CFS-D30

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model

Discard CFS-D30 Service Manual (No. 9-953-859-11) priviously issued. This Service Manual contains it.

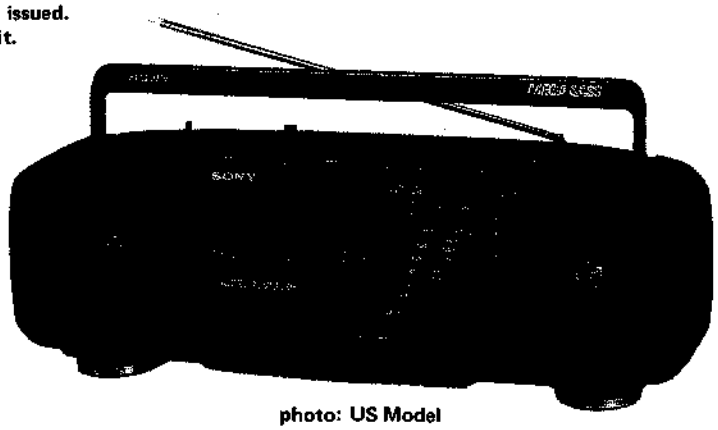


photo: US Model

Model Name Using Similar Mechanism	CFS-D20
Tape Transport Mechanism Type	MF-D30-78D

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS
(US, E model)

Full-range speakers:
With 3.2-ohm loads, both channels driven, from 400-10,000Hz; rated 1.5W per channel minimum RMS power, with no more than 10% total harmonic distortion in AC operation.
Super woofer:
With 3-ohm loads, driven from 60-400Hz; rated 3.5W minimum RMS power, with no more than 10% total harmonic distortion in AC operation

OTHER SPECIFICATIONS

Frequency range

	FM	AM
US, Canadian, E model	87.6–108MHz	530–1,710kHz
AEP model	87.6–107MHz	531–1,602kHz
Italian model	87.5–108MHz	526.5–1,606.5kHz

Intermediate frequency
FM: 10.7MHz
AM: 455kHz

Recording system 4-track 2-channel stereo

Frequency response
80–10,000Hz

Speakers
Full-range: 10cm (4 in.) dia. x2
Super woofer: 8cm (3 in.) dia. x1

Output
Headphones jack (stereo minijack) for 16-68 ohm impedance headphones

Power output (Canadian model)
2.5W + 2.5W (at 10% harmonic distortion) in DC operation
Super woofer: 5.8W (at 10% harmonic distortion) in DC operation

Maximum power output (AEP, Italian model)
4.6W (2.3W + 2.3W), super woofer 5.8W

Power consumption (AEP model)
20W

Power requirements
US, Canadian, E model: 120V AC, 60Hz
9V DC: six size D (R20) batteries
AEP, Italian model: 220V AC, 50Hz
9V DC, six R20 (size D) batteries

Battery life

Battery	FM recording
Sony SUM-1 (NS)	Approx. 6 hours
Sony AM1 (N) alkaline	Approx. 17 hours

Dimensions
Approx. 552x172x188 mm (w/h/d)
(21¾x6⅞x7⅜ inches)

Weight
Approx. 4.7kg (10 lb 6 oz)

Supplied accessory
AC power cord (1)

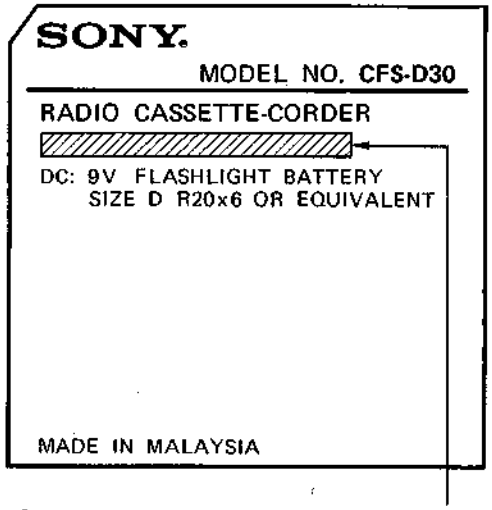
Design and specifications subject to change without notice.

MICROFILM

RADIO CASSETTE-CORDER
SONY®

TABLE OF CONTENTS

MODEL IDENTIFICATIONS
– Specification Labels –



US model:	AC:	120V	60Hz	20W
Canadian, E model:	AC:	120V	60Hz	22W
AEP, Italian model:	AC:	220V~	50Hz	20W

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ 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.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

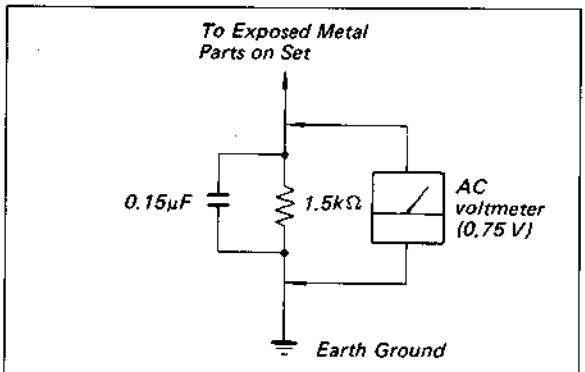


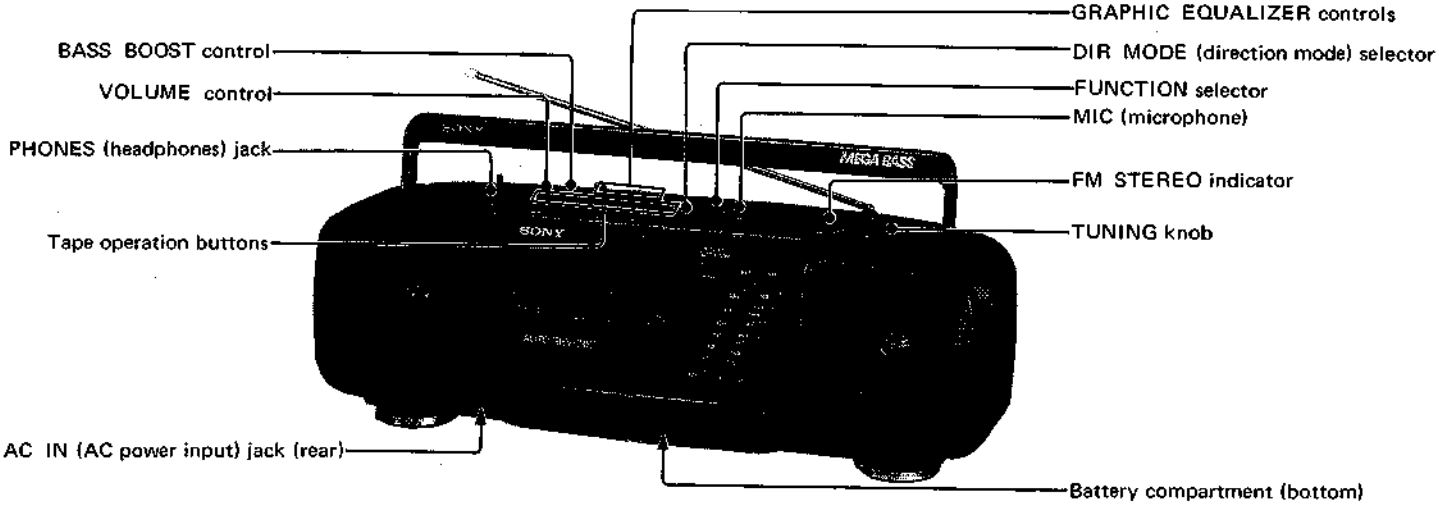
Fig. A. Using an AC voltmeter to check AC leakage.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

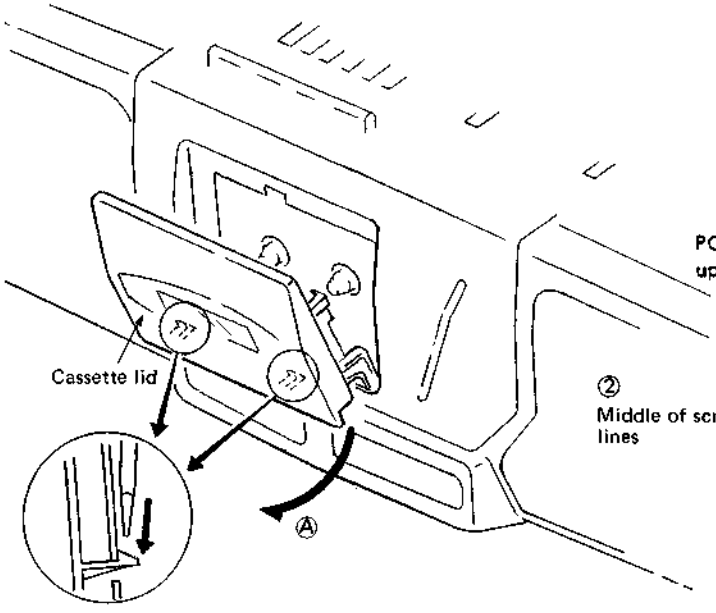
SECTION 1
GENERAL

LOCATION AND FUNCTION OF CONTROLS



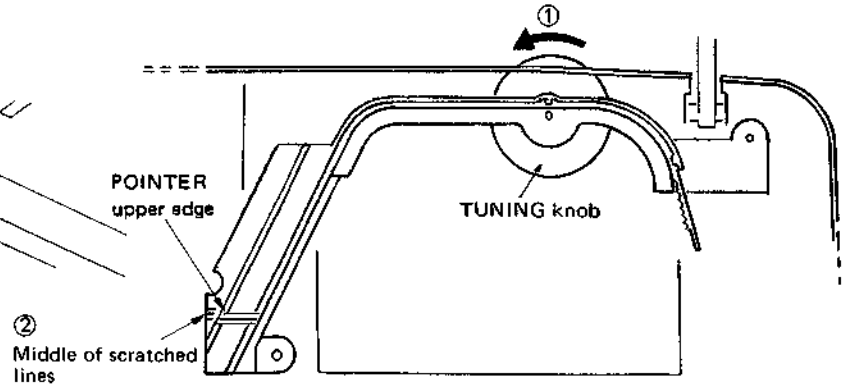
SECTION 2
DISASSEMBLY

CASSETTE LID REMOVAL



1. Depress claws to release.
2. Remove CASSETTE LID in the direction of arrow Ⓐ .

DIAL POINTER SETTING



1. Turn TUNING knob fully counterclockwise.
2. Set the POINTER upper edge to the middle of the scratched lines.
3. Mesh gear of POINTER with TUNING knob.

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 perfomed with the rated power supply voltage unless otherwise noted.
6. Power supply voltage: 9V dc.

