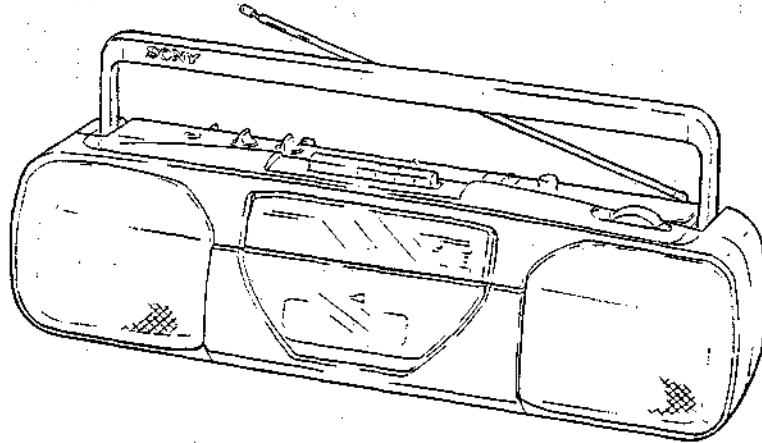


CFS-201L

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

Frequency range

	FM	MW	LW	SW
AEP, WG, UK model	87.6—107MHz	531—1602kHz	153—281kHz	595—18MHz
Italian model	87.5—108MHz	526.5—1606.5kHz	148.5—283.5kHz	

Recording system 4-track 2-channel stereo
 Frequency response 80—8,000Hz
 Speakers Full-range: 10cm (4 inches) dia. × 2
 Power output 2.3W+2.3W (at 10% harmonic distortion)
 at DC operation
 Output PHONES (Stereo minijack), 16-68Ω impedance

Power requirements

AEP, WG, Italian model	220V AC, 50Hz
UK model	240V AC, 50Hz

9V DC, six R20 (size D) batteries

Power consumption 18 W (UK), 14 W (others)

Battery life

Battery	FM recording
Sony SUM-1 (NS)	Approx. 17 hours
Sony AM-1 (N) alkaline	Approx. 30 hours

Dimensions

Approx. 480 × 147 × 148 mm (w/h/d) (19 × 5⁷/₈ × 5⁷/₈ inches) incl. projecting parts and controls

Weight

Approx. 3.0 kg (6 lb 10 oz), incl. batteries

Design and specifications subject to change without notice.

Model Name Using Similar Mechanism	CFS-210L
Tape Transport Mechanism Type	MF-210-75D (2)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.



RADIO CASSETTE-CORDER
SONY®

SECTION 1 GENERAL

SERVICING NOTE

• **Repairing printed resistor**

Cut both sides of the resistor and solder the carbon resistor having same value in place of printed one of the conductor side.

1/32W carbon resistor is supplied for the replacing part of the printed resistor.

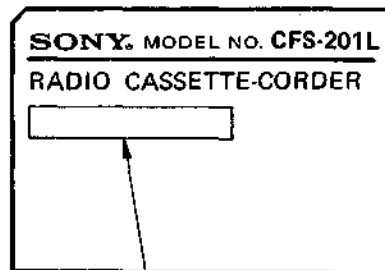
• **Note for tape operation buttons**

When replacing tape operation buttons, cut them off and attach new parts with locking compound.

MODEL IDENTIFICATION

– Model Number Label –

Carved on rear cabinet



AEP, WG, IT model: AC: 220 V ~ 50 Hz 14 W

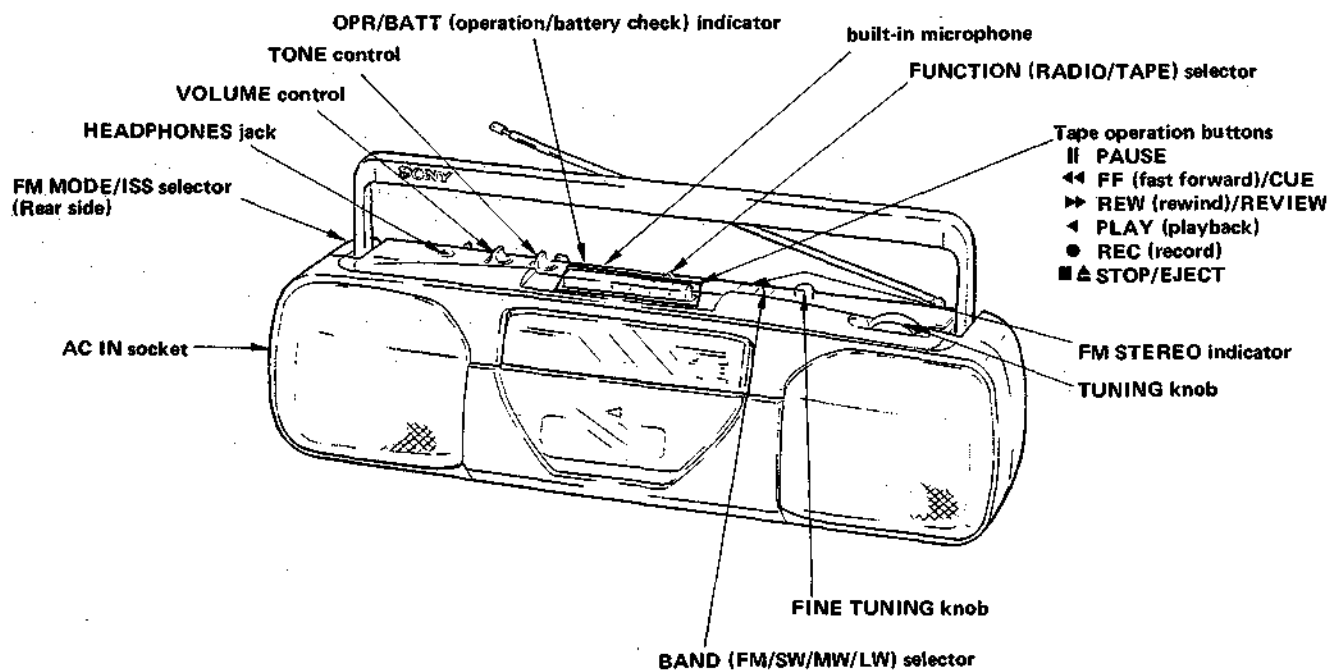
UK model: AC: 240 V ~ 50 Hz 18 W

Note:

WG: West Germany

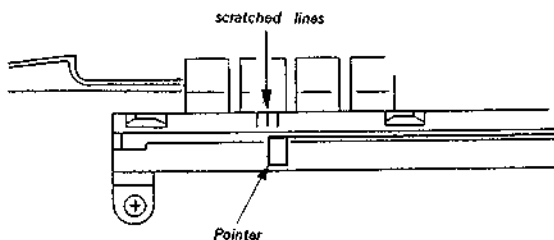
IT: Italian

LOCATION OF CONTROLS



SECTION 2 DIAL POINTER SETTING

1. Turn TUNING knob fully counterclockwise.
2. Set the left end of the pointer to the middle of the scratched lines.



SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
 - record/playback head
 - pinch roller
 - erase head
 - rubber belts
 - capstan
 - idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
6. Power supply voltage: 9V dc.

Torque Measurement

Torque	Meter Reading	Torque Meter
Forward	22.5-55g·cm (0.31-0.76oz·inch)	CQ-102C
Fast Forward and Rewind	60-120g·cm (0.83-1.67oz·inch)	CQ-201B
Back Tension	2-5g·cm (0.03-0.07oz·inch)	CQ-102C

Tape Tension Measurement

Meter	Meter Reading
CQ-403A	more than 150g (5.29oz)

SECTION 4 ELECTRICAL ADJUSTMENTS

4-1. TAPE RECORDER SECTION

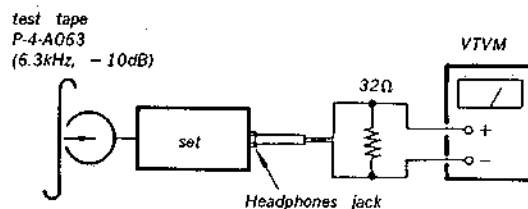
• Test Tape

Type	Signal	Used for
WS-48A	3kHz, 0dB	tape speed adjustment
P-4-A063	6.3kHz, -10dB	head azimuth adjustment

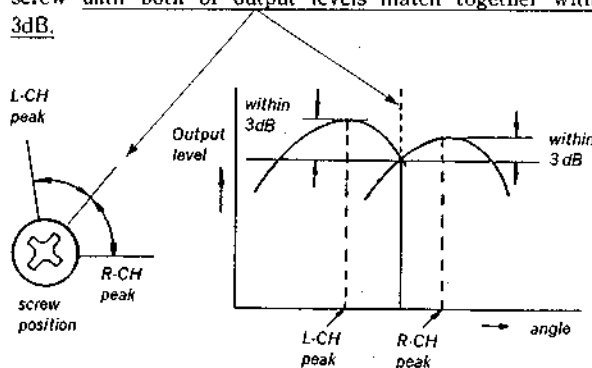
REC/PB Head Azimuth Adjustment

Procedure:

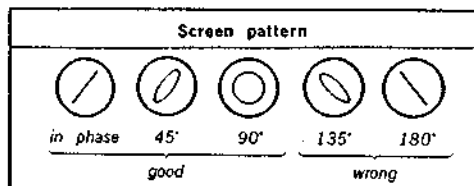
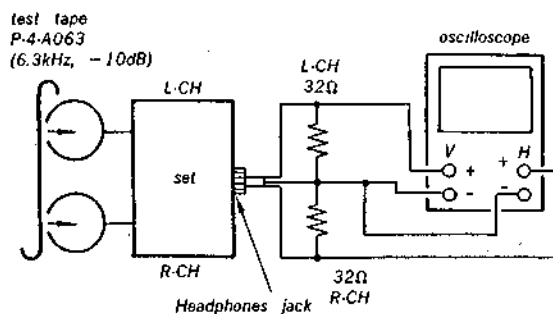
1. Mode: playback



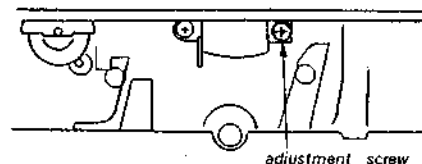
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 3dB.



