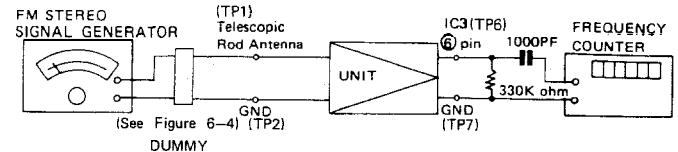


Figure 6-3

## FM STEREO ALIGNMENT

- Set the Band Selector Switch (SW1) to "FM" position and Function Switch (SW102) to "stereo" position.
- As shown in Figures 6-3 and 6-4, make connection of instrument.

FREQUENCY	DIAL POINTER	ADJUST-MENT	REMARKS
98MHz (54dB) un modulated	98MHz	VR1	Adjust for $38 \pm 0.15\text{kHz}$

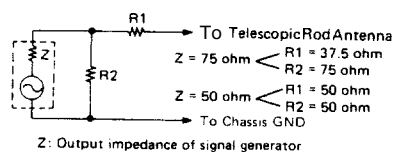


Figure 6-4 FM DUMMY

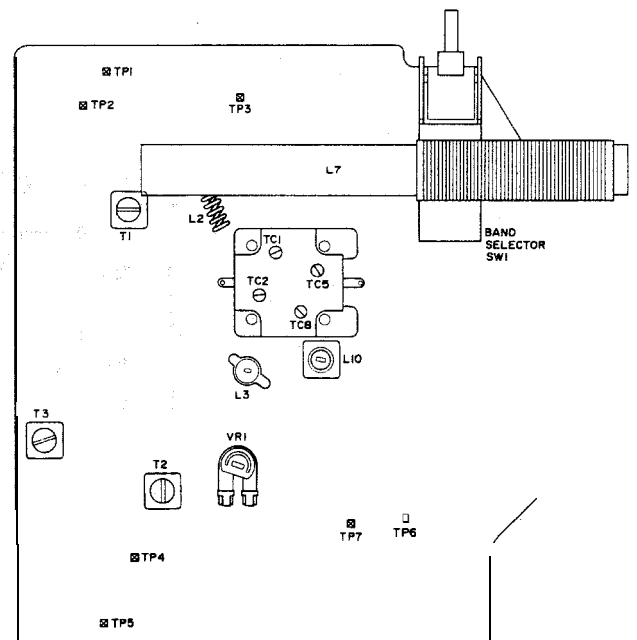


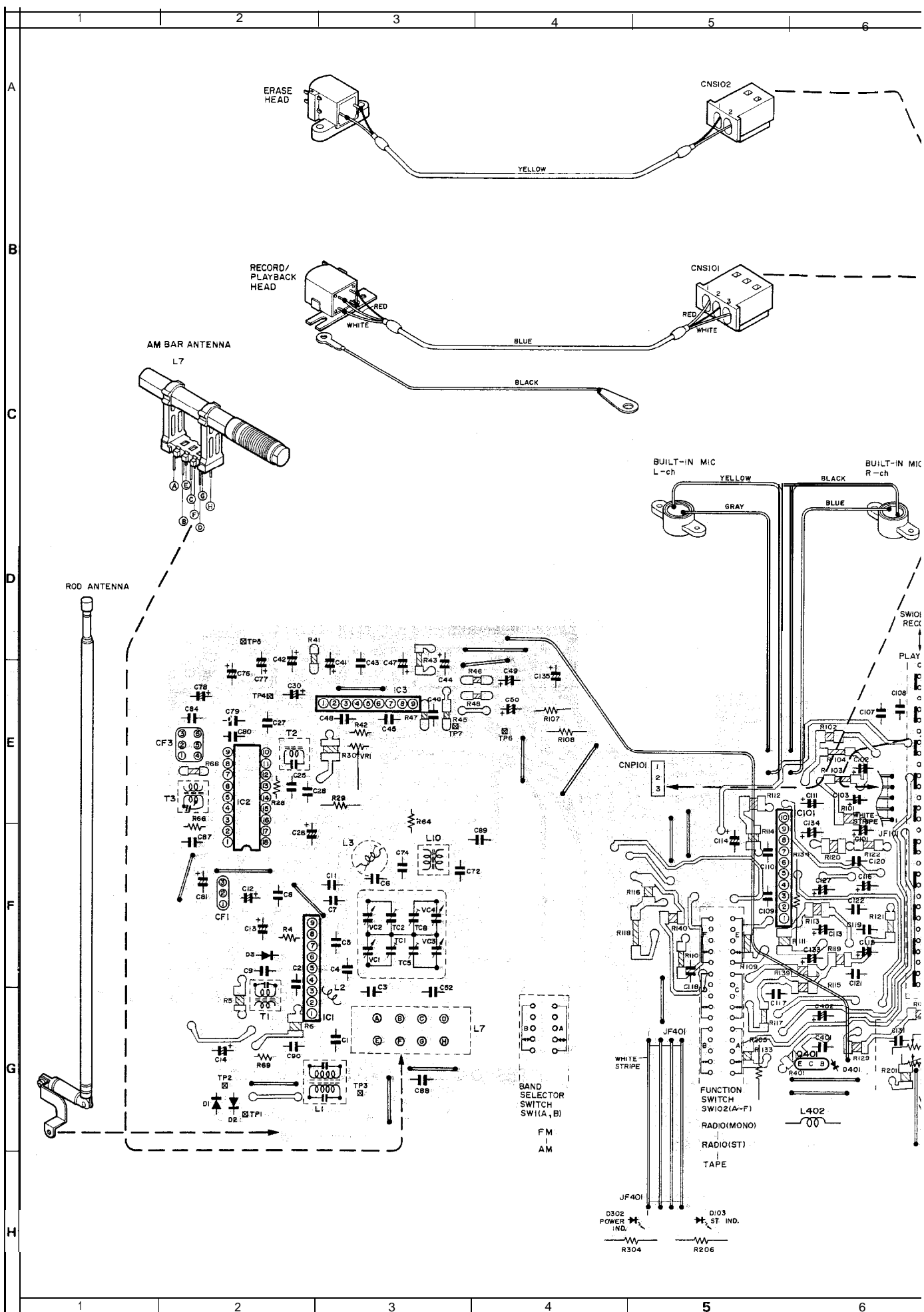
Figure 6-5 ALIGNMENT POINTS

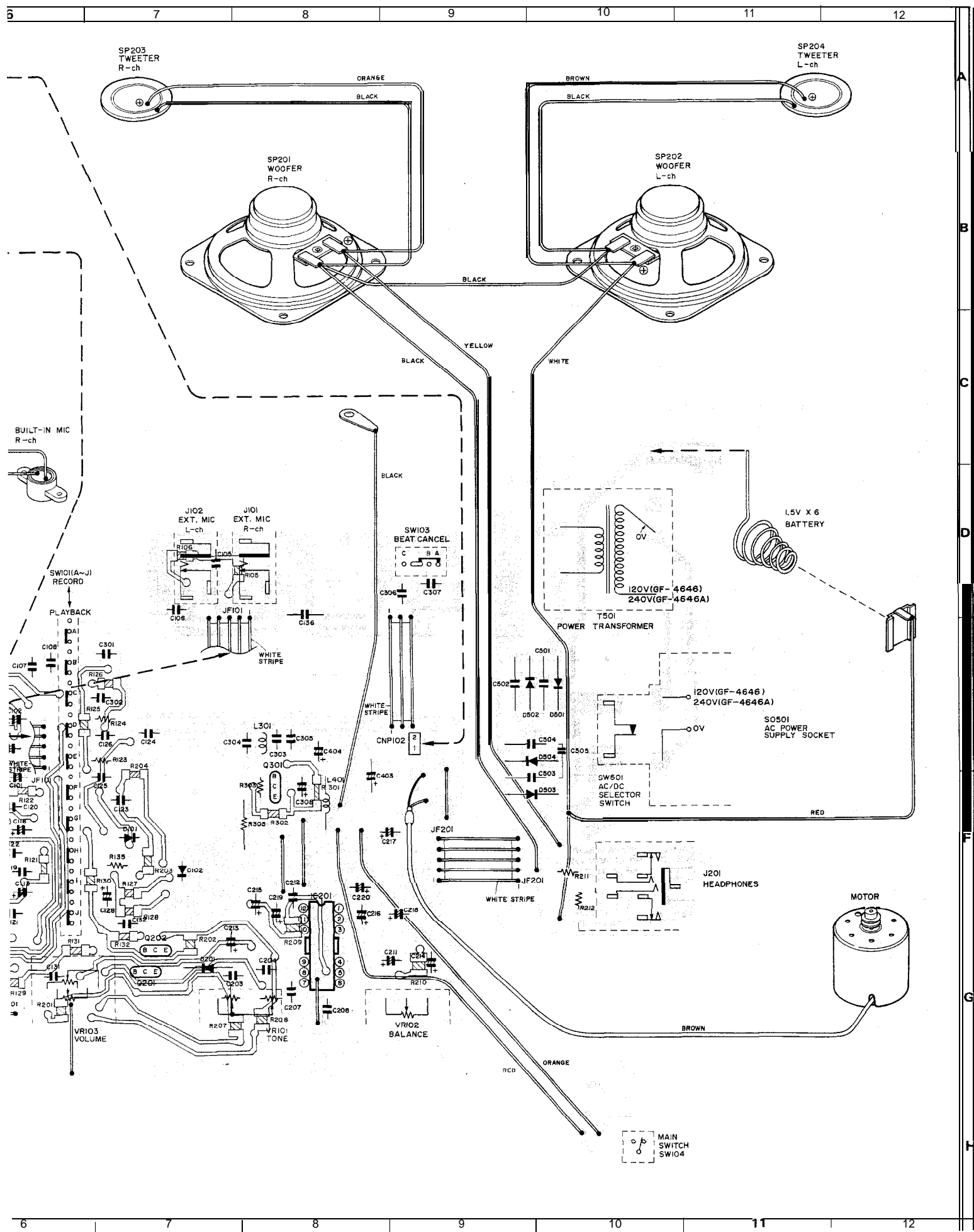
## NOTES ON SCHEMATIC DIAGRAM

- Resistor:
  - Unless otherwise specified all resistance in ohms, K=1000 ohms
- Capacitor:
  - Unless otherwise specified all capacitance in microfarads, P= Picofarads
  - (CH), (RH): Temperature compensation
- Voltage reading are measured with Digital Multimeter under no signal condition in tape position.
  - ( ): AM mode
  - : FM mode