Torque Measurement

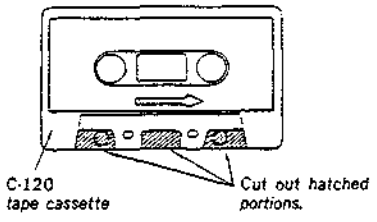
Torque	Torque meter	Meter reading
Forward	CQ-102C	24 – 70g•cm (0.33 – 0.97 oz•inch)
Forward back tension	CQ-102C	2 – 6g•cm (0.028 – 0.083 oz•inch)
Reverse	CQ-102RC	24 – 70g•cm (0.33 – 0.97 oz•inch)
Reverse back tension	CQ-102RC	2 – 6g•cm (0.028 – 0.083 oz•inch)
Fast Forward	CQ-201B	more than 85g•cm (more than 1.18 oz•inch)
Rewind	CQ-201B	85 – 150g•cm (1.18 – 2.08 oz•inch)

Tape Tension Measurement

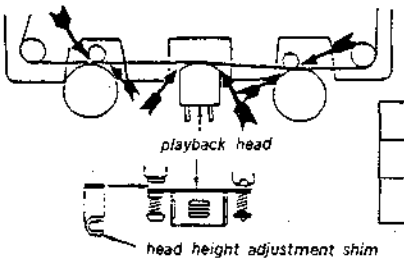
Mode	Meter	Meter Reading
Forward	CQ-403A	more than 110g (more than 3.88 oz)
Reverse	CQ-403R	

Head Height Adjustment

1. Use CQ-009C (Part No. 8-909-708-01) or prepare an adjustment cassette as shown below.



2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions shown by arrows.



Part No.	t
3-578-138-01	0.1
3-578-138-11	0.2

SECTION 4
ELECTRICAL ADJUSTMENTS

4-1. TAPE RECORDER SECTION

Standard Output Level

Output terminal	front speaker	rear speaker	headphones
load impedance	3.2Ω	3Ω	32Ω
output signal level	0.775 V (0dB)	0.775 V (0dB)	0.25 V (–10dB)

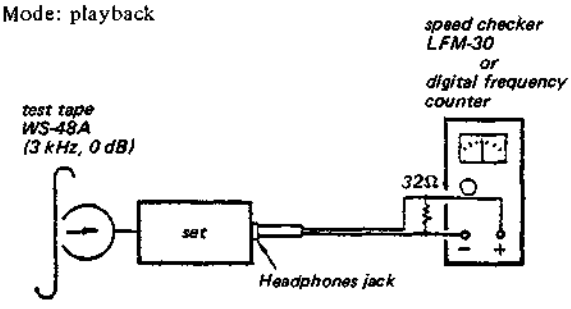
Test Tape

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

Tape Speed Adjustment

Procedure:

Mode: playback

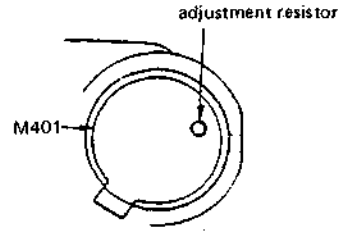


Adjustment Value:

Speed checker	Digital frequency counter
±3%	2,910 to 3,090 Hz

Frequency difference between the beginning and the end of the tape should be within 1% (30Hz).

Adjustment Location:



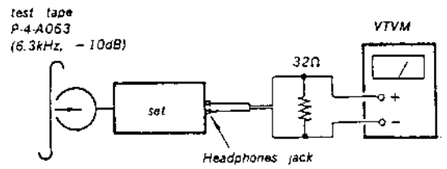
Head Azimuth Adjustment

Parform adjustments in both forward and reverse playback modes.

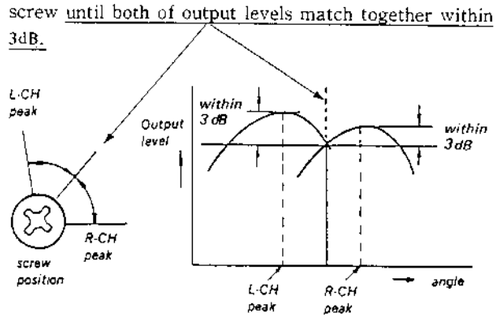
Output level of both forward and reverse playback modes should match together.

Procedure :

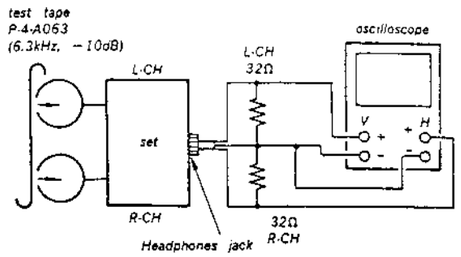
1. Mode : playback



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.



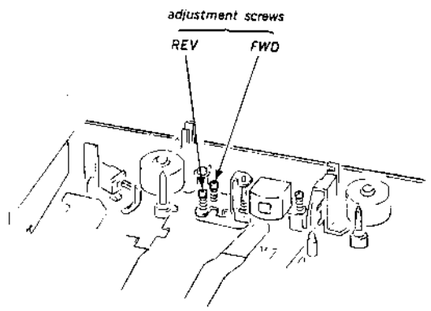
3. Phase Check
   Mode : playback



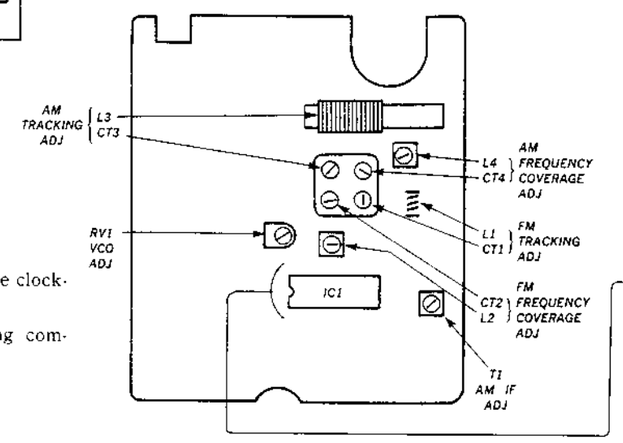
Screen Pattern				
in phase	45°	90°	135°	180°
good			wrong	

Note : Finish the screw adjustment with a turn in the clockwise direction.
After the adjustment, apply suitable locking compound to the adjustment screw.

Adjustment Location :



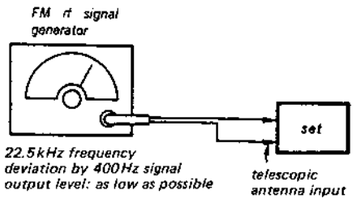
Adjustment Location : tuner board



4-2. RADIO SECTION

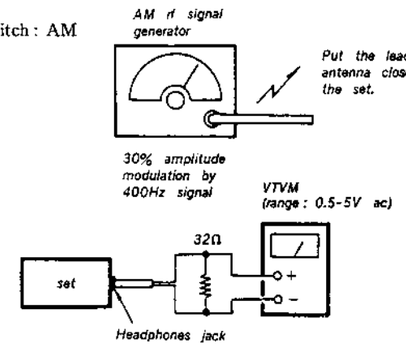
• FM Section

Setting :
FUNCTION switch : FM



• AM Section

Setting :
FUNCTION switch : AM

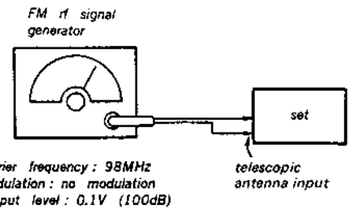


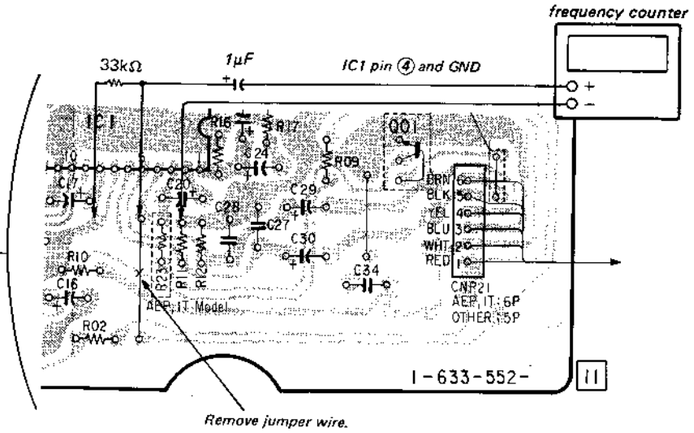
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

VCO Adjustment

A) Regular Method

Procedure :





Note:
CND: Canadian model
IT: Italian model

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	CT2
US,CND,E: 86.5MHz AEP: 87.0MHz IT: 87.35MHz	US,CND,E: 109.5MHz AEP: 108.3MHz IT: 108.25MHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1	CT1
US,CND,E: 86.5MHz AEP: 87.0MHz IT: 87.35MHz	US,CND,E: 109.5MHz AEP: 108.3MHz IT: 108.25MHz

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	CT4
US,CND,E,AEP: 520kHz IT: 516kHz	US,CND: 1,780kHz E,AEP: 1,680kHz IT: 1,630kHz

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L3	CT3
600kHz	US,CND: 1,500kHz E,AEP,IT: 1,400kHz

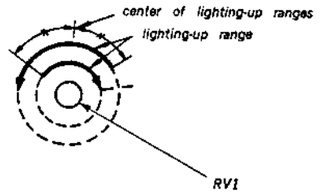
AM IF ADJUSTMENT
Adjust for a maximum reading on VTVM.
T1
455kHz

1. Remove jumper wire as shown below.
2. Connect frequency counter to the set as 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 removed in step 1.

B) Simple Method

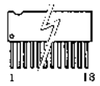
Procedure :

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 of both turns as shown below.