3. Phase Check
Mode: playback

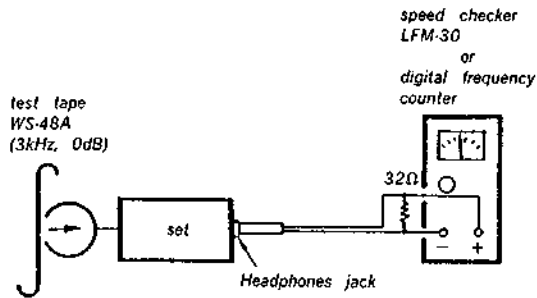


Adjustment Location:



Tape Speed Adjustment

Procedure :
Mode : playback

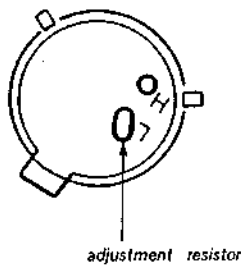


Adjustment Value :

Speed checker	Digital frequency counter
-3.5 to +2.5%	2,895-3,075Hz

Frequency difference between the beginning and the end of the tape should be within 1.5% (45Hz).

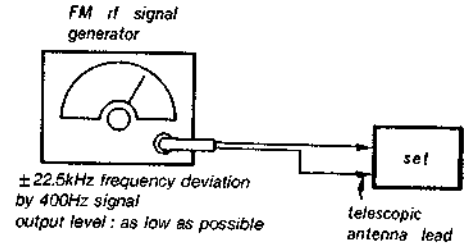
Adjustment Location :



4-2. RADIO SECTION

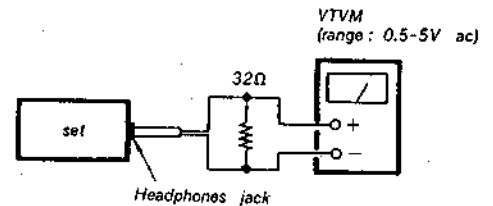
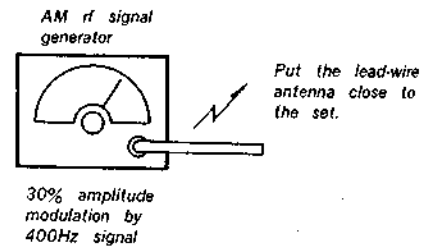
• **FM Section**

Setting :
FUNCTION switch: RADIO
BAND switch: FM



• **AM Section**

Setting :
FUNCTION switch: RADIO
BAND switch: MW, LW, SW



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

SECTION 5 DIAGRAMS

5-1. BLOCK DIAGRAM

AM IF ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
T1	455 kHz

MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	520 (516) kHz
CT4	1,680 (1,630) kHz

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L3	600 kHz
CT3	1,400 kHz

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L8	145 (140) kHz
CT8	295 (293) kHz

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L7	160 kHz
CT7	160 kHz

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	87.35 MHz
CT2	107.8 (108.3) MHz

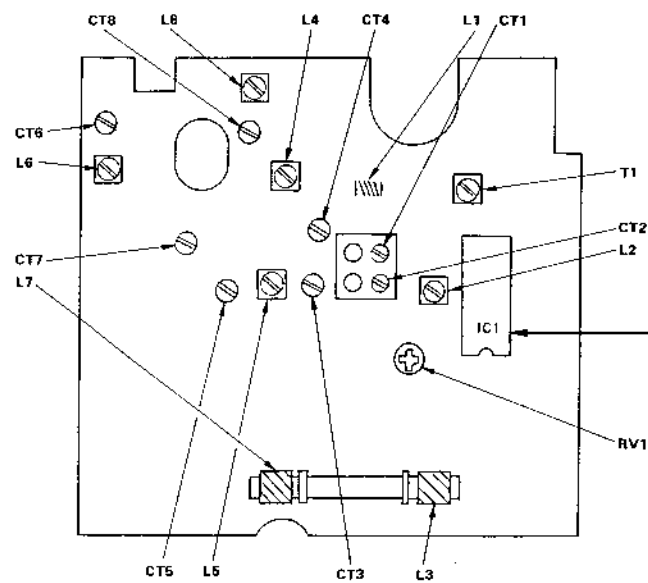
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1	87.35 MHz
CT1	107.8 (108.3) MHz

SW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L6	5.8 MHz
CT6	18.4 MHz

SW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L5	7 MHz
CT5	14 MHz

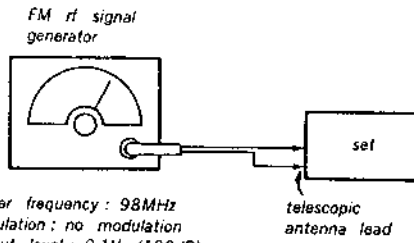
• () : Italian model

Adjustment Location: tuner board



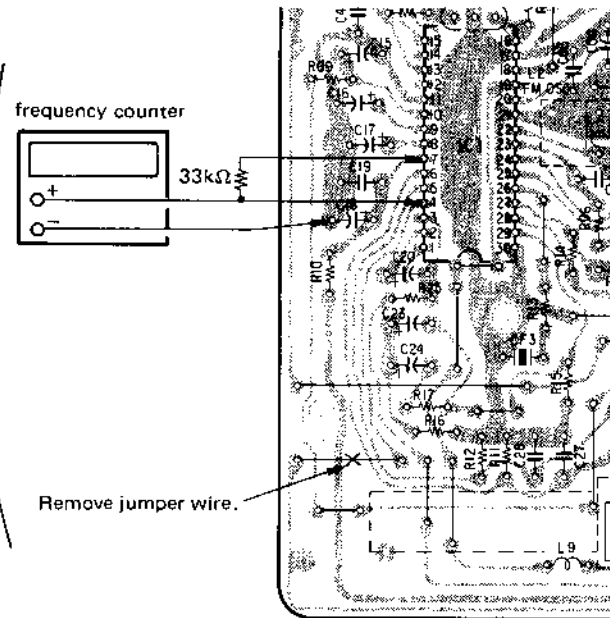
FM VCO Adjustment

A) Regular Method Procedure:



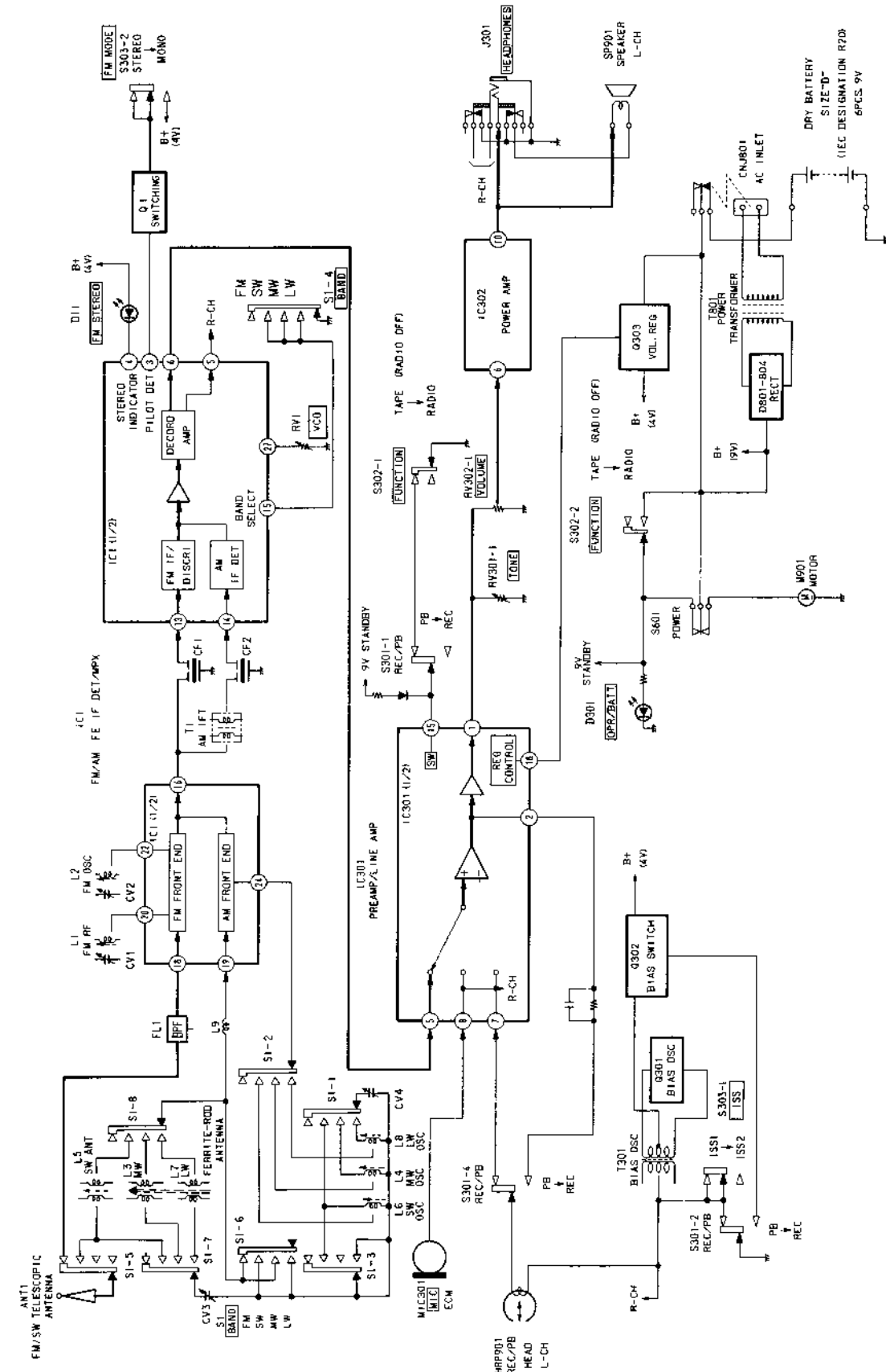
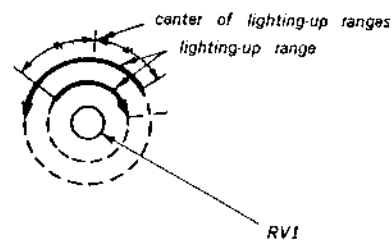
Carrier frequency: 98MHz
Modulation: no modulation
Output level: 0.1V (100dB)

1. Remove jumper wire as shown below.
2. Connect frequency counter to the positions shown below.
3. Tune the set to 98MHz.
4. Adjust RV1 for 76kHz ± 500Hz reading on the frequency counter.
5. After adjustment, connect jumper wire in step 1.