- Printed resistor

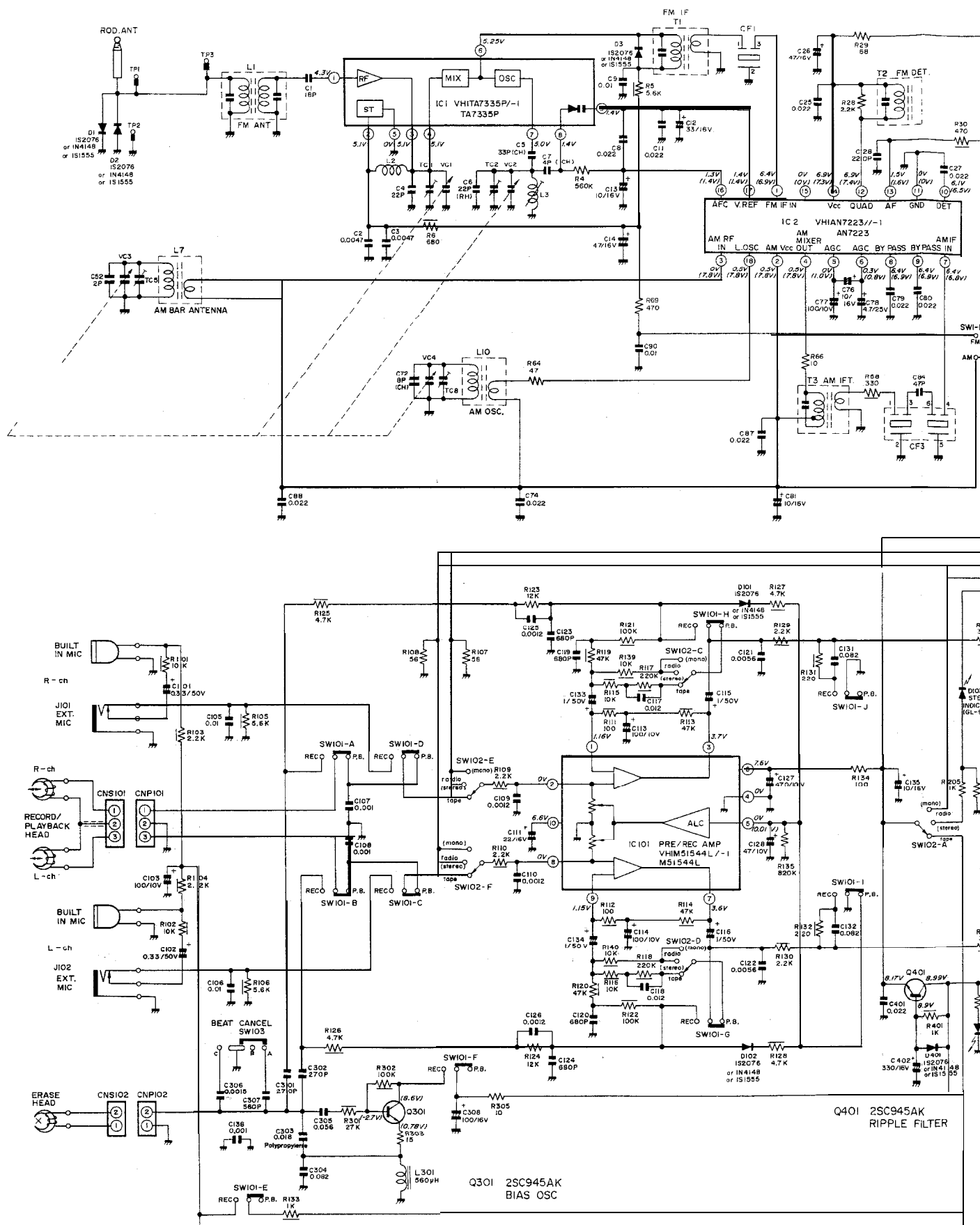
- Parts marked with "△" ( ) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.