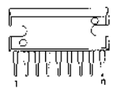


5-1. SEMICONDUCTOR LEAD LAYOUTS

BA3420AL



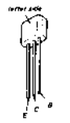
LA4630-N



DTA114ES
DTA114TS
DTC114ES
DTC143TS
DTC144WS

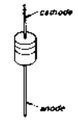
2SA952

2SA1175-HFE
2SC2785-HFE

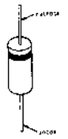


2SD773

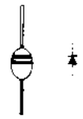
RD6.8ES-B2
1SS119



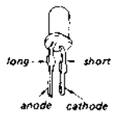
RL202-M11



U15G

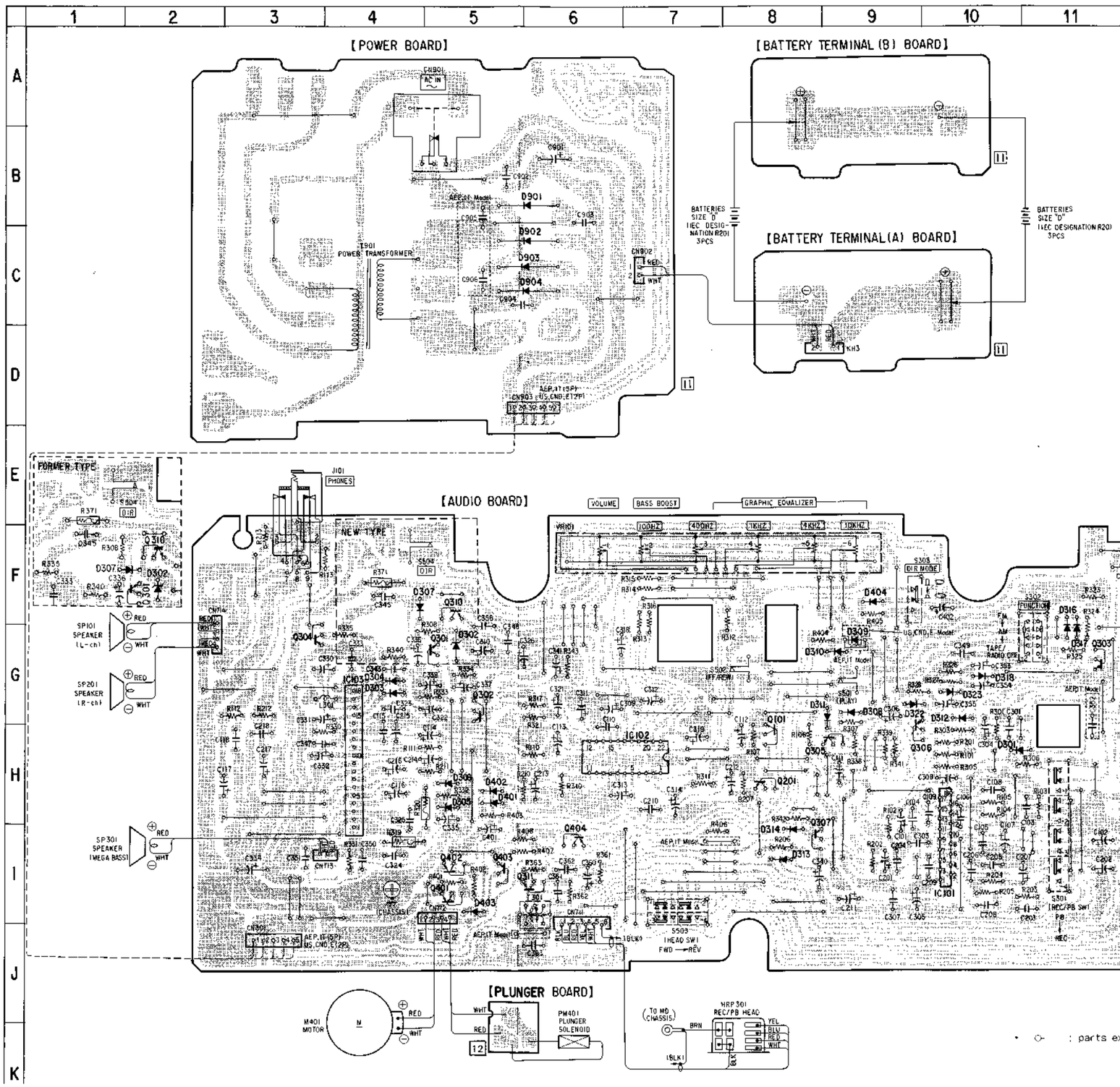


GL-3PR9



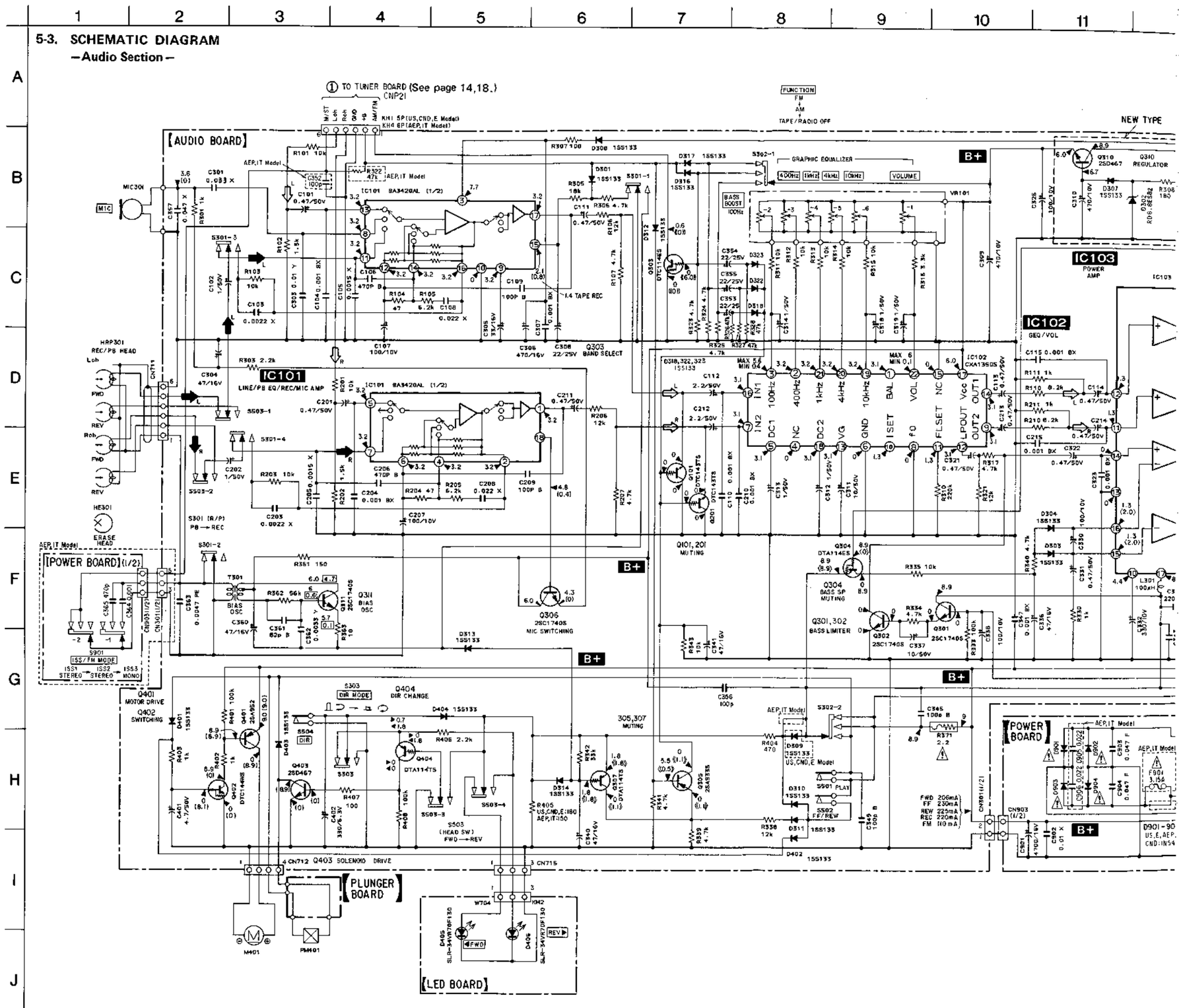
• Semiconductor Location

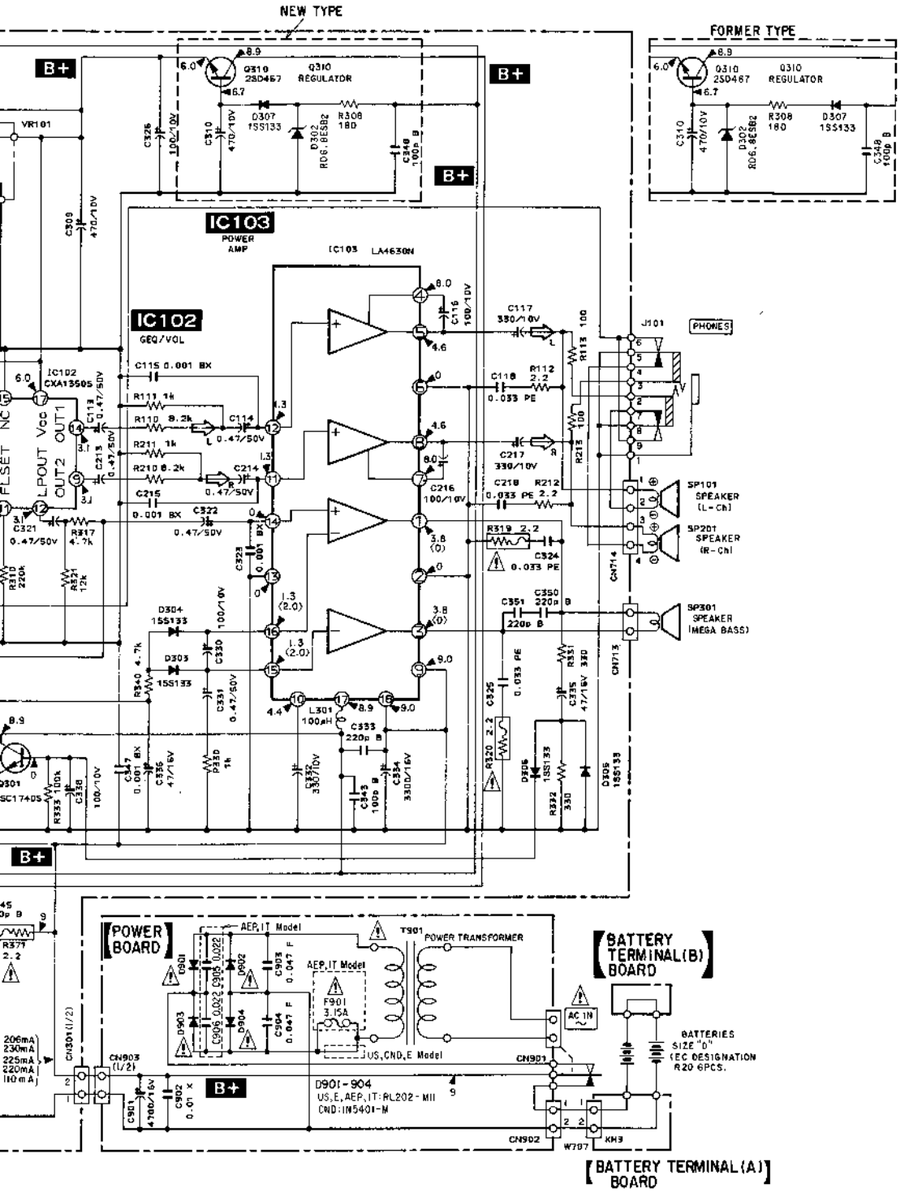
Ref. No.	Location	Ref. No.	Location
D301	H-10	D901	B-5
D302	G-5	D902	C-5
D303	G-4	D903	C-5
D304	G-4	D904	C-5
D305	H-5		
D306	H-5	IC101	I-10
D307	F-4	IC102	H-6
D308	G-9	IC103	G-4
D309	G-9		
D310	G-8	Q101	G-8
D311	G-8	Q201	H-8
D312	G-10	Q301	G-5
D313	I-8	Q302	G-5
D314	I-8	Q303	G-11
D316	F-11	Q304	G-3
D317	G-11	Q305	H-8
D318	G-10	Q306	H-9
D322	G-9	Q307	H-8
D323	G-10	Q310	F-5
D401	H-5	Q311	I-5
D402	H-5	Q401	I-5
D403	I-5	Q402	I-5
D404	F-9	Q403	I-5
D405	I-13	Q404	I-6
D406	I-13		



• ○ : parts extracted from the component side.