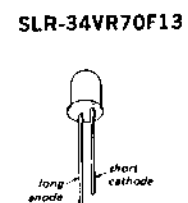
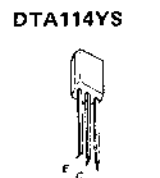
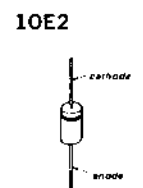
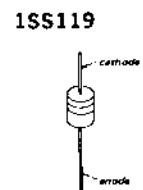
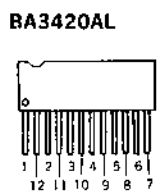
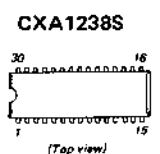
B) Simple Method Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RV1 clockwise or counterclockwise and memorize the lighting-up range of the FM STEREO lamp.
3. Secure RV1 at the center of the lighting-up range as shown below.



5-2. PRINTED WIRING BOARDS - AUDIO SECTION -

• Semiconductor Lead Layouts

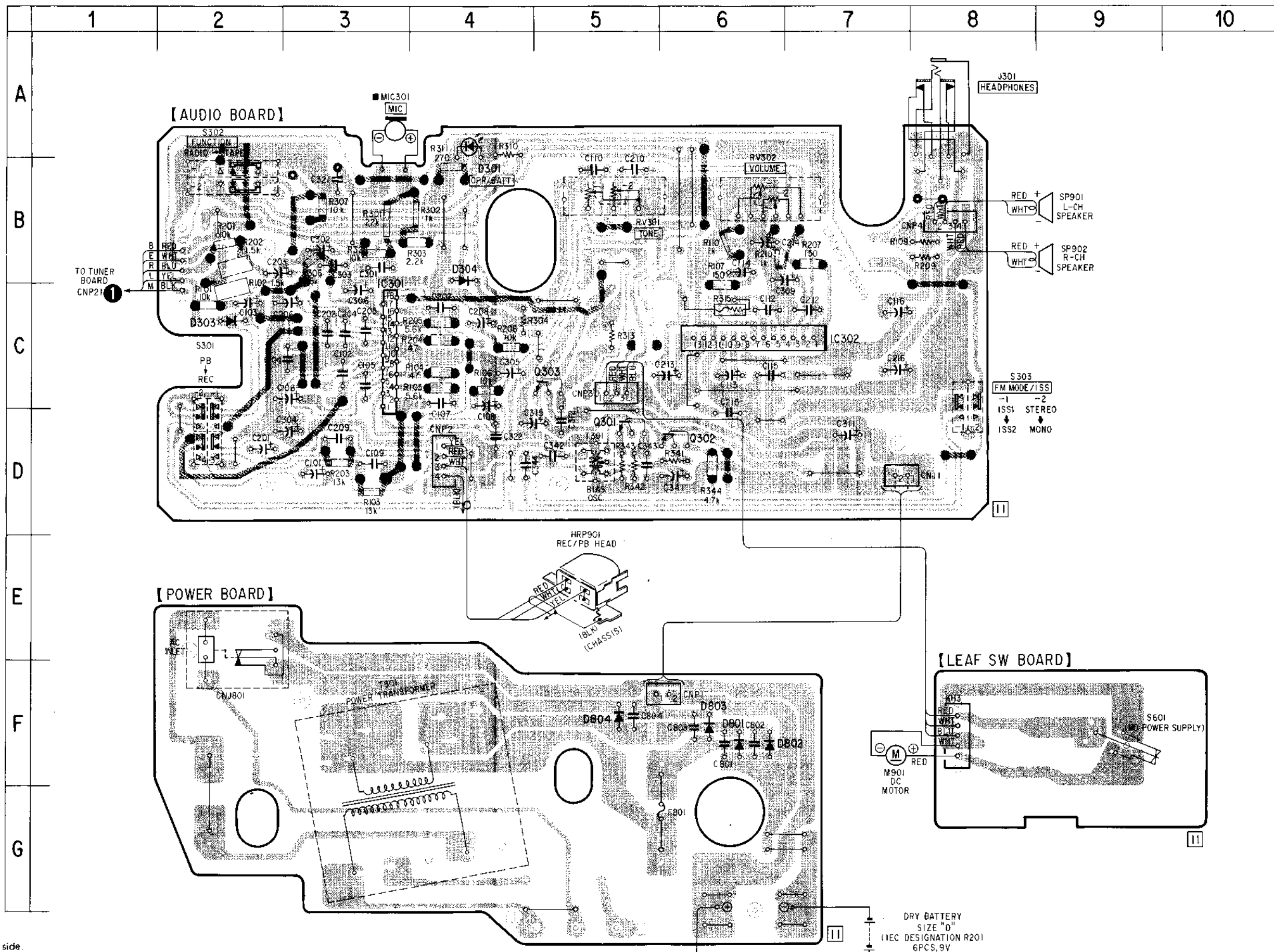


• Semiconductor Location

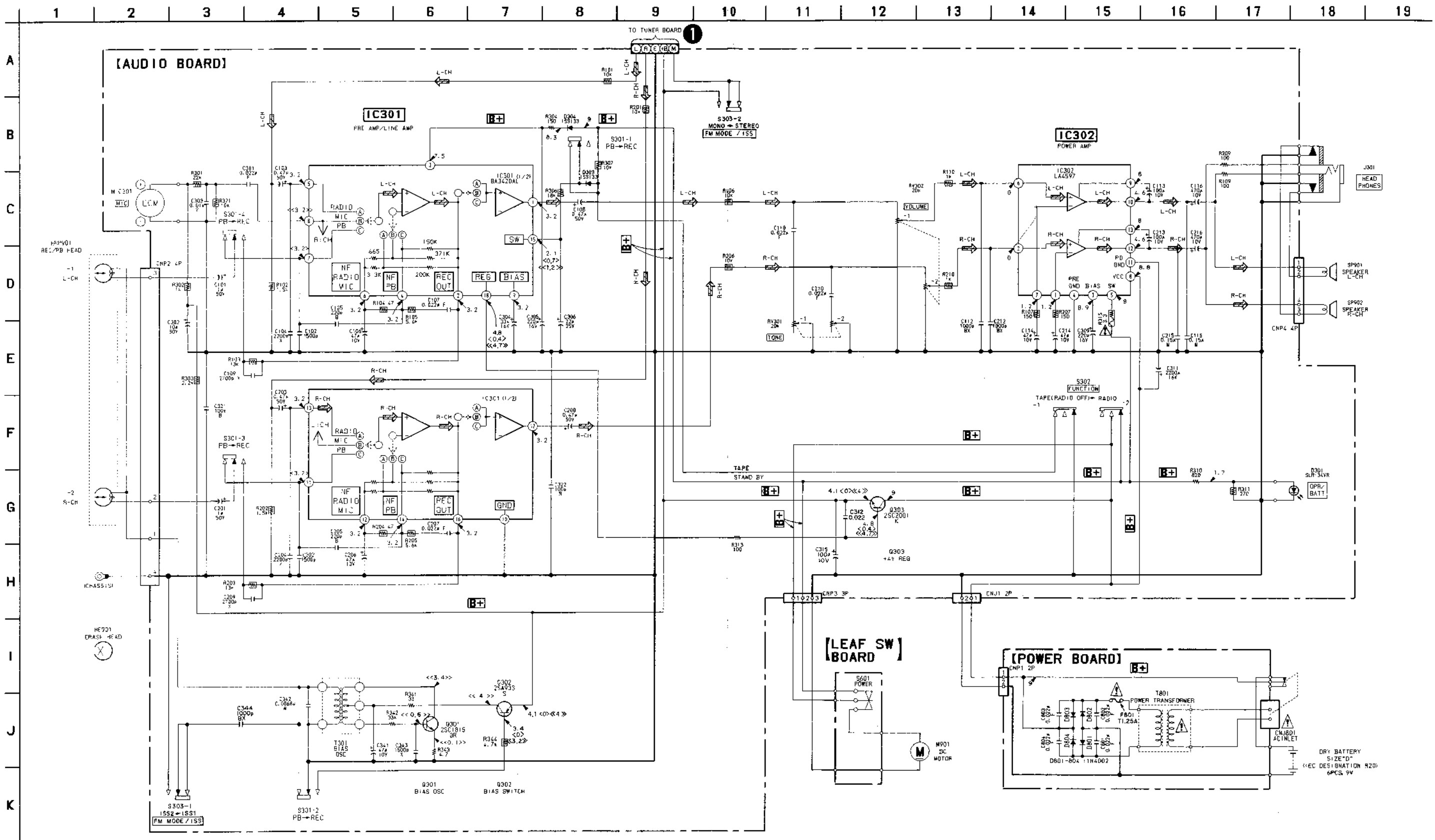
Ref.No.	Location
D301	B-4
D303	C-2
D304	B-4
D801	F-6
D802	F-6
D803	F-6
D804	F-5
IC301	C-3
IC302	C-6
Q301	D-6
Q302	D-5
Q303	C-5



Note:

- : parts extracted from the component side.
- : Through hole.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern of the rear side.
- : Printed resistor of the rear side.