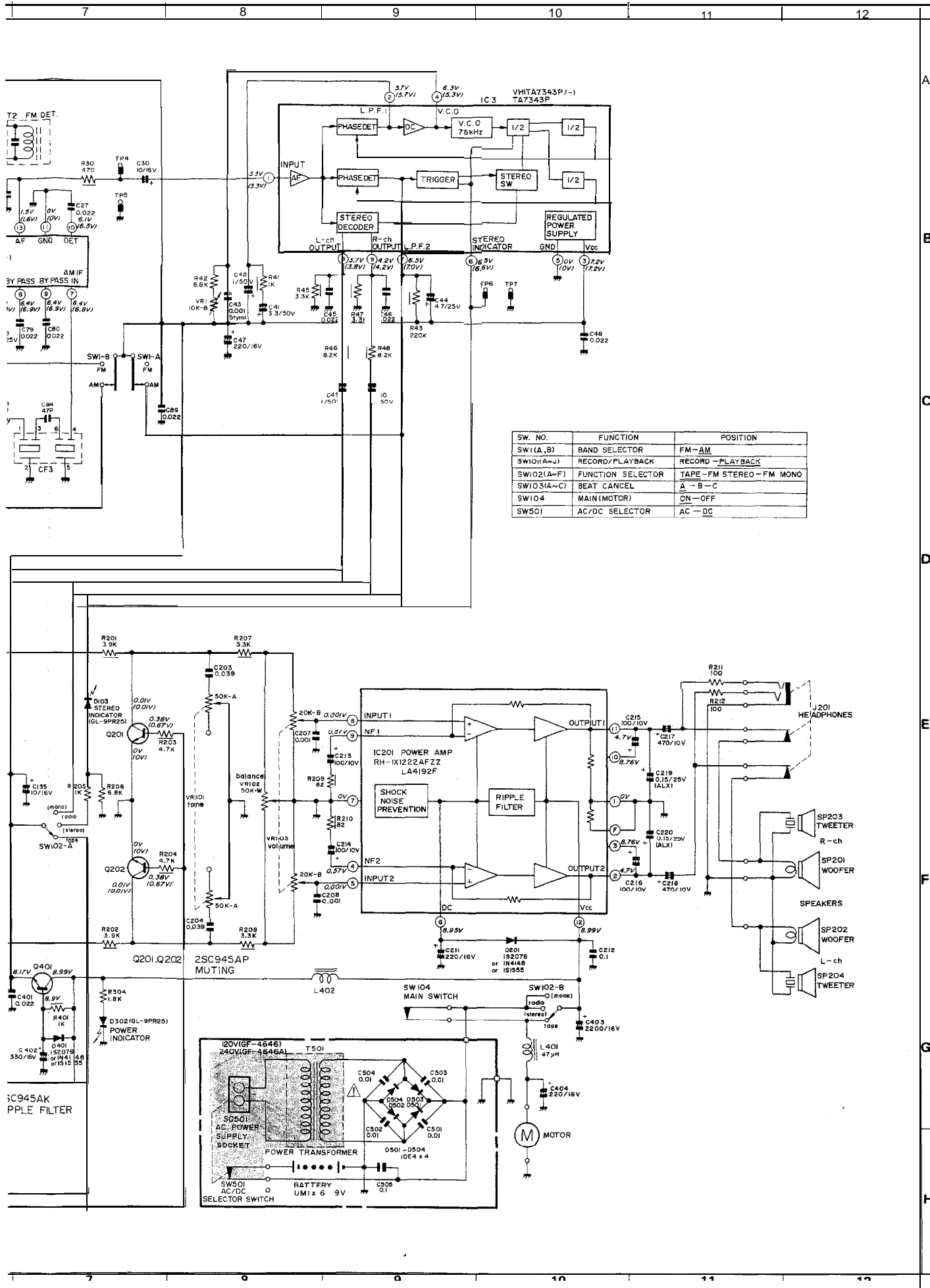
WIRING SIDE OF P.W. BOARD





(Specifications or wiring diagrams of this model are subject to change for improvement without prior notice.)