5-3. SCHEMATIC DIAGRAM
–Audio Section–

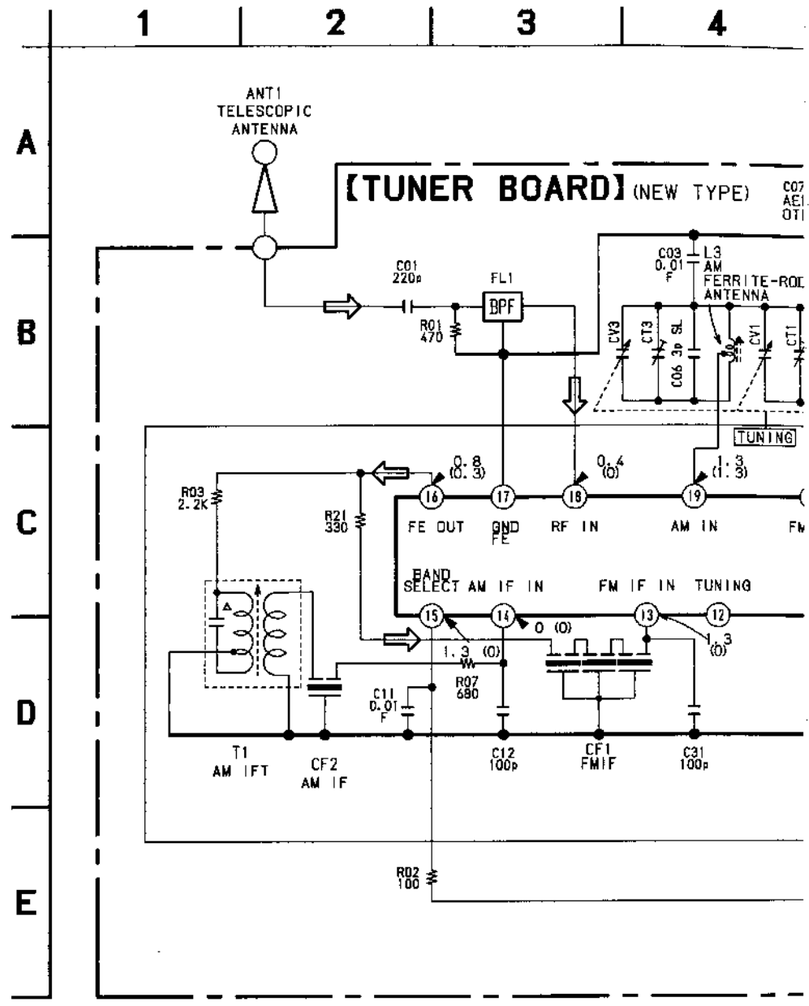




- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.
- B+ : B +line.
- Total current is measured with no cassette installed.
- Power voltage is 9V dc and fed with regurated dc power supply from battery terminal.
- Voltage and waveforms are dc with respect to ground under no signal conditions.
  no mark: FM ▭ : REC
  ( ) : PLAY ▶ : FWD
  〈 〉 : HEADPHONE IN ◀ : REV
  《 》 : AM ❮ ❯ : FF/REW
- Voltages are taken with a VOM. (Input impedance 10MΩ) Voltage variations may be noted due to normal production torerances.
- Signal path.
  ⇨ : FM
  ➡ : PB

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-4. SCHEMATIC DIAGRAM (NEW TYPE)
—Tuner Section—



- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- B+ : B +line.
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no signal (detuned) conditions.
  no mark: FM
  ( ) : AM
- Voltages are taken with a VOM. (Input impedance 10MΩ)
  Voltage variations may be noted due to normal production torerances.
- Signal path.
  ⇨ : FM

● SEMIC

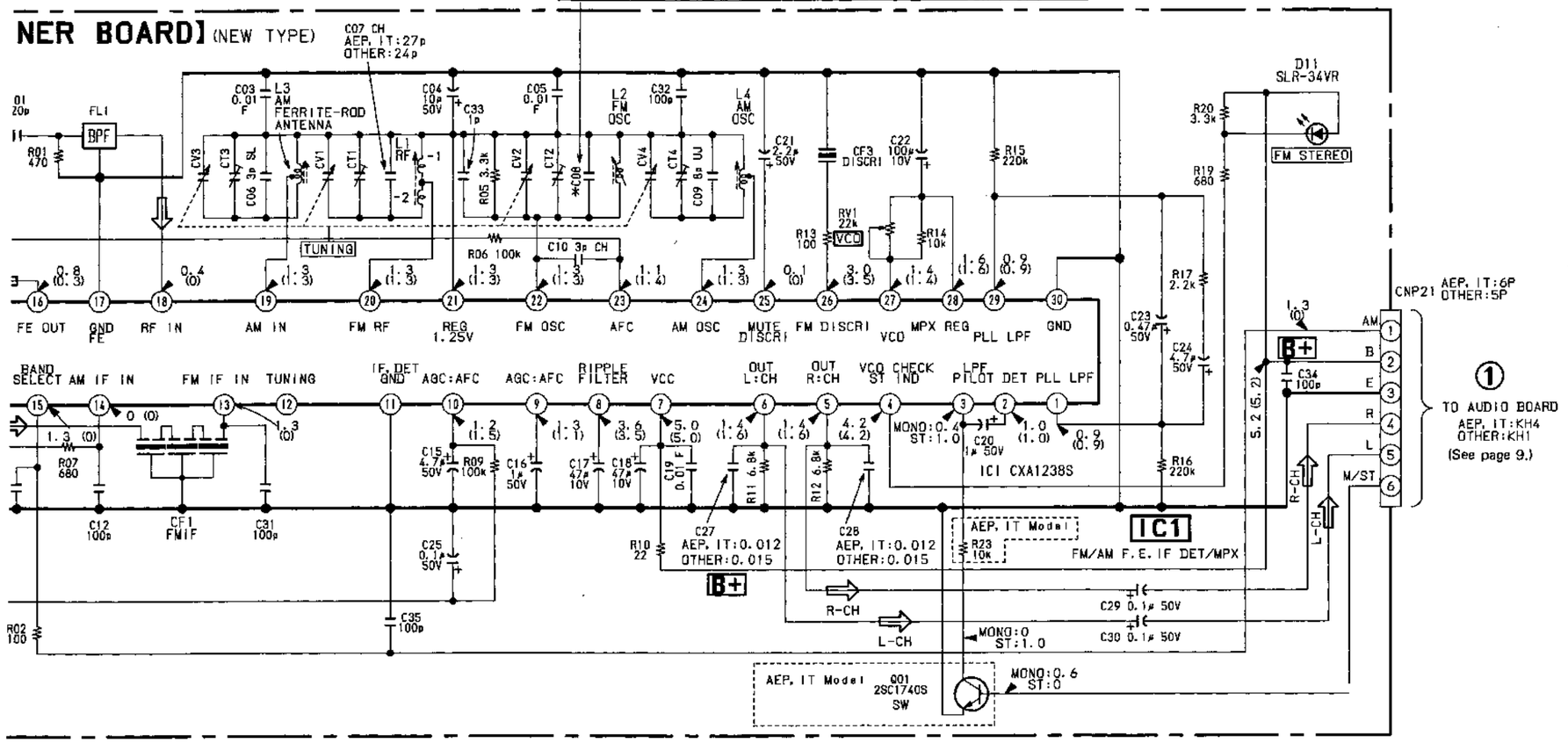
:)

3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11

* C08

	NEW TYPE-1		NEW TYPE-2		NEW TYPE-3
DESTINATIONS	AEP, IT	US, CND, E, AUS	AEP	IT	US, CND, E, AUS
C08 VALUE	27p	24p	24p	22p	24p

NER BOARD] (NEW TYPE)