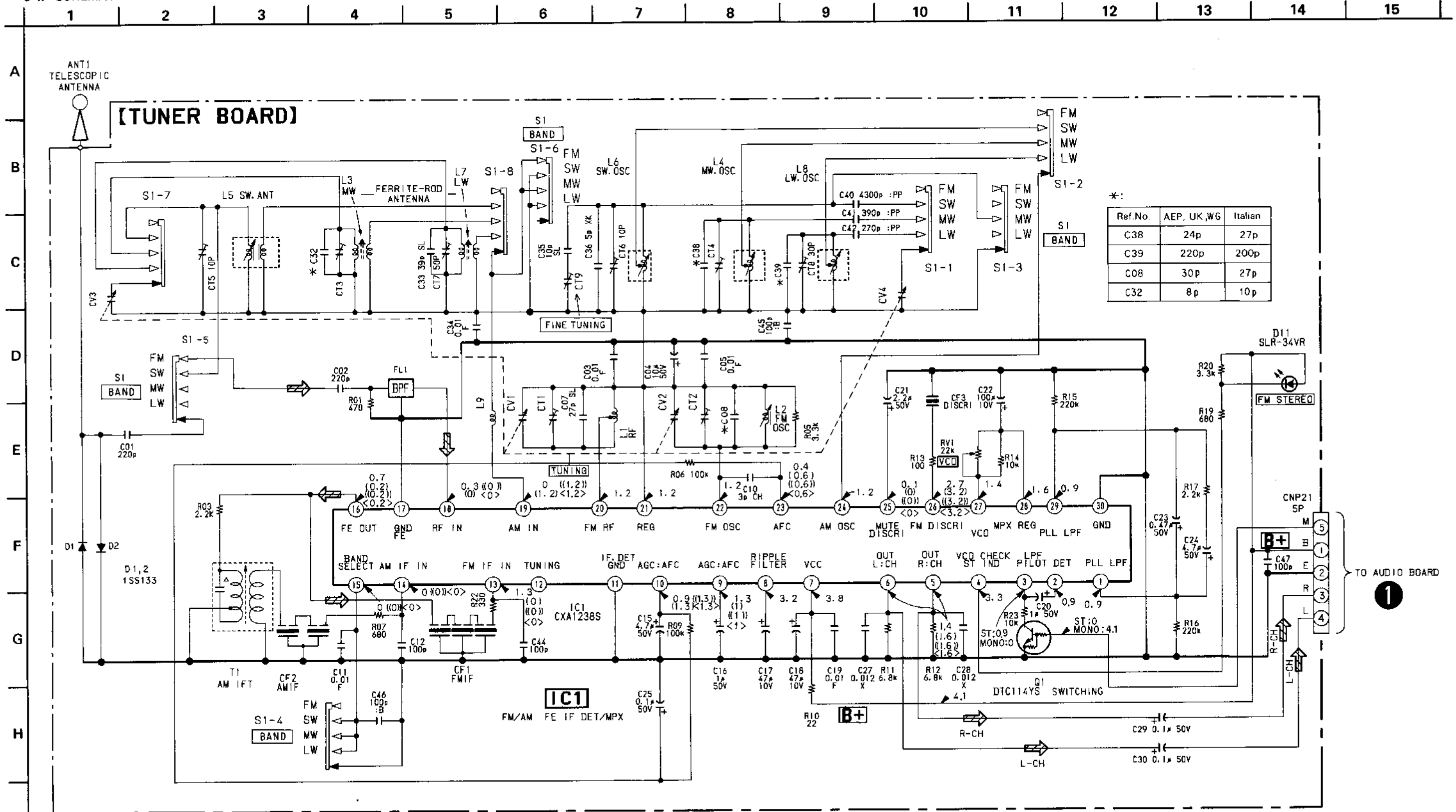


5-3. SCHEMATIC DIAGRAM - AUDIO SECTION - • See page 11 for notes.



Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

5-4. SCHEMATIC DIAGRAM - TUNER SECTION -



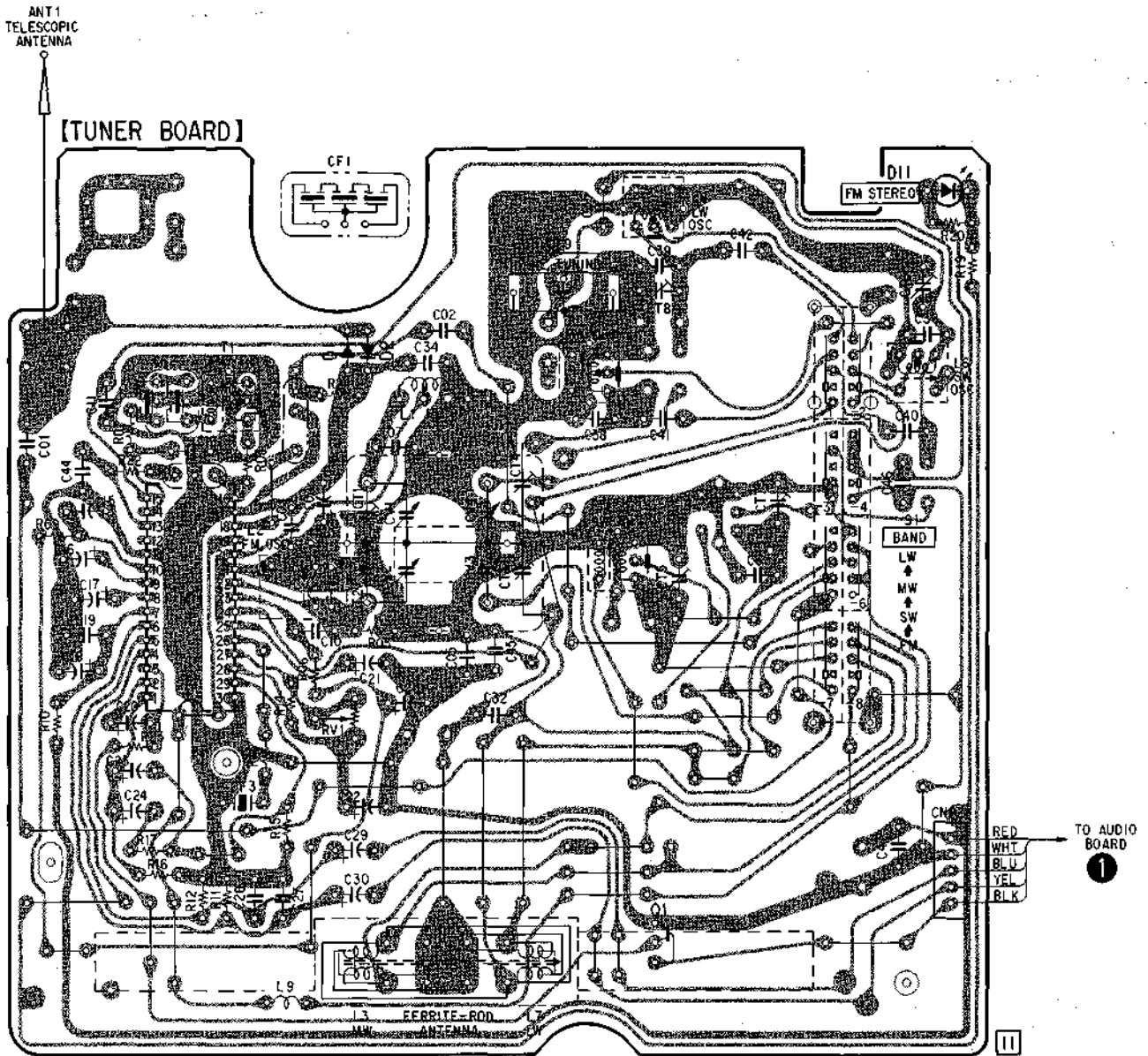
Note:

- All capacitors are in μF unless otherwise noted. pF: μpF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
- \square : nonflammable resistor.
- --- : printed resistor.
- --- : adjustment for repair.

- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark: FM
- (): MW
- < >: PB
- | | : REC
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- \Rightarrow : FM

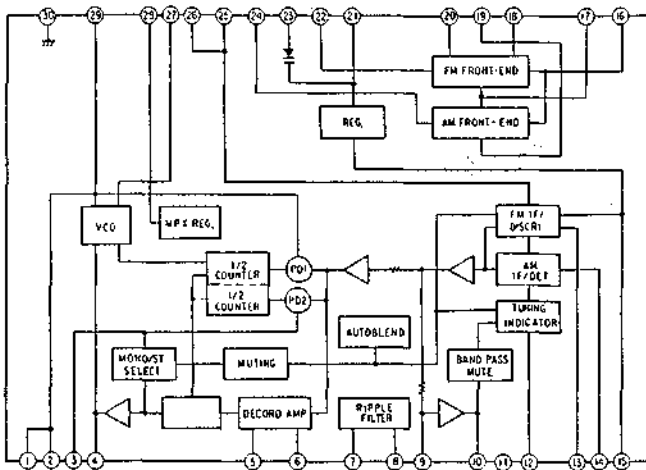
5-5. PRINTED WIRING BOARDS
 - TUNER SECTION -

• See page 7 for Semiconductor Lead Layouts.