Figure 9 SCHEMATIC DIAB



ATIC DIABRAM

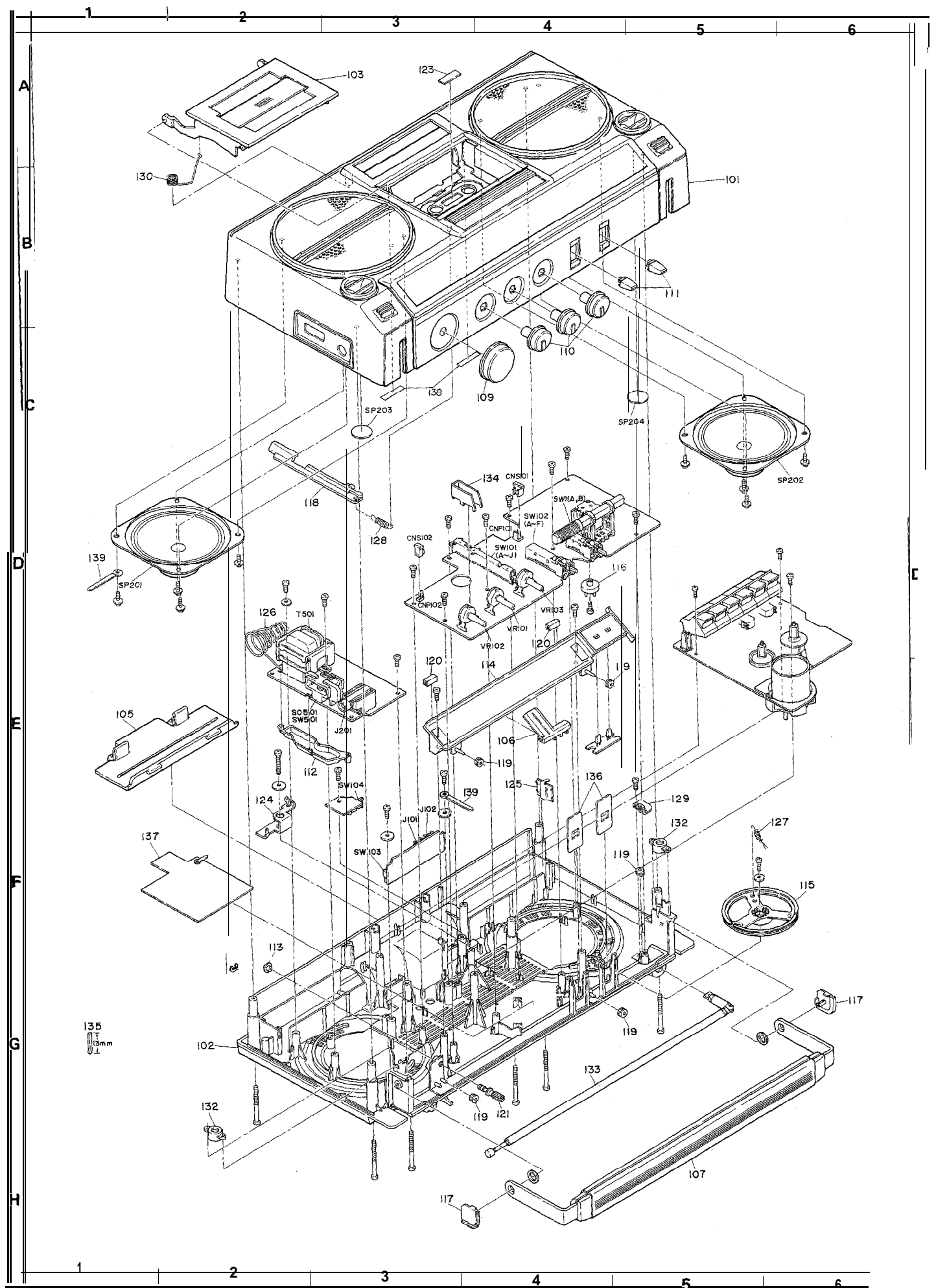


Figure 11 CABINET EXPLODED VIEW

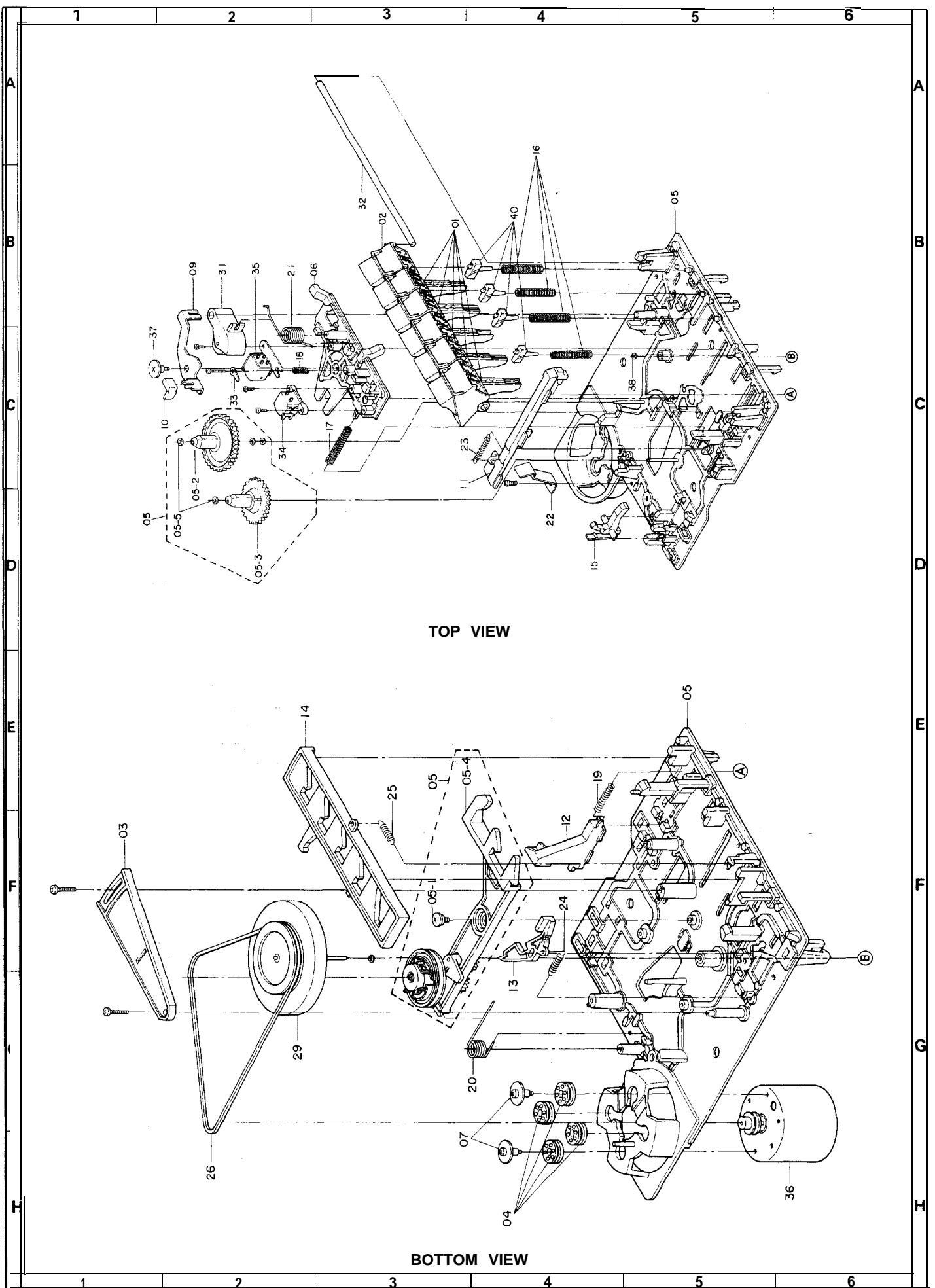


Figure 12 MECHANISM EXPLODED VIEW

# REPLACEMENT PARTS LIST

## "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 |

NOTES: 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.

REF. NO.	PART NO.	DESCRIPTION	CODE	REF. NO.	PART NO.	DESCRIPTION	CODE
INTEGRATED CIRCUITS				FILTERS			
IC1	VHITA7335P/-1	FM Front End (TA7335P)	AG	CF1	RFILF0080AFZZ	Ceramic, FM IF, 10.7MHz	AD
IC2	VHIAN7223/-1	FM IF/AM (Mixer, Oscillator, IF)(AN7223)	AK	CF3	RFILA0074AFZZ	Ceramic, AM IF, 455kHz	AG
IC3	VHITA7343P/-1	FM Multiplex (TA7343P)	AG	CONTROLS			
IC101	VHIM51544L/-1	Pre/Record Amp. (M51544L)	AG	VC1, 2, VC3, 4, TC1.2, TC5, 8 }	RVC-R0085AFZZ	Variable Capacitors Tuning with Trimmers	AN
IC201	VHILA41 92/-1	Power Amp. (LA4192)	AK			TC1; FM RF Trimmer	
						TC2; FM Oscillation Trimmer	
						TC5; AM Antenna Trimmer	
TRANSISTORS							
Q201	VS2SC945AP/-1	Muting (2SC945AP)	} AB	VR1	RVR-M0216AFZZ	10K ohm (B), V.C.O. Adjust	AB
Q202	VS2SC945AP/-1	Muting (2SC945AP)		VR101	92LVR-197A	50K ohm (A), Tone Control	
Q301	VS2SC945AK/-1	Bias Oscillator (2SC945AK)		VR102	92LVR-197B	50K ohm (W), Balance Control	
Q401	VS2SC945AK/-1	Ripple Filter (2SC945AK)		VR103	92LVR-197C	20K ohm (B), Volume Control	
DIODES				ELECTROLYTIC CAPACITORS			
				(Unless otherwise specified capacitors are ±20% type.)			
D1, 2	92L1N4148FV	Static Protector (1N4148)	} AB	C12	RC-EZV336AF1C	33MFD, 16V	
D3	92L1N4148FV	FM Overload (1N4148)		C13	RC-EZV106AF1C	10MFD, 16V	