d. pF: μ μF
electrolytics

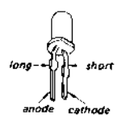
ss otherwise

ound

10MΩ)
roduc-

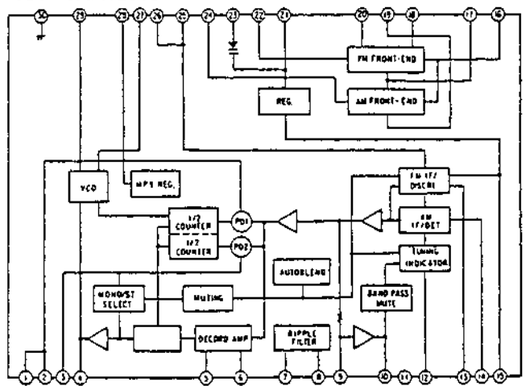
• SEMICONDUCTOR LEAD LAYOUTS

GL-3PR9

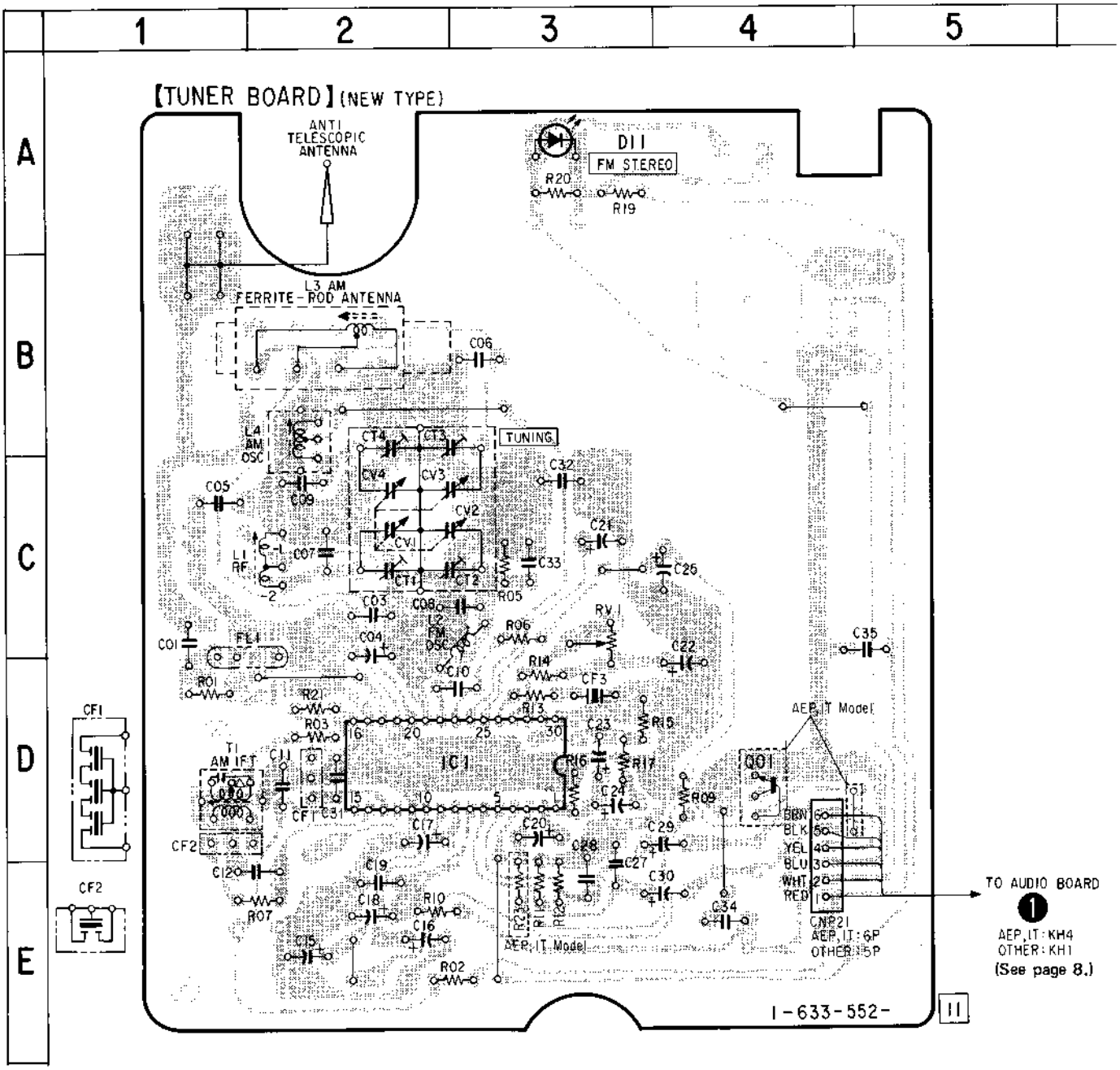


• IC BLOCK DIAGRAM

IC1 CXA1238S



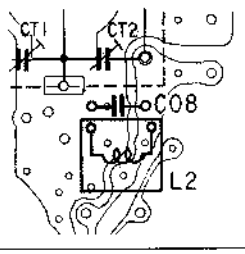
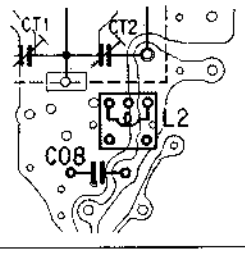
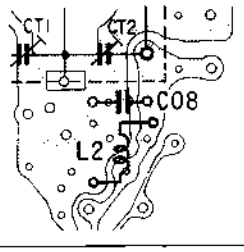
5-5. PRINTED WIRING BOARDS (NEW TYPE)
—Tuner Section—



• ○— : parts extracted from the component side.

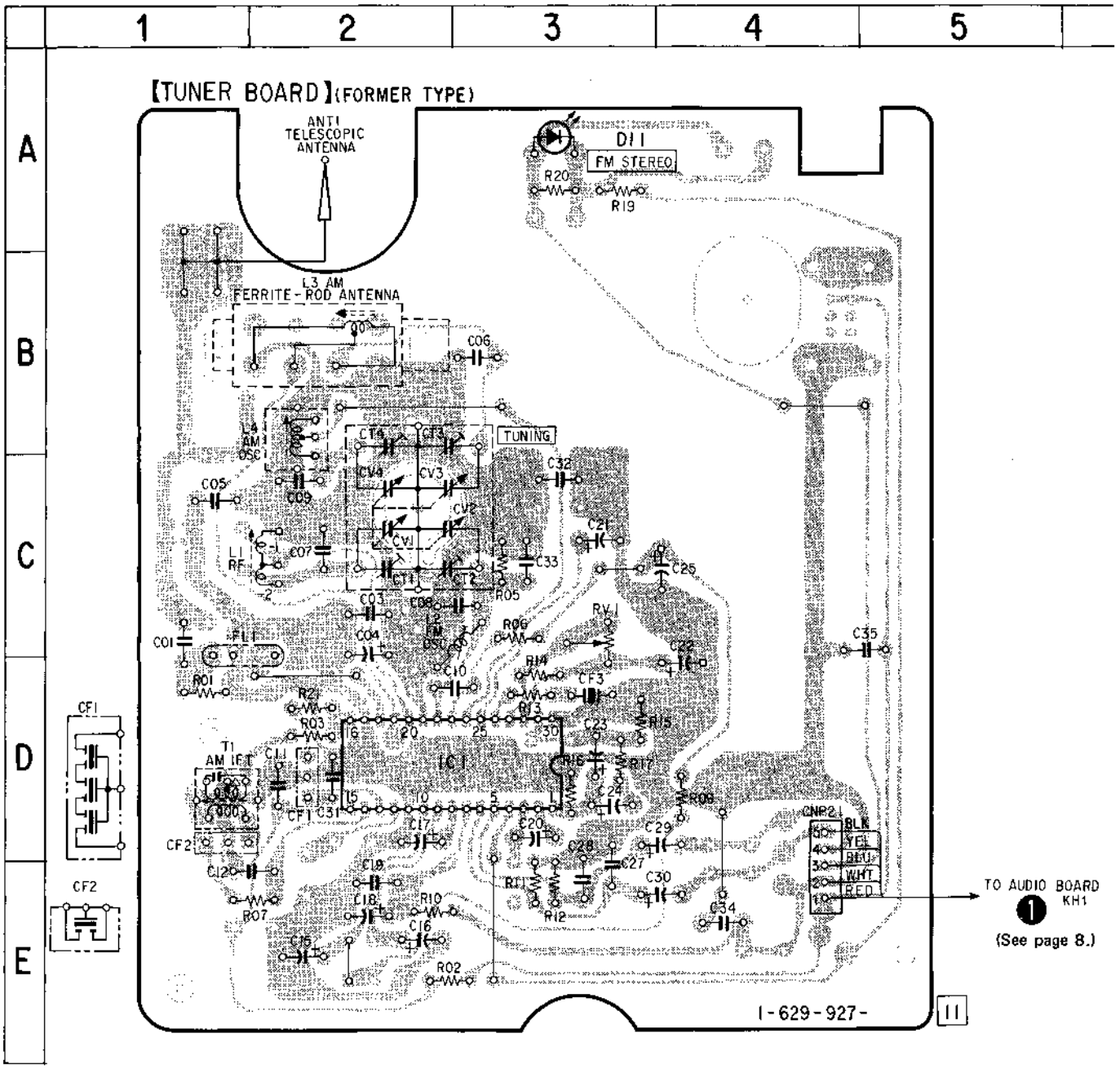
• Semiconductor Location

Ref. No.	Location
IC1	D-2
Q1	D-4
D11	A-3

	NEW TYPE-1		NEW TYPE-2		NEW TYPE-3
L2	1-459-815-11		1-459-418-31		1-406-161-11
DESTINATIONS	AEP, IT	US, CND, E	AEP	IT	US, CND, E
C08 VALUE	27p	24p	24p	22p	24p
MOUNTED POSITION					

5-6. PRINTED WIRING BAORDS (FORMER TYPE)

—Tuner Section—

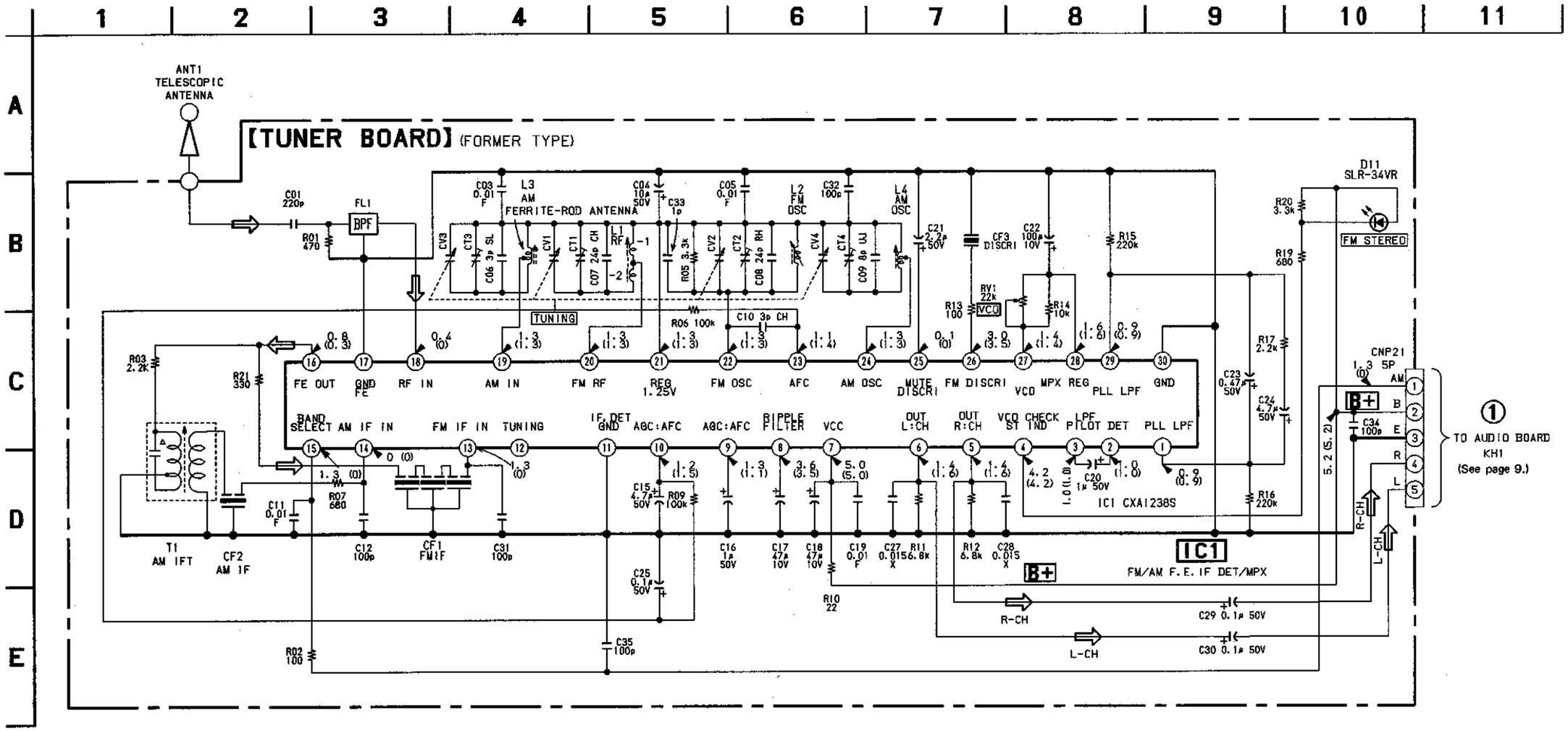


· Semiconductor Location

Ref. No.	Location
IC1	D-2
D11	A-3

· ○— : parts extracted from the component side.