• IC Block Diagram

IC1 CXA1238S



SECTION 6 EXPLODED VIEWS

NOTE:

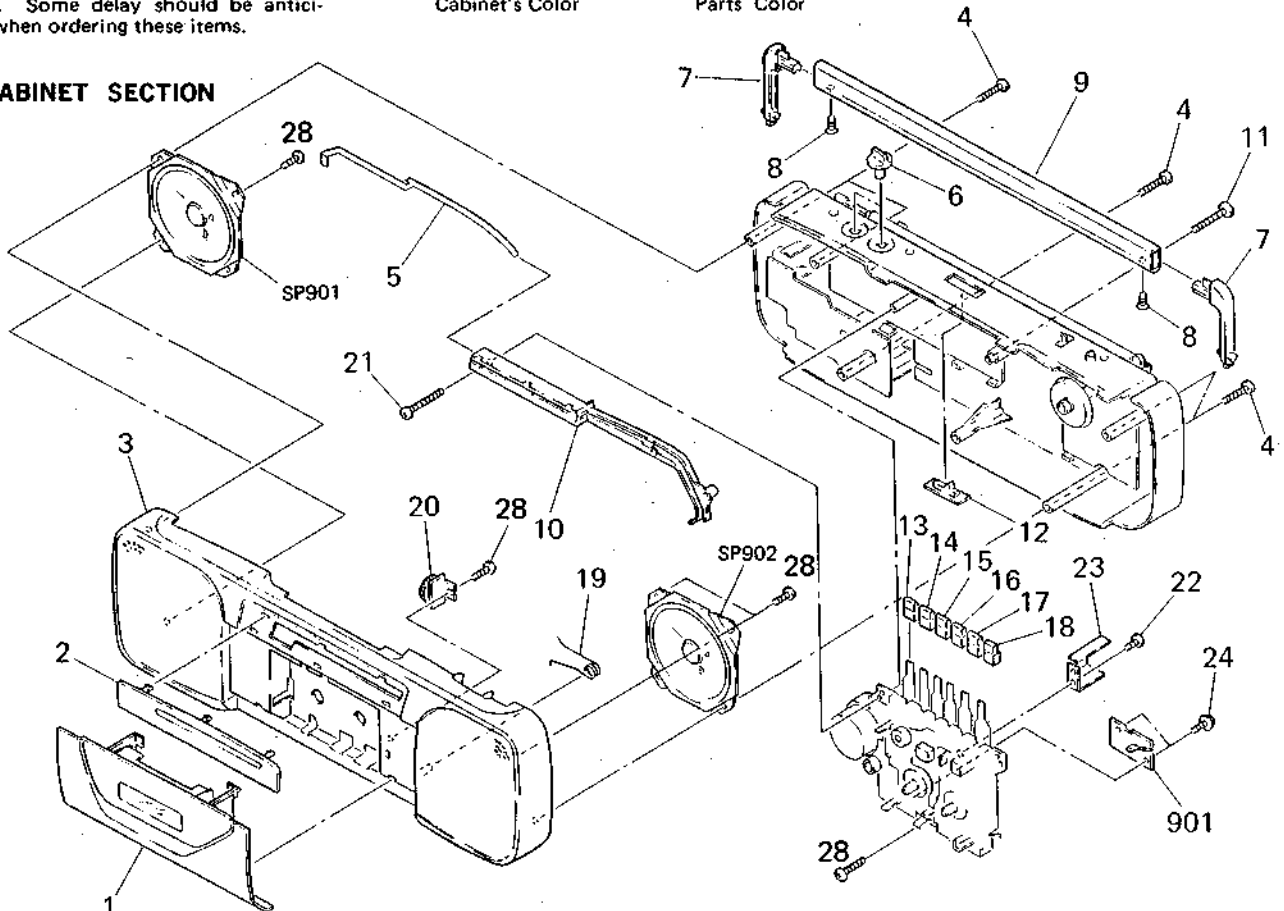
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
(RED) ... KNOB, BALANCE (WHITE)

↑ Cabinet's Color ↑ Parts Color

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

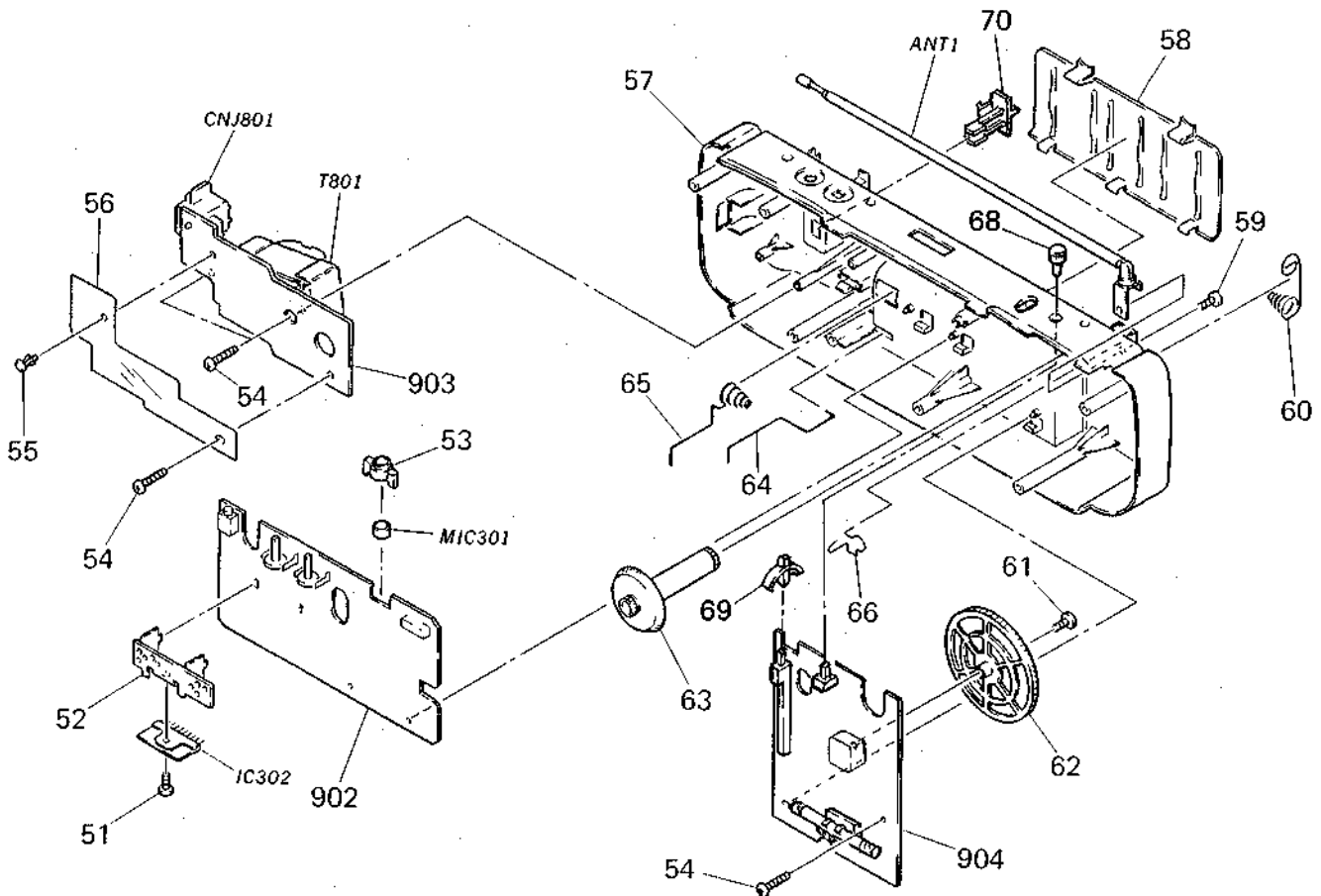
6-1. CABINET SECTION



No.	Part No.	Description	Remarks
1	X-3338-560-1 X-3338-561-1 X-3338-573-1	(BLACK)...HOLDER ASSY, CASSETTE (WHITE)...HOLDER ASSY, CASSETTE (RED)....HOLDER ASSY, CASSETTE	
2	3-351-323-11	PLATE, TRANSPARENT	
3	X-3338-558-1 X-3338-559-1 X-3338-572-1	(BLACK)...CABINET ASSY, FRONT (WHITE)...CABINET ASSY, FRONT (RED)....CABINET ASSY, FRONT	
4	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S	
5	3-351-322-01	POINTER	
6	3-351-338-01 3-351-338-11 3-351-338-21	(BLACK)...KNOB (VOLUME) (WHITE)...KNOB (VOLUME) (RED)....KNOB (VOLUME)	
7	3-343-063-01 3-343-063-21 3-343-063-31	(BLACK)...PLATE, SIDE, HANDLE (WHITE)...PLATE, SIDE, HANDLE (RED)....PLATE, SIDE, HANDLE	
8	7-685-248-14 7-685-248-19	(WHITE)...SCREW +KTP 3X12 TYPE2 NON-SLIT (BLACK,RED)...SCREW +KTP 3X12 TYPE2 SLIT	
9	3-351-314-01 3-351-314-11 3-351-314-21	(BLACK)...HANDLE (WHITE)...HANDLE (RED)....HANDLE	
10	*3-351-333-01	CHASSIS (DIAL)	
11	7-685-154-19	SCREW +P 3X35 TYPE2 SLIT	
12	3-351-317-01 3-351-317-11 3-351-317-21	(BLACK)...KNOB (FUNCTION) (WHITE)...KNOB (FUNCTION) (RED)....KNOB (FUNCTION)	

No.	Part No.	Description	Remarks
13	3-351-331-01	BUTTON (PAUSE)	
14	3-351-332-01	BUTTON (FF)	
15	3-351-328-01	BUTTON (REW)	
16	3-351-327-01	BUTTON (PLAY)	
17	3-351-330-01	BUTTON (REC)	
18	3-351-329-01	BUTTON (STOP)	
19	3-351-308-01	SPRING (CASSETTE)	
20	3-351-377-11	DAMPER	
21	7-685-152-19	SCREW +P 3X25 TYPE2 NON-SLIT	
22	7-621-773-86	SCREW +BVTT 2.6X4 (S)	
23	*3-351-316-01	LEVER (REC7)	
24	7-687-233-11	SCREW (+ PTPWH) (2.6X6)	
28	7-685-648-79	SCREW +BVTP 3X12 TYPE 2 N-S	
901	*1-629-925-11	PC BOARD, LEAF SW	
SP901	1-503-492-11	SPEAKER	
SP902	1-503-492-11	SPEAKER	