D101, 102	92L1N4148FV	ALC (1N4148)		C14	RC-EZV476AF1C	47MFD, 16V	
D103	RH-PX1029AFZZ	LED, Stereo Indicator (GL-9PR25)		AC	C26	RC-EZV476AF1C	
D201	92L1N4148FV	Stabilizer for AC Mode (1N4148)	AB	C30	RC-EZV106AF1C	10MFD, 16V	
D302	RH-PX1029AFZZ	LED, Power Indicator (GL-9PR25)	AC	C41	RC-EZV335AF1H	3.3MFD, 50V	
D401	92L1N4148FV	Noise Suppressor (1N4148)	A 8	C42	RC-EZV105AF1H	1MFD, 50V	
D501, 502, } D503, 504 }	VHD10E-4///-1	Rectifier (10E4)	AB	c44	RC-EZV475AF1E	4.7MFD, 25V	
COILS							
L1	RCILA0455AFZZ	FM Antenna	AC	c47	RC-EZV227AF1C	220MFD, 16V	AB
L2	RCILR0364AFZZ	FM RF	AA	C49, 50	RC-EZV105AF1H	1MFD, 50V	
L3	RCILB0628AFZZ	FM Oscillator	AC	C76	RC-EZV106AF1C	10MFD, 16V	
L7	92LCOI LA-200A	AM Bar Antenna	AB	c77	RC-EZV107AF1A	100MFD, 10V	
L10	RCILB0626AFZZ	AM Oscillator		C78	RC-EZV475AF1E	4.7MFD, 25V	
L301	VP-CH561K0000	Bias Oscillator, 560μH	AC	C81	RC-EZV106AF1C	10MFD, 16V	AC
L401	VP-CH470K0000	Noise Suppressor, 47μH	AB	C101, 102	VCEALA1HW334M	0.33M FD, 50V	
L402	92LCOILC-197B	Noise Suppressor	AB	C103	RC-EZV107AF1A	100MFD, 10V	
TRANSFORMERS				C111	RC-EZV226AF1C	22MFD, 16V	
T1	RCILI0157AFZZ	FM IF	} AC	CI 13, 114	RC-EZV107AF1A	100MFD, 10V	AB
T2	RCILI0312AFZZ	FM Detector		C115, 116	RC-EZV105AF1H	1MFD, 50V	
T3	RCILI0310AFZZ	AM IF		C127	RC-EZV477AF1A	470MFD, 10V	
△T501	{ 92LPT-201A	Power (GF-4646)		C128	RC-EZV476AF1A	47MFD, 10V	
	{ 92LPT-199A	Power (GF-4646A)		C133, 134	RC-EZV105AF1H	1MFD, 50V	AC
				C135	RC-EZV106AF1C	10MFD, 16V	
				C211	RC-EZV227AF1C	220MFD, 16V	
				C213, 214, C215, 216 }	RC-EZV107AF1A	100MFD, 10V	
				C217, 218	RC-EZV477AF1A	470MFD, 10V	A O
				C219, 220	RC-AZ1001AFZZ	0.15MFD, 25V	