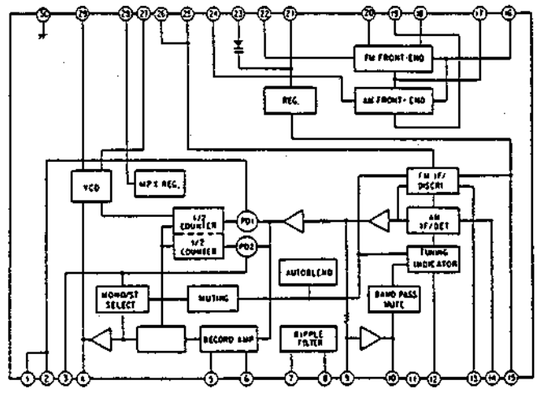
5-7. SCHEMATIC DIAGRAM (FORMER TYPE)
—Tuner Section—



- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- B+ : B +line.
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no signal (detuned) conditions.
  no mark: FM
  ( ) : AM
- Voltages are taken with a VOM. (Input impedance 10MΩ)
  Voltage variations may be noted due to normal production torerances.
- Signal path.
  ⇨ : FM

• IC BLOCK DIAGRAM

IC1 CXA1238S



SECTION 6
EXPLODED VIEWS

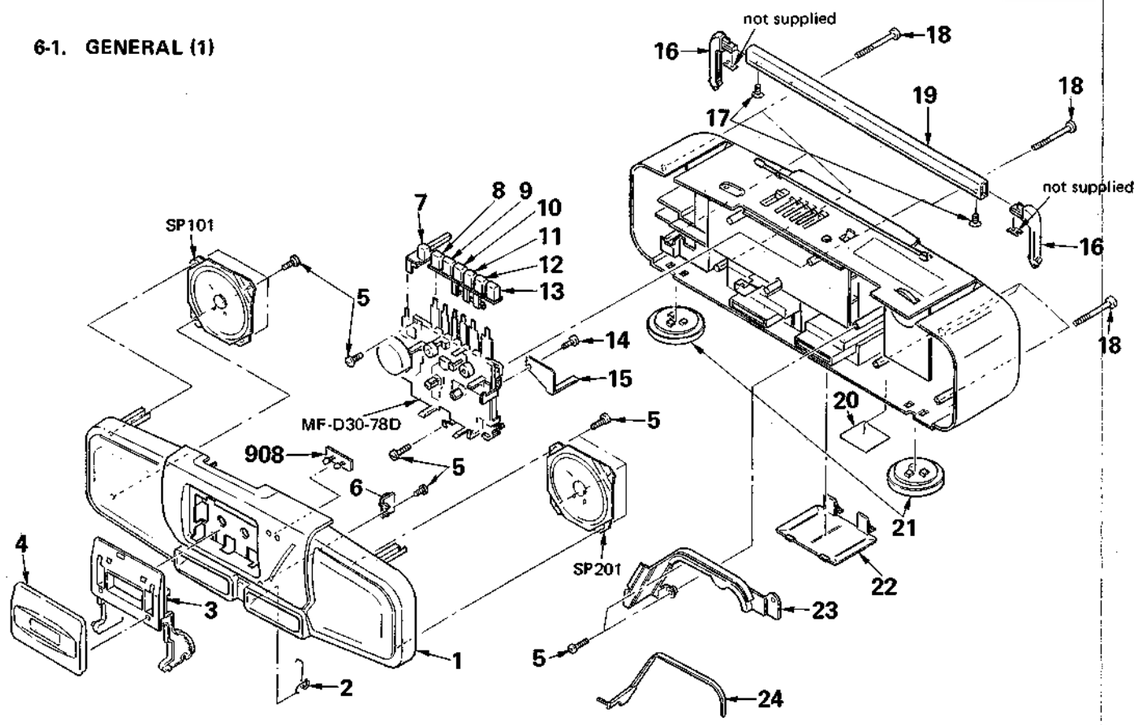
NOTE:

- 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.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

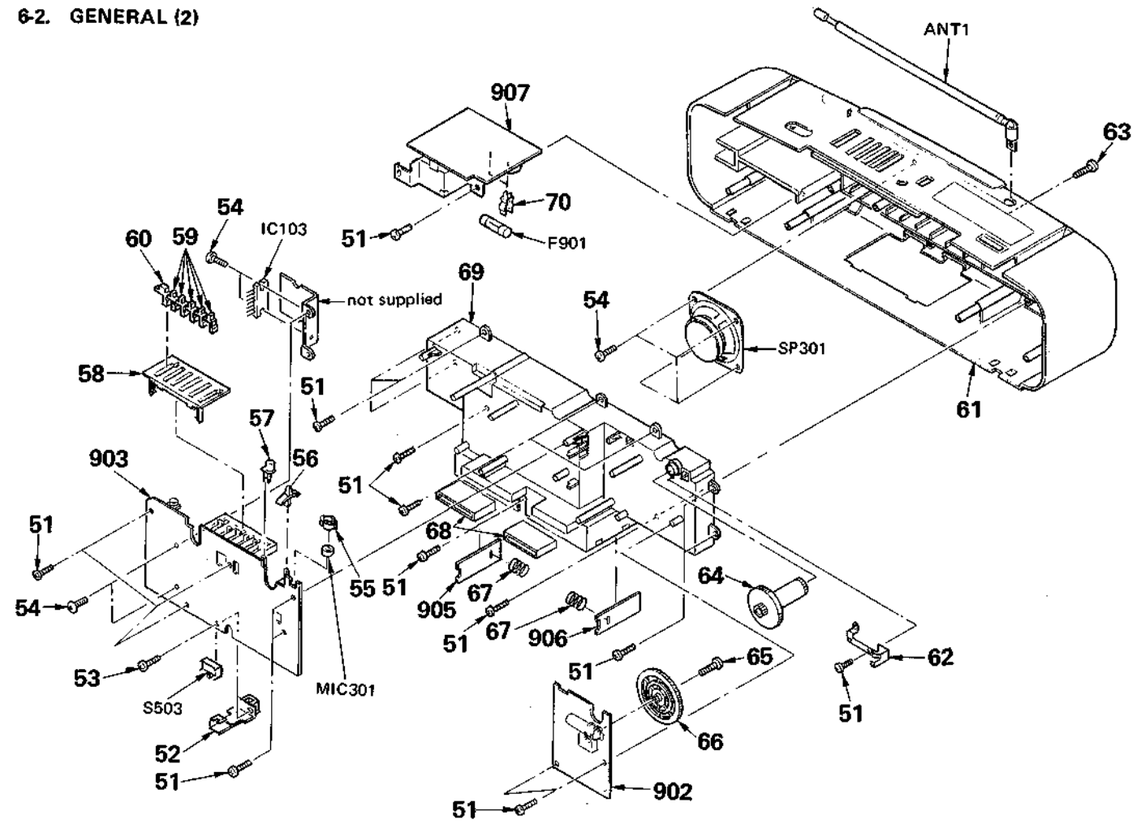
6-1. GENERAL (1)



No.	Part No.	Description	Remarks
1	X-3336-815-1	(US,CND,E)...CABINET (FRONT) ASSY	
	X-3336-822-1	(IT).....CABINET (FRONT) ASSY	
	X-3336-821-1	(AEP).....CABINET (FRONT) ASSY	
2	3-336-856-01	SPRING (CASSETTE)	
3	3-336-871-01	HOLDER, CASSETTE	
4	X-3336-813-1	CASSETTE LID ASSY	
5	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
6	3-351-377-11	DAMPER	
7	3-336-878-01	BUTTON (DIR)	
8	3-336-865-01	BUTTON (PAUSE)	
9	3-336-873-01	BUTTON (FF)	
10	3-336-874-01	BUTTON (REW)	
11	3-336-872-01	BUTTON (PLAY)	
12	3-336-867-01	BUTTON (REC)	

No.	Part No.	Description	Remarks
13	3-336-866-01	BUTTON (STOP)	
14	7-621-770-87	SCREW +BVTT 2.6X5 (S)	
15	*3-336-852-01	SPRING (REC), LEAF	
16	3-343-063-41	PLATE, SIDE, HANDLE	
17	7-685-247-19	SCREW +KTP 3X10 TYPE2 SLIT	
18	3-334-187-11	SCREW (3X50), TAPPING, + BV	
19	3-338-481-01	HANDLE	
20	3-338-492-01	(CND,E)...LABEL, MODEL NUMBER	
21	3-336-863-01	FOOT	
22	3-336-860-01	LID, BATTERY CASE	
23	*3-336-880-01	CHASSIS (TUN)	
24	3-336-864-01	POINTER	
908	*1-631-379-11	PC BOARD, LED	
SP101	1-544-154-11	SPEAKER (L-CH)	
SP201	1-544-154-11	SPEAKER (R-CH)	

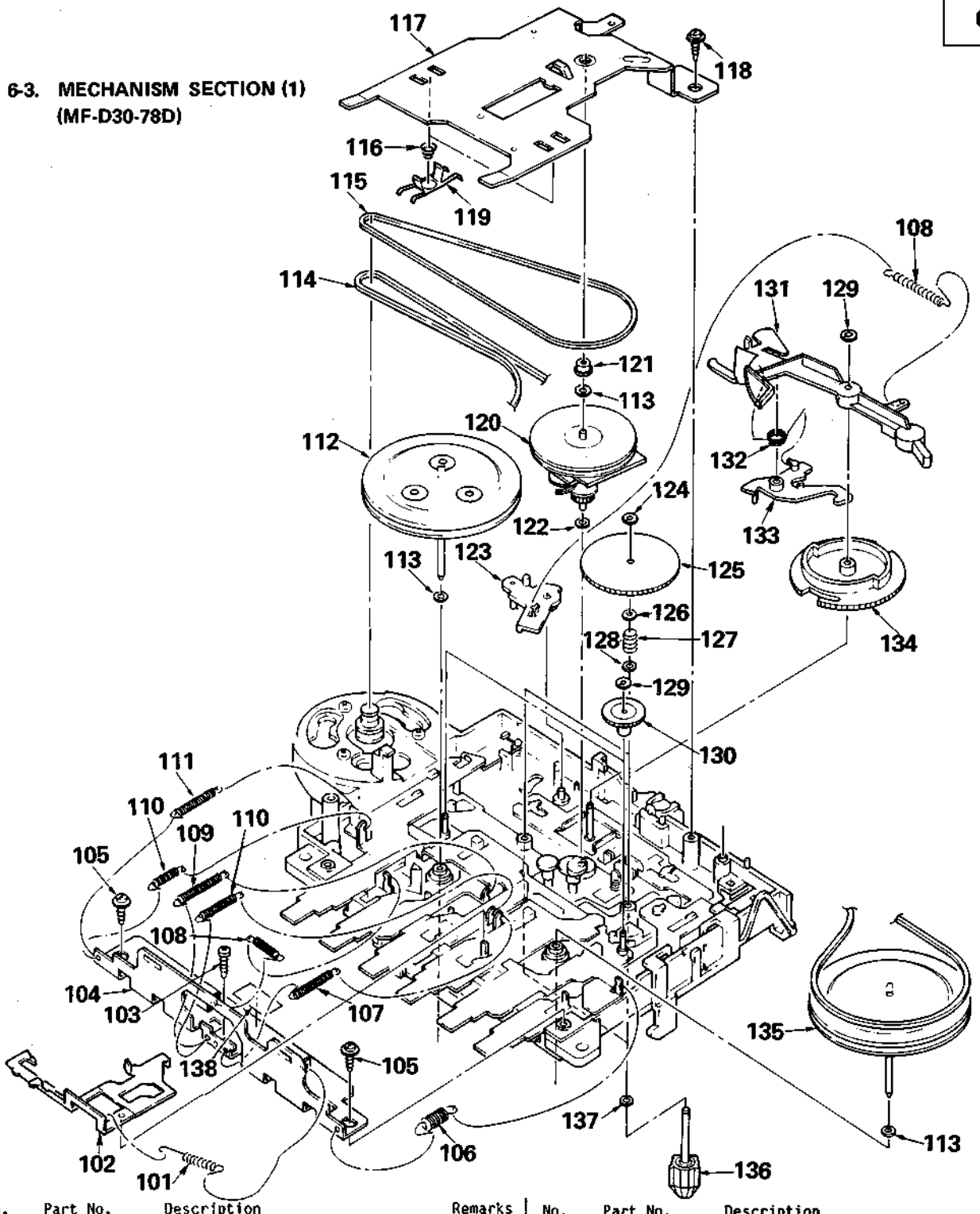
6-2. GENERAL (2)