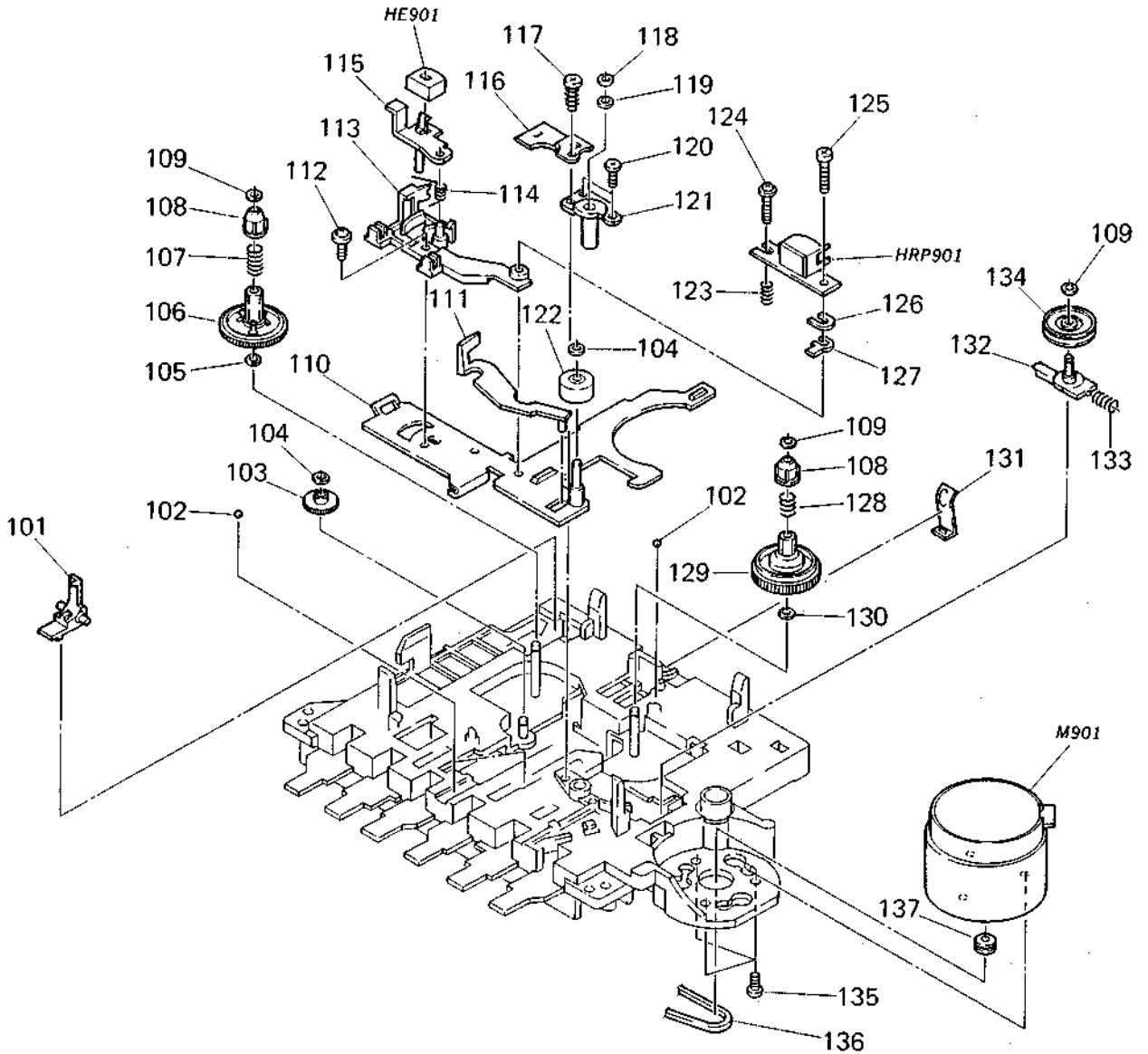
6-2. BOARDS, CABINET (REAR) SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	7-685-970-01	SCREW +BVTT 3X5 (S)		68	3-338-501-31	(BLACK)...KNOB (FINE TUNING)	
52	*3-351-311-01	HEAT SINK			3-338-501-41	(WHITE)...KNOB (FINE TUNING)	
53	3-321-122-01	CUSHION, MICROPHONE			3-338-501-51	(RED)...KNOB (FINE TUNING)	
54	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S		69	3-343-062-01	(BLACK)...KNOB (BAND)	
55	4-812-134-00	RIVET NYLON, 3.5			3-343-062-11	(WHITE)...KNOB (BAND)	
56	*3-351-307-01	SHEET, INSULATING			3-343-062-21	(RED)...KNOB (BAND)	
57	3-351-335-41	(AEP,WG,IT:BLACK)...CABINET (REAR)		70	3-351-313-01	(BLACK)...KNOB (FM MODE/TSS)	
	3-351-335-51	(AEP,WG,IT:WHITE)...CABINET (REAR)			3-351-313-11	(WHITE)...KNOB (FM MODE/TSS)	
	3-351-335-61	(AEP,WG,IT:RED)...CABINET (REAR)			3-351-313-21	(RED)...KNOB (FM MODE/TSS)	
	3-351-335-71	(UK:BLACK)...CABINET (REAR)		902	*A-3270-604-A	PC BOARD ASSY, AUDIO	
	3-351-335-81	(UK:WHITE)...CABINET (REAR)		903	*1-629-928-11	PC BOARD, POWER	
	3-351-335-91	(UK:RED)...CABINET (REAR)		904	*A-3266-532-A	(AEP,UK,WG)...MOUNTED PCB, TUNER	
58	3-343-064-01	(BLACK)...LID, BATTERY CASE			*A-3266-533-A	(IT)...MOUNTED PCB, TUNER	
	3-343-064-11	(WHITE)...LID, BATTERY CASE		905	1-533-217-11	HOLDER, FUSE	
	3-343-064-21	(RED)...LID, BATTERY CASE		ANT1	1-501-375-11	ANTENNA, TELESCOPIC	
59	7-682-548-09	SCREW +B 3X8		ΔCNJ801	1-526-838-11	INLET, AC 2P	
60	3-351-387-01	SPRING COIL BATTERY (+,-)		IC302	8-759-820-22	IC LA4597	
61	7-621-770-67	SCREW +P 2.6X6		MIC301	8-814-186-00	MICROPHONE, ELECTRET CONDENSER (MIC)	
62	3-338-505-01	DRUM, TUNING CAPACITOR					
63	3-351-321-01	KNOB (TUNING)		T801 Δ	1-448-760-21	(UK)...TRANSFORMER, POWER	
64	3-351-315-01	TERMINAL, PLUS		T801 Δ	1-448-761-21	(AEP,WG,IT)...TRANSFORMER, POWER	
65	3-351-320-01	SPRING (MINUS)					
66	3-351-318-01	TERMINAL, ANTENNA					
67	*3-890-726-00	PLATE (C), SHIELD					

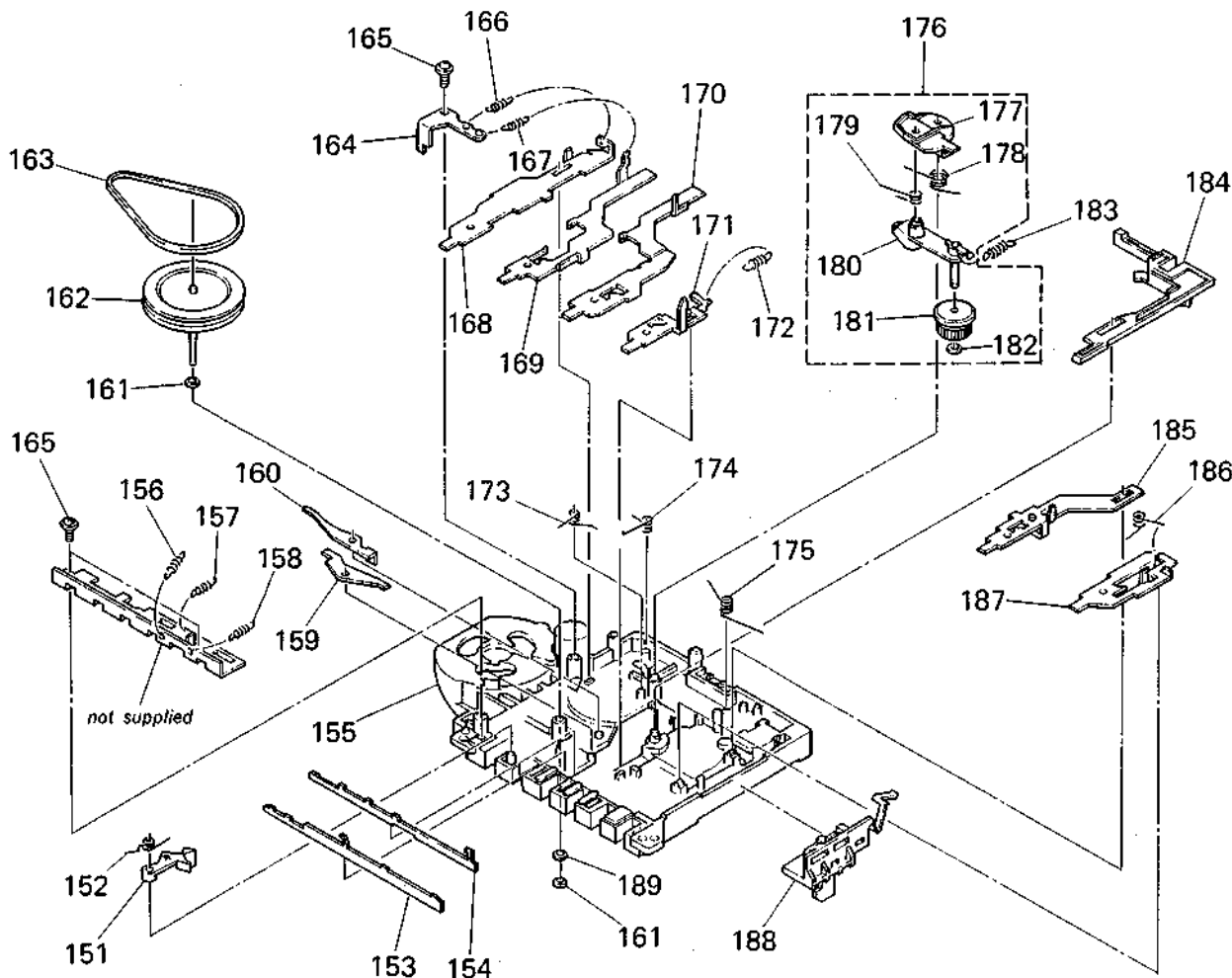
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

6-3. MECHANISM SECTION (1)
(MF-210-75D (2))