REF. NO.	PART NO.	DESCRIPTION	CODE
C308	RC-EZV107AF1C	100MFD, 16V	A 8
C402	RC-EZV337AF1C	330MFD, 16V	AC
C403	VCEAAU1CW228Y	2200MFD, 16V, +50 - 20 %	AF
C404	RC-EZV227AF1C	220MFD, 16V	A 8

#### CAPACITORS

C1	VCCSPU1HL180J	18PF, 50V, ±5%, Ceramic	A A
C2, 3	VCKZPU1HB472K	0.0047MFD, 50V, ±10%, Ceramic	
C4	VCCSPU1HL220J	22PF, 50V, ±5%, Ceramic	
C5	VCCCPU1HH330J	33PF (CH), 50V, ±5%, Ceramic	AB
C6	VCCRPU1HH220J	22PF (RH), 50V, ±5%, Ceramic	
C7	VCCCPU1HH4R0C	4 P F (CH), 50V, ±0.25PF, Ceramic	A A
C8	VCKZPU1HF223Z	0.022MFD, 50V, +80—20%, Ceramic	
C9	VCTYPU1EX103M	0.01MFD, 25V, ±20%, Semiconductor	
C11	VCTYPU1EX223M	0.022MFD, 25V, ±20%, Semiconductor	AB
C25	VCTYPU1EX223M	0.022MFD, 25V, ±20%, Semiconductor	A 8
C27	VCKZPU1HF223Z	0.022MFD, 50V, +80—20%, Ceramic	A A
C28	VCCSPU1HL221 J	220PF, 50V, ±5%, Ceramic	A A
c43	VCQSMV1HL102J	0.001MFD, 50V, ±5%, Styrol	AB
C45, 46, } C48	VCTYPU1EX223M	0.022MFD, 25V, ±20%, Semiconductor	AB
C52	VCCSPU1HL2R0C	2PF, 50V, 0.25PF, Ceramic	
C72	VCCCPU1HH8R0C	8PF (CH), 50V, 0.25PF, Ceramic	
c74	VCTYPU1EX223M	0.022MFD, 25V, ±20%, Semiconductor	AB
C79, 80	VCTYPU1EX223M	0.022MFD, 25V, ±20%, Semiconductor	AB
C84	VCCSPU1HL470J	47PF, 50V, ±5%, Ceramic	A A
C87, 88	VCKZPU1HF223Z	0.022MFD, 50V, +80—20%, Ceramic	A A
C89	VCKZPU1HB223M	0.022MFD, 50V, ±20%, Ceramic	AB
C90	VCKZPU1HF103Z	0.01 MFD, 50V, +80—20%, Ceramic	
C105, 106	VCTYPU1EX103K	0.01MFD, 25V, ±10%, Semiconductor	
C107, 108	VCTYPU1EX102K	0.001MFD, 25V, ±10%, Semiconductor	
C109, 110	VCTYPU1EX122K	0.0012MFD, 25V, ±10%, Semiconductor	
C117, 118	VCTYPU1EX123K	0.012MFD, 25V, ±10%, Semiconductor	A A
Cl 19, 120	VCKZPU1HB681K	680PF, 50V, ±10%, Ceramic	
C121, 122	VCTYPU1EX562K	0.0056MFD, 25V, ±10%, Semiconductor	
C123, 124	VCKZPU1HB681K	680PF, 50V, ±10%, Ceramic	
C125, 126	VCTYPU1EX122K	0.0012MFD, 25V, ±10%, Semiconductor	
C131, 132	VCTYPU1EX823K	0.082MFD, 25V, ±10%, Semiconductor	AB
C136	VCKZPU1HF102Z	0.001MFD, 50V, +80—20%, Ceramic	A A
C203, 204	VCTYPU1EX393K	0.039MFD, 25V, ±10%, Semiconductor	A A
C207, 208	VCTYPU1EX102K	0.001MFD, 25V, ±10%, Semiconductor	A A
c212	VCTYPU1EX104M	0.1MFD, 25V, ±20%, Semiconductor	AB