No.	Part No.	Description	Remarks
51	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
52	*X-3337-813-1	BRACKET (SW) ASSY	
53	7-621-770-87	SCREW +BVTT 2.6X5 (S)	
54	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT	
55	3-321-122-01	CUSHION, MICROPHONE	
56	3-336-849-01	KNOB (FUNCTION)	
57	3-351-312-01	BUTTON (PUSH)	
58	*3-336-861-01	BRACKET (VR)	
59	3-336-851-01	KNOB (GEQ)	
60	3-336-858-01	KNOB (VOL)	
61	3-336-882-71	(AEP,IT)...CABINET (REAR)	
	3-336-882-01	(US,CND)...CABINET (REAR)	
	3-336-882-41	(E).....CABINET (REAR)	
62	3-338-484-01	TERMINAL BOARD, ANTENNA	
63	7-682-550-04	SCREW +B 3X12	
64	*3-336-862-01	KNOB (TUNING)	
65	7-621-770-87	SCREW +P 2.6X5	
66	3-338-505-01	DRUM, TUNING CAPACITOR	
67	3-336-886-01	TERMINAL, MINUS	
68	*3-336-850-01	HORN, DODEKA	
69	*3-336-881-01	CHASSIS, DODEKA	
70	*1-533-189-11	(AEP,IT)...HOLDER, FUSE	

No.	Part No.	Description	Remarks
902	*A-3266-598-A	(IT).....PC BOARD ASSY, TUNER	
	*A-3266-600-A	(AEP).....PC BOARD ASSY, TUNER	
	*A-3266-618-A	(US,CND,E)...MOUNTED PCB, TUNER	
903	*A-3270-661-A	(US,CND,E)...MOUNTED PCB, AUDIO	
	*A-3270-711-A	(AEP,IT).....MOUNTED PCB, AUDIO	
905	*1-631-376-11	PC BOARD, BATTERY TERMINAL (A)	
906	*1-631-377-11	PC BOARD, BATTERY TERMINAL (B)	
907	*1-631-378-11	PC BOARD, POWER	
ANT1	1-501-378-11	(AEP,IT).....ANTENNA, TELESCOPIC	
ANT1	1-501-388-21	(US,CND,E)...ANTENNA, TELESCOPIC	
F901	1-532-237-00	(AEP,IT)...FUSE, TIME-LAG 3.15A	
IC103	8-759-821-92	IC LA4630-N	
MIC301	1-542-092-11	MICROPHONE, ELECTRET CONDENSER	
S503	1-571-904-11	SWITCH, SLIDE (HEAD)	
SP301	1-544-193-11	SPEAKER (MEGA BASS)	

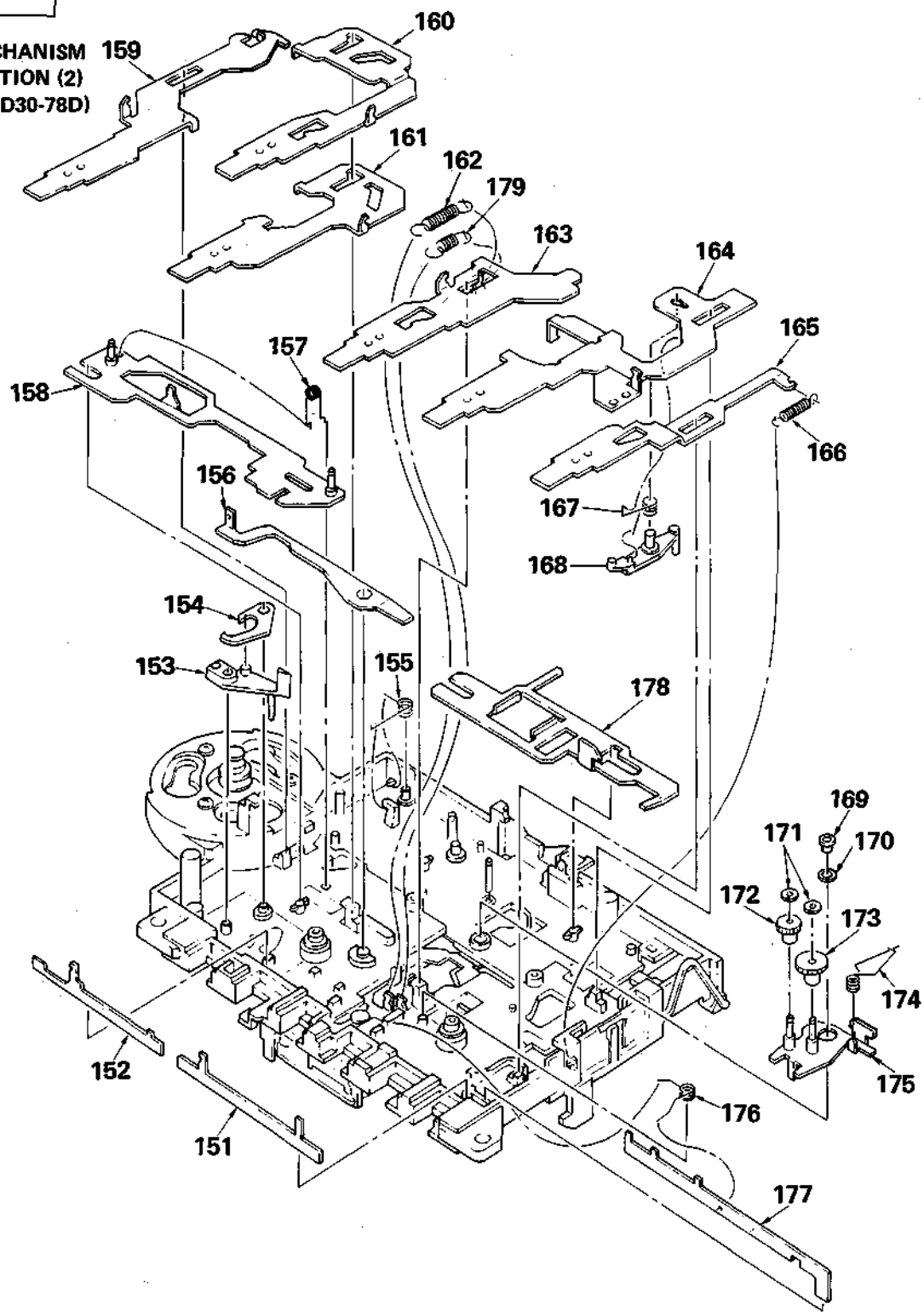
6-3. MECHANISM SECTION (1) (MF-D30-78D)



No.	Part No.	Description	Remarks
101	3-330-605-01	SPRING, TENSION	
102	*3-330-606-01	LEVER, SELECTION, S.OFF	
103	7-685-105-19	TPG +P 2X8, TYPE 2, NON-SLIT	
104	*3-322-518-01	RETAINER, LEVER	
105	7-687-233-11	SCREW (+ PTPWH) (2.6X6)	
106	3-322-691-01	SPRING, TENSION	
107	3-322-526-01	SPRING, TENSION(POWER TENSION)	
108	3-322-527-01	SPRING, TENSION	
109	3-328-103-01	SPRING, TENSION	
110	3-322-522-01	SPRING, TENSION	
111	3-530-260-00	SPRING, TENSION	
112	X-3330-601-1	FLYWHEEL (NR) ASSY	
113	3-701-437-11	WASHER (t=0.25)	
114	3-322-533-01	BELT	
115	3-657-035-XX	BELT, COUNTER	
116	3-322-676-01	SPRING (S), COMPRESSION	
117	*3-322-519-01	RETAINER, THRUST	
118	7-685-134-19	SCREW (+ PTPWH) (2.6X8)	
119	3-322-524-01	SPRING	

No.	Part No.	Description	Remarks
120	X-3322-540-1	DETECTION BLOCK ASSY	
121	3-322-566-01	BEARING, PULLEY	
122	3-701-437-01	WASHER (t=0.13)	
123	3-330-827-01	LEVER (B), GEAR LOCK	
124	3-578-223-21	WASHER, NYLON	
125	3-322-508-01	GEAR, REEL	
126	3-322-660-01	WASHER (B)	
127	3-321-541-01	SPRING, COMPRESSION	
128	3-322-659-01	WASHER (A)	
129	3-307-948-01	WASHER, NYLON	
130	3-322-556-01	GEAR, FR	
131	3-330-833-01	LEVER (C), OA	
132	3-322-534-01	SPRING	
133	3-330-826-01	LEVER (D), OA	
134	3-322-553-01	GEAR, CAM	
135	X-3322-507-1	FLYWHEEL (R) ASSY	
136	X-3322-502-1	CLAW ASSY, REEL	
137	3-545-715-00	WASHER	
138	3-831-441-11	CUSHION (T)	