Ref.No	Part No.	Description	Remarks	Ref.No	Part No.	Description	Remarks
101	3-313-357-00	CLAW, REC PREVENTION		124	7-621-255-55	SCREW, LOCK	
102	7-671-112-11	BALL, STEEL		125	7-621-772-40	SCREW +B 2X8	
103	3-558-620-11	GEAR, REWIND		126	3-578-138-01	SHIM	
104	3-307-948-01	WASHER, NYLON			3-578-138-11	SHIM	
105	3-322-659-01	WASHER (A)			3-578-138-21	SHIM	
106	3-313-305-00	TABLE, REEL, SUPPLY		127	3-331-108-01	LUG (T), SHIM	
107	3-313-344-00	SPRING, COMPRESSION			3-331-108-11	LUG (T), SHIM	
108	3-313-333-00	CLAW, REEL			3-331-108-21	LUG (T), SHIM	
109	3-558-708-01	WASHER, STOPPER			3-331-108-31	LUG (T), SHM	
110	X-3313-311-1	CHASSIS ASSY			3-331-108-41	LUG (T), SHIM	
111	3-313-316-00	LEVER, SHUT-OFF DETECTION		128	3-313-345-00	SPRING, COMPRESSION	
112	7-621-255-35	SCREW (2MMX5), + PWH		129	A-3130-031-A	TABLE ASSY, REEL, TAKE-UP	
113	3-334-717-01	BRACKET (M), HEAD		130	3-701-437-21	WASHER	
114	3-313-339-00	SPRING		131	3-313-902-11	SPRING	
115	3-313-361-00	ARM, ERASE HEAD		132	X-3313-301-0	BRACKET ASSY, T PULLEY	
116	*3-332-309-01	SPRING (B)		133	3-573-464-00	SPRING, COMPRESSION	
117	7-685-134-19	SCREW (B2.6), TAPPING		134	X-3313-307-0	PULLEY ASSY, FWD	
118	3-307-948-41	WASHER, NYLON		135	7-621-770-87	SCREW +P 2.6X5	
119	3-701-438-11	WASHER, 2.5		136	3-313-335-00	BELT, CAPSTAN	
120	3-318-203-71	SCREW (B1.7X5), TAPPING		137	X-3313-308-1	PULLEY (C), MOTOR	
121	X-3319-945-1	BEARING ASSY, CAPSTAN		HE901	1-543-525-11	HEAD, MAGNETIC (ERASE)	
122	3-703-597-41	PINCH ROLLER, STANDARD		HRP901	1-543-283-11	HEAD, MAGNETIC (REC/PB)	
123	3-313-340-00	SPRING, COMPRESSION		M901	1-541-624-11	MOTOR, DC	

6-4. MECHANISM SECTION (2)
(MF-210-75D (2))



Ref.No	Part No.	Description	Remarks	Ref.No	Part No.	Description	Remarks
151	3-313-322-02	LEVER (A), S.OFF		171	*3-313-326-00	LEVER, FWD BUTTON	
152	3-313-323-00	SPRING		172	3-324-222-01	SPRING (HIGH TENSION), TENSION	
153	*3-313-351-16	PLATE (A), LOCK		173	3-313-338-00	SPRING	
154	*3-313-352-11	PLATE (B), LOCK		174	3-313-378-01	SPRING (A)	
155	A-3102-092-A	CHASSIS ASSY, MECHANICAL		175	3-313-327-00	SPRING	
156	3-313-369-00	SPRING, TENSION		176	A-3136-041-B	IDLER COMPLETE ASSY, FR	177-182
157	3-313-343-00	SPRING, TENSION		177	3-313-314-00	LEVER (SI), FR	
158	3-322-529-01	SPRING, TENSION		178	3-313-315-00	SPRING	
159	*3-313-321-00	LEVER, PREVENTION, RFR		179	3-313-313-00	SPRING	
160	*3-313-320-00	LEVER, RCP		180	X-3313-304-0	ARM ASSY, REW	
161	3-701-438-11	WASHER, 2.5		181	X-3313-312-1	IDLER ASSY, FR	
162	X-3327-909-2	FLYWHEEL (G) ASSY		182	3-558-708-01	WASHER, STOPPER	
163	3-313-335-00	BELT, CAPSTAN		183	3-313-365-00	SPRING, TENSION	
164	*3-332-310-01	HOOK, SPRING		184	3-313-356-00	BRAKE	
165	7-687-233-11	SCREW (+ PTPWH) (2.6X6)		185	*3-313-350-00	LEVER, REC BUTTON	
166	3-313-349-00	SPRING, TENSION		186	3-313-331-00	SPRING	
167	3-313-348-00	SPRING, TENSION		187	*3-313-325-00	LEVER, STOP BUTTON	
168	*3-313-381-01	LEVER (B), PAUSE BUTTON		188	3-313-380-01	CLAW (A), EJECT	
169	*3-313-353-00	LEVER, FF BUTTON		189	3-701-438-01	WASHER	
170	*3-313-354-00	LEVER, REW BUTTON					

SECTION 7 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:

UA...: μ A..., UPA...: μ PA...,

UPC...: μ PC, UPD...: μ PD...

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
901	*1-629-925-11	PC BOARD, LEAF SW	C39	1-130-048-00	(AEP,WG,UK)...FILM 220PF 5% 50V
902	*A-3270-604-A	PC BOARD ASSY, AUDIO	C39	1-136-010-00	(IT).....FILM 200PF 5% 50V
903	*1-629-928-11	PC BOARD, POWER	C40	1-136-025-91	FILM 0.0043MF 5% 50V
904	*A-3266-532-A	(AEP,UK,WG)...MOUNTED PCB, TUNER	C41	1-130-013-00	FILM 390PF 5% 50V
	*A-3266-533-A	(IT).....MOUNTED PCB, TUNER	C42	1-130-011-00	FILM 270PF 5% 50V
905	1-533-217-11	HOLDER, FUSE	C44	1-162-282-31	CERAMIC 100PF 10% 50V
ANT1	1-501-375-11	ANTENNA, TELESCOPIC	C45	1-162-282-31	CERAMIC 100PF 10% 50V
C01	1-162-286-31	CERAMIC 220PF 10% 50V	C46	1-162-282-31	CERAMIC 100PF 10% 50V
C02	1-162-286-31	CERAMIC 220PF 10% 50V	C47	1-162-282-31	CERAMIC 100PF 10% 50V
C03	1-164-096-11	CERAMIC 0.01MF 50V	C101	1-124-499-11	ELECT 1MF 20% 50V
C04	1-123-875-11	ELECT 10MF 20% 50V	C102	1-161-374-11	CERAMIC 0.0015MF 30% 16V
C05	1-164-096-11	CERAMIC 0.01MF 50V	C103	1-124-902-00	ELECT 0.47MF 20% 50V
C07	1-164-056-11	CERAMIC 27PF 5% 50V	C104	1-161-375-00	CERAMIC 0.0022MF 30% 16V
C08	1-102-961-00	(IT)....CERAMIC 27PF 5% 50V	C105	1-162-286-31	CERAMIC 220PF 10% 50V
C08	1-102-962-00	(AEP,WG,UK) ...CERAMIC 30PF 5% 50V	C106	1-124-446-11	ELECT 47MF 20% 10V
C10	1-164-012-11	CERAMIC 3PF 0.25PF 50V	C107	1-161-494-00	CERAMIC 0.022MF 25V
C11	1-164-096-11	CERAMIC 0.01MF 50V	C108	1-124-902-00	ELECT 0.47MF 20% 50V
C12	1-162-282-31	CERAMIC 100PF 10% 50V	C109	1-162-832-11	CERAMIC 0.0027MF 10% 16V
C15	1-124-927-11	ELECT 4.7MF 20% 50V	C110	1-161-494-00	CERAMIC 0.022MF 25V
C16	1-124-499-11	ELECT 1MF 20% 50V	C112	1-162-294-31	CERAMIC 0.001MF 10% 50V
C17	1-124-446-11	ELECT 47MF 20% 10V	C113	1-124-443-00	ELECT 100MF 20% 10V
C18	1-124-446-11	ELECT 47MF 20% 10V	C114	1-124-446-11	ELECT 47MF 20% 10V
C19	1-164-096-11	CERAMIC 0.01MF 50V	C115	1-130-497-00	MYLAR 0.15MF 5% 50V
C20	1-124-499-11	ELECT 1MF 20% 50V	C116	1-124-472-11	ELECT 470MF 20% 10V
C21	1-124-925-11	ELECT 2.2MF 20% 50V	C201	1-124-499-11	ELECT 1MF 20% 50V
C22	1-124-443-00	ELECT 100MF 20% 10V	C202	1-161-374-11	CERAMIC 0.0015MF 30% 16V
C23	1-124-902-00	ELECT 0.47MF 20% 50V	C203	1-124-902-00	ELECT 0.47MF 20% 50V
C24	1-124-927-11	ELECT 4.7MF 20% 50V	C204	1-161-375-00	CERAMIC 0.0022MF 30% 16V
C25	1-124-463-00	ELECT 0.1MF 20% 50V	C205	1-162-286-31	CERAMIC 220PF 10% 50V
C27	1-162-840-11	CERAMIC 0.012MF 10% 16V	C206	1-124-446-11	ELECT 47MF 20% 10V
C28	1-162-840-11	CERAMIC 0.012MF 10% 16V	C207	1-161-494-00	CERAMIC 0.022MF 25V
C29	1-124-463-00	ELECT 0.1MF 20% 50V	C208	1-124-902-00	ELECT 0.47MF 20% 50V
C30	1-124-463-00	ELECT 0.1MF 20% 50V	C209	1-162-832-11	CERAMIC 0.0027MF 10% 16V
C32	1-102-945-00	(AEP,WG,UK) ...CERAMIC 8PF 0.5PF 50V	C210	1-161-494-00	CERAMIC 0.022MF 25V
C32	1-102-947-00	(IT)....CERAMIC 10PF 0.5PF 50V	C212	1-162-294-31	CERAMIC 0.001MF 10% 50V
C33	1-164-050-11	CERAMIC 39PF 5% 50V	C213	1-124-443-00	ELECT 100MF 20% 10V
C34	1-164-096-11	CERAMIC 0.01MF 50V	C214	1-124-446-11	ELECT 47MF 20% 10V
C35	1-164-046-11	CERAMIC 10PF 0.5PF 50V	C215	1-130-497-00	MYLAR 0.15MF 5% 50V
C36	1-102-998-00	CERAMIC 5PF 0.5PF 50V	C216	1-124-472-11	ELECT 470MF 20% 10V
C38	1-102-722-00	(IT).....CERAMIC 27PF 5% 50V	C301	1-161-494-00	CERAMIC 0.022MF 25V
C38	1-102-960-00	(AEP,WG,UK)...CERAMIC 24PF 5% 50V	C302	1-123-875-11	ELECT 10MF 20% 50V
			C303	1-161-379-00	CERAMIC 0.01MF 30% 16V
			C304	1-124-963-11	ELECT 33MF 20% 16V
			C305	1-124-120-11	ELECT 220MF 20% 16V