C301, 302	VCKZPU1HB271K	270PF, 50V, ±10%, Ceramic	
C303	VCQPKV2AA183J	0.018MFD, 100V, ±5%, Polypropylene	AB
C304	VCTYPU1EX823K	0.082MFD, 25V, ±10%, Semiconductor	AB
C305	VCTYPU1EX563K	0.056MFD, 25V, ±10%, Semiconductor	AB
C306	VCTYPU1EX152K	0.0015MFD, 25V, ±10%, Semiconductor	A A
C307	VCKZPU1HB561K	560PF, 50V, ±10%, Ceramic	AA
C401	VCTYPU1EX223M	0.022MFD, 25V, ±20%, Semiconductor	AB
C501, 502, } C503, 504 }	VCKZPU1HF103Z	0.01MFD, 50V, +80—20%, Ceramic	A A
C505	VCKZPU1HF104Z	0.1MFD, 50V, +80 -20% Ceramic	

#### RESISTORS

(All resistors are 1/4W, ±5%, Carbon type.)

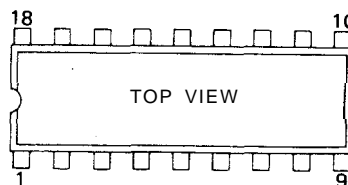
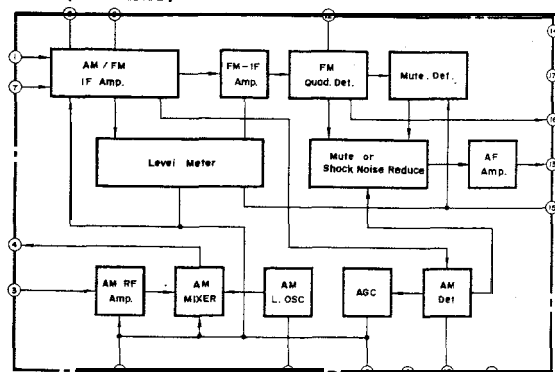
R4	VRD-SU2EE564J	560K ohm	
R28	VRD-SU2EE222J	2.2K ohm	
R29	VRD-SU2EE680J	68 ohm	
R42	VRD-SU2EE682J	6.8K ohm	
R64	VRD-SU2EE470J	47 ohm	
R66	VRD-SU2EE100J	10 ohm	
R69	VRD-SU2EE471J	470 ohm	
R107, 108	VRD-SU2EE560J	56 ohm	
R123, 124	VRD-SU2EE123J	12K ohm	
R134	VRD-ST2EE101J	100 ohm	
R135	VRD-SU2EE824J	820K ohm	
R205	VRD-ST2EE102J	1K ohm	
R206	VRD-ST2EE682J	6.8K ohm	
R211, 212	VRD-SU2EE101J	100 ohm	
R303	VRD-SU2EE150J	15 ohm	
R304	VRD-ST2EE182J	1.8K ohm	
R305	VRD-ST2EE100J	10 ohm	

#### MECHANISM PARTS

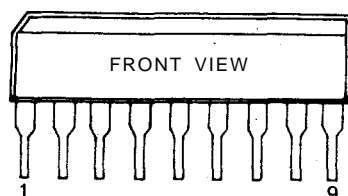
01	92LM-BUTON185A	Button, Function	
02	92LM-BUTON185B	Button, Eject	
03	92LM-SUPT152A	Bracket, Flywheel	AC
04	92LCUSN 113A	Cushion Rubber, Motor	
05	92LM-C-ASY152A	Mechanism Chassis Assembly	
05-1	LX-BZ0321 AFFD	Screw, Slip Roller Assembly Retaining	A A
05-2	NDAIR0125AFSA	Turntable, Take-up	} AC
05-3	NDAIR0162AFZZ	Turntable, Supply	
05-4	NROLW0016AFZZ	Slip Roller Assembly	AK
05-5	LX-WZ9064AFZZ	Washer, 1.2mm Dia. x 3.3mm Dia. x 0.5mm	AA
06	92LM-S-CHS152A	Sub-chassis	
07	92LS2R6S025A	Screw, Motor Retaining	
09	92LM-LEV152F	Lever, Tape Contact	} AB
10	92LMC-SPAC025B	Contact, Tape	
11	92LM-LEV152A	Lever, Record Action	AC
12	92LM-LEV185A	Lever, Switch Action	
13	92LM-LEV152C	Lever, Auto Stop	AB
14	92LM-LEV152D	Lock Plate, Function Key	AD
15	92LM-LEV152E	Lever, Erase Prevention	AB
16	92LM-CSPR152D	Spring, Function Key	AA
17	92LM -CSPR152E	Spring, Sub-chassis Returning	AA
18	92LM-CSPR152F	Spring, Head Azimuth	AB
19	92LM-CSPR185A	Spring, Switch Action Lever	
20	92LM-CSPR152I	Spring, Slip Roller	AA
21	92LM-CSPR152H	Spring, Pressure Roller	AB