Ref.No.	Part No.	Description							
C306	1-126-233-11	ELECT	22MF	20%	25V				
C309	1-124-120-11	ELECT	220MF	20%	16V				
C311	1-124-556-11	ELECT	2200MF	20%	16V				
C312	1-161-494-00	CERAMIC	0.022MF		25V				
C315	1-124-443-00	ELECT	100MF	20%	10V				
C321	1-162-282-31	CERAMIC	100PF	10%	50V				
C322	1-162-282-31	CERAMIC	100PF	10%	50V				
C341	1-124-446-11	ELECT	47MF	20%	10V				
C342	1-130-481-00	MYLAR	0.0068MF	5%	50V				
C343	1-161-374-11	CERAMIC	0.0015MF	30%	16V				
C344	1-162-294-31	CERAMIC	0.001MF	10%	50V				
C801	1-101-005-00	CERAMIC	0.022MF		50V				
C802	1-101-005-00	CERAMIC	0.022MF		50V				
C803	1-101-005-00	CERAMIC	0.022MF		50V				
C804	1-101-005-00	CERAMIC	0.022MF		50V				
CF1	1-567-166-00	FILTER, CERAMIC							
CF3									
CF2	1-567-670-11	FILTER, CERAMIC							
CNJ1	*1-563-307-11	CONNECTOR (SOCKET) 2P							
△CNJ801	1-526-838-11	INLET, AC 2P							
CNP1	*1-568-259-11	PIN, CONNECTOR (PC BOARD) 2P							
CNP2	*1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P							
CNP3	*1-506-985-11	PIN, CONNECTOR (PC BOARD) 3P							
CNP4	*1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P							
CNP21	*1-506-987-11	PIN, CONNECTOR (PC BOARD) 5P							
CT1-4	1-151-637-11	CAP, VARIABLE							
CV1-4									
CT5	1-141-290-41	CAP, VAR FILM TRIMMER							
CT6	1-141-290-41	CAP, VAR FILM TRIMMER							
CT7	1-141-260-00	TRIMMER, CERAMIC							
CT8	1-141-245-00	TRIMMER, CERAMIC							
CT9	1-141-328-11	CAP, TRIMMER							
D1	8-719-911-19	DIODE 1SS119							
D2	8-719-911-19	DIODE 1SS119							
D11	1-807-738-11	DIODE SLR-34VR70F130 (LED)							
D301	1-807-738-11	DIODE SLR-34VR70F130 (LED)							
D303	8-719-911-19	DIODE 1SS119							
D304	8-719-911-19	DIODE 1SS119							
D801	8-719-200-02	DIODE 10E-2							
D802	8-719-200-02	DIODE 10E-2							
D803	8-719-200-02	DIODE 10E-2							
D804	8-719-200-02	DIODE 10E-2							
F801	△1-532-285-00	FUSE, TIME-LAG 1.25A							
FL1	1-236-022-11	FILTER, BAND PASS							
HE901	1-543-525-11	HEAD, MAGNETIC (ERASE)							
HRP901	1-543-283-11	HEAD, MAGNETIC (REC/PB)							
IC1	8-752-035-68	IC CXAT238S							
IC301	8-759-978-54	IC BA3420AL							
IC302	8-759-820-22	IC LA4597							
J301	1-566-891-11	JACK							
L1	*1-422-180-11	COIL, AIR-CORE (RF)							
L2	1-459-815-11	COIL (WITH CORE)							
L3	1-402-417-11	ANTENNA, FERRITE-ROD (LW/MW)							
L7									
L4	1-406-253-11	COIL (OSC)							
L5	1-402-312-11	COIL (ANT)							
L6	1-406-280-11	COIL (OSC)							
L8	1-406-252-11	COIL (OSC)							
L9	*1-409-293-00	COIL, AIR CORE							
M901	1-541-624-11	MOTOR, DC							
MIC301	8-814-186-00	MICROPHONE, ELECTRET CONDENSER (MIC)							
Q1	8-729-904-36	TRANSISTOR DTC114YS							
Q301	8-729-281-53	TRANSISTOR 2SC1815GR							
Q302	8-729-117-54	TRANSISTOR 2SA1175							
Q303	8-729-100-13	TRANSISTOR 2SC2001							
R03	1-249-421-11	CARBON	2.2K	5%	1/4W				
R05	1-249-423-11	CARBON	3.3K	5%	1/4W				
R06	1-249-441-11	CARBON	100K	5%	1/4W				
R07	1-249-415-11	CARBON	680	5%	1/4W				
R09	1-249-441-11	CARBON	100K	5%	1/4W				
R10	1-249-397-11	CARBON	22	5%	1/4W				
R11	1-249-427-11	CARBON	6.8K	5%	1/4W				
R12	1-249-427-11	CARBON	6.8K	5%	1/4W				
R13	1-249-405-11	CARBON	100	5%	1/4W				
R14	1-249-429-11	CARBON	10K	5%	1/4W				
R15	1-247-887-00	CARBON	220K	5%	1/4W				
R16	1-247-887-00	CARBON	220K	5%	1/4W				
R17	1-249-421-11	CARBON	2.2K	5%	1/4W				
R19	1-249-415-11	CARBON	680	5%	1/4W				
R20	1-249-423-11	CARBON	3.3K	5%	1/4W				
R22	1-249-411-11	CARBON	330	5%	1/4W				
R23	1-249-429-11	CARBON	10K	5%	1/4W				
R24	1-249-413-11	CARBON	470	5%	1/4W				
R101	1-249-429-11	CARBON	10K	5%	1/4W				

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description			
R102	1-249-419-11	CARBON	1.5K	5%	1/4W
R103	1-215-448-00	CARBON	13K	5%	1/4W
R104	1-249-401-11	CARBON	47	5%	1/4W
R105	1-249-426-11	CARBON	5.6K	5%	1/4W
R106	1-249-429-11	CARBON	10K	5%	1/4W
R107	1-249-407-11	CARBON	150	5%	1/4W
R109	1-249-405-11	CARBON	100	5%	1/4W
R110	1-249-417-11	CARBON	1K	5%	1/4W
R201	1-249-429-11	CARBON	10K	5%	1/4W
R202	1-249-419-11	CARBON	1.5K	5%	1/4W
R203	1-215-448-00	CARBON	13K	5%	1/4W
R204	1-249-401-11	CARBON	47	5%	1/4W
R205	1-249-426-11	CARBON	5.6K	5%	1/4W
R206	1-249-429-11	CARBON	10K	5%	1/4W
R207	1-249-407-11	CARBON	150	5%	1/4W
R209	1-249-405-11	CARBON	100	5%	1/4W
R210	1-249-417-11	CARBON	1K	5%	1/4W
R301	1-249-433-11	CARBON	22K	5%	1/4W
R302	1-249-417-11	CARBON	1K	5%	1/4W
R303	1-249-421-11	CARBON	2.2K	5%	1/4W
R304	1-249-407-11	CARBON	150	5%	1/4W
R306	1-249-432-11	CARBON	18K	5%	1/4W
R307	1-249-429-11	CARBON	10K	5%	1/4W
R310	1-249-416-11	CARBON	820	5%	1/4W
R311	1-249-410-11	CARBON	270	5%	1/4W
R313	1-249-405-11	CARBON	100	5%	1/4W
R315	△ 1-217-640-11	FUSIBLE	3.3	5%	1/4W F
R321	1-249-429-11	CARBON	10K	5%	1/4W
R341	1-249-399-11	CARBON	33	5%	1/4W
R342	1-249-435-11	CARBON	33K	5%	1/4W
R343	1-249-389-11	CARBON	4.7	5%	1/4W
R344	1-249-425-11	CARBON	4.7K	5%	1/4W
RV1	1-228-995-00	RES, ADJ, CARBON 22K			
RV301	1-238-431-11	RES, VAR, CARBON 20K/20K (TONE)			
RV302	1-238-430-11	RES, VAR, CARBON 20K/20K (VOLUME)			
S7	1-571-747-11	SWITCH, LEVER SLIDE (BAND)			
S301	1-571-472-11	SWITCH, SLIDE (REC/PB)			
S302	1-571-547-11	SWITCH, SLIDE (FUNCTION)			
S303	1-554-222-00	SWITCH, SLIDE (FM MODE/ISS)			
S601	1-554-495-00	SWITCH, LEAF (MD POWER SUPPLY)			
SP901	1-503-492-11	SPEAKER			
SP902	1-503-492-11	SPEAKER			
T1	1-404-355-00	TRANSFORMER, IF			
T301	1-433-268-00	TRANSFORMER, BIAS OSCILLATOR			

Ref.No.	Part No.	Description
T801	△ 1-448-760-21	(UK).....TRANSFORMER, POWER
T801	△ 1-448-761-21	(AEP,WG,IT)...TRANSFORMER, POWER

ACCESSORY & PACKING MATERIAL

△ 1-555-234-00	(AEP,WG,IT)...CORD, POWER
△ 1-558-032-11	(UK).....CORD, POWER
*3-351-378-01	CUSHION (LEFT) (RIGHT)
*3-351-374-01	INDIVIDUAL CARTON
3-750-187-11	(AEP,IT,UK)...MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)
3-750-187-41	(AEP,WG,IT)...MANUAL, INSTRUCTION (GERMAN,DUTCH,SWEDISH,ITALIAN)

Note: The components identified by mark **△** or dotted line with mark **△** are critical for safety. Replace only with part number specified.