REF. NO.	PART NO.	DESCRIPTION	CODE	REF. NO.	PART NO.	DESCRIPTION	CODE
22	92LM-FSPR185A	Plate Spring, Cassette Retaining		132	92LIN-MIC-197A	Built-in Microphone	
23	92LM-CSPR152A	Spring, Record Key	AB	133	QANTR0114AFZZ	Telescopic Rod Antenna	AM
24	92LM-CSPR152B	Spring, Auto Stop Lever	} AA	134	92L RDAT199A	Heat Sink	
25	92LM-CSPR152C	Spring, Function Key Release Lever		135	QLUGP0111CEFW	Lug, Terminal	AA
26	92LBELT152A	Drive Belt		136	92LSPAC 197C	Spacer, Switch Knob	
29	92LM-FWHEL152A	Flywheel	AM	137	92LSH LD1 97A	Shield Plate	
31	92LM-P-ROL152A	Pressure Roller Assembly	AQ	138	92LCUSN197A	Cushion	
32	92LM-SHAFT152B	Shaft, Function Key	AC	139	LHLDW9003CEZZ	Wire Holder	AA
33	QHWS-2222AGFN	Lug	AA	CNP101	QCNCM136CAFZZ	Plug, 3 pin	AB
34	92LM-ER-HD197A	Head, Erase		CNP102	QCNCM095BAFZZ	Plug, 2 pin	AB
35	92LM-RP-HD197A	Head, Record/Playback		CNS101	QCNW-1493AFZZ	Socket, 3 pin with Wire Leads	AE
36	92LM-MOTOR197A	Motor, DC		CNS102	QCNW-1494AFZZ	Socket, 2 pin with Wire Leads	AE
37	92LS2R6S152A	Screw, Tape Contact Lever	AB		92LCONE-200A	Jumper, 5 Leads, 150 mm	
38	92LIR9W5-R5N	Washer, Capstan Oil Cut			92LCONE-199A	Jumper, 3 Leads, 60 mm	
40	92LM-CHIP185A	Guide, Spring			92LCONE-197C	Jumper, 4 Leads, 105 mm	
<b>MISCELLANEOUS</b>					92LCONE-197D	Jumper, 5 Leads, 90 mm	
101	92LCAB200FRTSI	Front Cabinet with Dial Scale Plate		J101	92LJACK-197A	Jack, External Microphone (R-ch)	
102	{ 92LCAB201B	Back Cabinet (GF-4646)		J102	92LJACK-197A	Jack, External Microphone (L-ch)	
	{ 92LCAB200B	Back Cabinet (GF-4646A)		J201	92LJACK-197B	Jack, Headphones	
103	92LCT-HOLD197A	Cassette Holder		SO501	92LSOK-200A	Socket, AC Power Supply with AC/DC Selector Switch (SW501)	
105	92LLID197A	Lid, Battery Compartment		SW501			
106	92LPINT197A	Dial, Pointer		SP201, 202	92LSP-197A	Woofers, 3.2 ohm	
107	92LMEC197HNL01	Handle		SP203, 204	RALMB0057AFZZ	Tweeter	AC
109	92LKNOB185A	Knob, Tuning Control		SW1	92LSWICH-200A	Switch, Band Selector	AM
110	92LKNOB197A	Knob, Tone Control/Volume Control		SW101	92LSWICH-197B	Switch, Record/Playback	
111	92LKNOB197B	Knob, Function Selector/Band Selector		(A ~ J)			
112	92LCOV201A	Cover, Power Transformer		SW102	92LSWICH-197C	Switch, Function Selector	
113	92LSPAC197A	Spacer, Tuning Shaft		(A ~ F)			
114	92LDIAL-P197A	Frame		SW103	QSW-S0267AFZZ	Switch, Beat Cancel	AD
115	92LWHE L197A	Wheel, Dial Cord		(A, B, C)	QSW-F0158AFZZ	Switch, Main	AE
116	92LBOS197A	Boss, Drum Joint		SW104	QACCD0051AFOO	AC Power Supply Cord (GF-4646)	
117	92LSPAC 197B	Spacer, Handle		△	QACCL0050AF00	AC Power Supply Cord (GF-4646A)	
118	92LEV185B	Lever, Eject		△			
119	92LROLL009	Pulley, Dial Cord	AB		92LP-CASE201A	Packing Case (GF-4646)	
120	92LFELT197A	Felt			92LP-CASE200A	Packing Case (GF-4646A)	
121	92LSHAFT136A	Shaft, Tuning			92LP-AD197A	Packing Add.	
123	92LMIRR185A	Mirror, Cassette Compartment			92LBAG197A	Polyethylene Bag, Unit	
124	92LLEV197A	Lever, Record Joint			92LBAG117A	Polyethylene Bag, Operation Manual	
125	92LBTML113A	Terminal, Battery	AB		92LG-CARD004	Guarantee Card (GF-4646A)	
126	92LBSPR197A	Spring, Battery			92LINST201A	Operation Manual (GF-4646)	
127	92LCSPR035	Spring, Dial Cord			92LINST200A	Operation Manual (GF-4646A)	
128	92LM-CSPR152C	Spring, Eject Lever	AA		92LCAUT122A	Safety Caution (GF-4646)	
129	92LSUPT197A	Supporter, Rod Antenna Joint			92LS-LIST004B	SS List (GF-4646A)	
130	92LCSPR197A	Spring, Cassette Holder Opening					

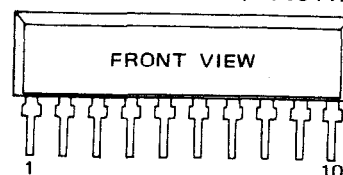
**IC2: VHIAN7223/-1  
(AN7223)**



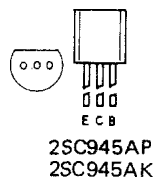
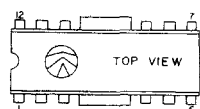
**IC1: VHITA7335P/-1 (TA7335P)  
IC3: VHITA7343P/-1 (TA7343P)**



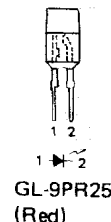
**IC101: VHIM51544L/-1 (M51544L)**



**IC201: VHILA4192/-1 (LA4192)**



E: EMITTER  
C: COLLECTOR  
B: BASE



1: ANODE  
2: CATHODE

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