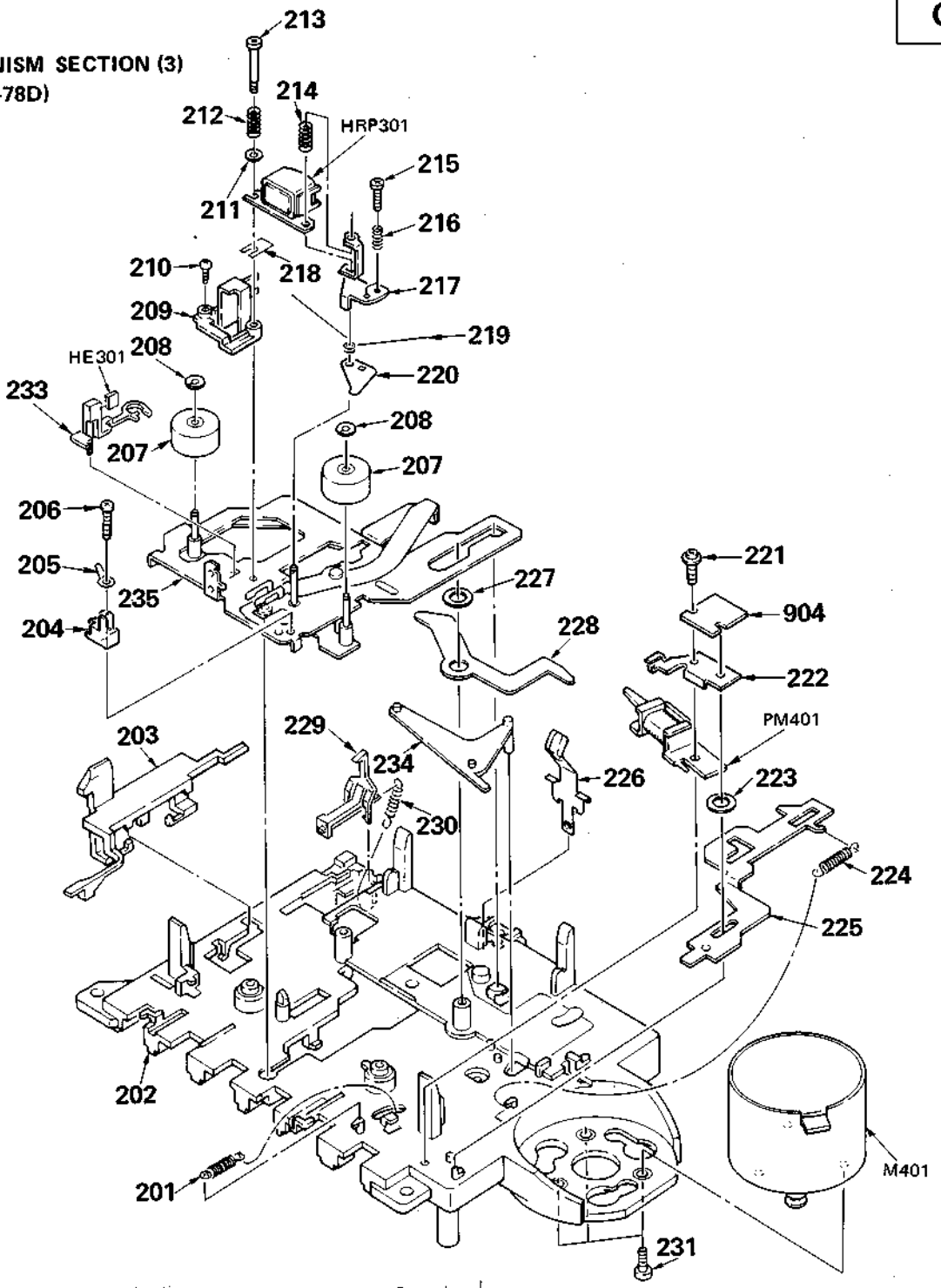
6-4. MECHANISM SECTION (2) (MF-D30-78D)



No.	Part No.	Description	Remarks
151	*3-330-604-01	PLATE (C), LOCK	
152	*3-322-587-01	PLATE (B), LOCK	
153	X-3330-610-1	LEVER (R) ASSY, S.OFF	
154	3-322-555-01	LEVER (E), S.OFF	
155	3-322-577-01	SPRING	
156	*3-322-517-01	LEVER, AMS	
157	3-322-578-01	SPRING	
158	*X-3322-505-1	LEVER ASSY, FR	
159	*3-330-829-11	LEVER (C), PAUSE BUTTON	
160	3-322-515-11	LEVER, REW BUTTON	
161	*3-322-585-11	LEVER, FF BUTTON	
162	3-322-520-01	SPRING, TENSION	
163	*3-322-584-11	LEVER, PLAY BUTTON	
164	*3-322-591-41	LEVER, REC BUTTON	
165	*3-322-583-11	LEVER, STOP BUTTON	

No.	Part No.	Description	Remarks
166	3-322-528-01	SPRING, TENSION	
167	3-322-575-01	SPRING	
168	3-322-554-01	ARM, REC LOCK	
169	3-322-513-01	COLLAR	
170	3-322-689-01	RING	
171	3-570-615-00	POLY-WASHER (DIA.1.2)	
172	3-343-146-01	GEAR (A), FWD	
173	3-343-145-01	GEAR (B), FWD	
174	3-322-576-01	SPRING	
175	*X-3339-320-1	ARM ASSY (M), FWD GEAR	
176	3-322-579-01	SPRING	
177	*3-322-589-01	LEVER, SWITCH	
178	*3-330-602-01	LEVER (R), DIRECTION	
179	3-322-693-01	SPRING, TENSION	

6-5. MECHANISM SECTION (3) (MF-D30-78D)



No.	Part No.	Description	Remarks
201	3-330-633-01	SPRING, TENSION	
202	A-3102-109-A	CHASSIS ASSY, MECHANICAL	
203	3-322-512-01	LEVER, EJECT	
204	3-326-625-01	RETAINER, PC BOARD	
205	7-623-505-01	LUG, 2	
206	7-621-255-65	SCREW +P 2X10	
207	3-703-597-41	PINCH ROLLER, STANDARD	
208	3-307-948-01	WASHER, NYLON	
209	*3-339-701-01	GUIDE, TAPE	
210	7-621-772-20	SCREW +B 2X5	
211	7-688-001-01	W 2, SMALL	
212	3-318-106-01	SPRING (H), COMPRESSION	
213	3-322-567-11	SCREW, PAN, STEP	
214	3-341-163-01	SPRING, COMPRESSION	
215	7-627-851-27	SCREW, PRECISION +P 1.4X5	
216	3-322-531-01	SPRING, COMPRESSION	
217	*3-341-161-01	LEVER, AZIMUTH	
218	3-578-138-01	SHIM (t=0.1)	
	3-578-138-11	SHIM (t=0.2)	
219	3-341-164-01	SPRING	
220	3-326-622-01	RETAINER, AZIMUTH	

No.	Part No.	Description	Remarks
221	7-685-105-19	SCREW (2X8), + PTPWH	
222	*3-337-884-11	GUIDE (D), WIRING	
223	3-701-437-01	WASHER (t=0.13)	
224	3-322-528-01	SPRING, TENSION	
225	*3-330-601-11	LEVER, MANUAL BUTTON	
226	3-322-595-01	SPRING	
227	3-701-443-11	WASHER (t=0.5)	
228	*3-322-590-02	LEVER, DIRECTION RELEASE	
229	3-322-511-01	CLAW, ERASING PROTECTION	
230	3-313-384-01	SPRING, TENSION	
231	7-621-770-87	SCREW +P 2.6X5	
233	3-322-507-01	ARM, EBF	
234	3-322-514-01	LINK (A)	
235	X-3337-810-1	CHASSIS (R) ASSY, HEAD	
904	*1-602-735-00	PC BOARD, PLUNGER	
HE301	1-543-649-11	HEAD, MAGNETIC (ERASE)	
HRP301	1-543-389-51	HEAD, MAGNETIC (REC/PB)	
M401	A-3133-210-A	MOTOR ASSY, DC (WITH PULLEY)	
PM401	1-454-355-00	SOLENOID, PLUNGER	

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: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

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

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- CND: Canadian model
- IT : Italian model

Ref.No.	Part No.	Description
902	*A-3266-598-A	(IT).....PC BOARD ASSY, TUNER
	*A-3266-600-A	(AEP).....PC BOARD ASSY, TUNER
	*A-3266-618-A	(US,CND,E)...MOUNTED PCB, TUNER
903	*A-3270-661-A	(US,CND,E)...MOUNTED PCB, AUDIO
	*A-3270-711-A	(AEP,IT).....MOUNTED PCB, AUDIO
904	*1-602-735-00	PC BOARD, PLUNGER
905	*1-631-376-11	PC BOARD, BATTERY TERMINAL (A)
906	*1-631-377-11	PC BOARD, BATTERY TERMINAL (B)
907	*1-631-378-11	PC BOARD, POWER
908	*1-631-379-11	PC BOARD, LED
ANT1	1-501-378-11	(AEP,IT).....ANTENNA, TELESCOPIC
ANT1	1-501-388-21	(US,CND,E)...ANTENNA, TELESCOPIC
C01	1-162-286-31	CERAMIC 220PF 10% 50V
C03	1-164-096-11	CERAMIC 0.01MF 50V
C04	1-123-875-11	ELECT 10MF 20% 50V
C05	1-164-096-11	CERAMIC 0.01MF 50V
C06	1-164-039-11	CERAMIC 3PF 0.25PF 50V
C07	1-164-028-11	(US,CND,E)...CERAMIC 24PF 5% 50V
C07	1-164-056-11	(AEP,IT).....CERAMIC 27PF 5% 50V
C08	1-102-959-00	(NEW TYPE-2:IT). ....CERAMIC 22PF 5% 50V
C08	1-102-960-00	(NEW TYPE-1,3:US,CND,E) ...CERAMIC 24PF 5% 50V
C08	1-101-982-11	(NEW TYPE-2:AEP).....CERAMIC 24PF 5% 50V
C08	1-102-961-00	(NEW TYPE-1:AEP,IT)..CERAMIC 27PF 5% 50V
C09	1-102-945-00	CERAMIC 8PF 0.5PF 50V
C10	1-164-012-11	CERAMIC 3PF 0.25PF 50V
C11	1-164-096-11	CERAMIC 0.01MF 50V
C12	1-162-282-31	CERAMIC 100PF 10% 50V
C15	1-124-927-11	ELECT 4.7MF 20% 50V
C16	1-124-791-11	ELECT 1MF 20% 50V
C17	1-124-446-11	ELECT 47MF 20% 10V
C18	1-124-446-11	ELECT 47MF 20% 10V
C19	1-164-096-11	CERAMIC 0.01MF 50V
C20	1-124-791-11	ELECT 1MF 20% 50V
C21	1-124-925-11	ELECT 2.2MF 20% 50V
C22	1-124-443-00	ELECT 100MF 20% 10V
C23	1-124-902-00	ELECT 0.47MF 20% 50V
C24	1-124-927-11	ELECT 4.7MF 20% 50V
C25	1-124-463-00	ELECT 0.1MF 20% 50V
C27	1-161-053-00	(US,CND,E)...CERAMIC 0.015MF 10% 16V
C27	1-162-840-11	(AEP,IT).....CERAMIC 0.012MF 10% 16V
C28	1-161-053-00	(US,CND,E)...CERAMIC 0.015MF 10% 16V
C28	1-162-840-11	(AEP,IT).....CERAMIC 0.012MF 10% 16V

Ref.No.	Part No.	Description
C29	1-124-463-00	ELECT 0.1MF 20% 50V
C30	1-124-463-00	ELECT 0.1MF 20% 50V
C31	1-162-282-31	CERAMIC 100PF 10% 50V
C32	1-162-282-31	CERAMIC 100PF 10% 50V
C33	1-162-187-31	CERAMIC 1PF 20% 50V
C34	1-162-282-31	CERAMIC 100PF 10% 50V
C35	1-162-282-31	CERAMIC 100PF 10% 50V
C101	1-124-902-00	ELECT 0.47MF 20% 50V
C102	1-124-791-11	ELECT 1MF 20% 50V
C103	1-161-375-00	CERAMIC 0.0022MF 20% 16V
C104	1-162-294-31	CERAMIC 0.001MF 10% 50V
C105	1-161-374-11	CERAMIC 0.0015MF 20% 16V
C106	1-162-290-31	CERAMIC 470PF 10% 50V
C107	1-124-443-00	ELECT 100MF 20% 10V
C108	1-162-843-11	CERAMIC 0.022MF 10% 16V
C109	1-162-282-31	CERAMIC 100PF 10% 50V
C110	1-162-294-31	CERAMIC 0.001MF 10% 50V
C111	1-124-902-00	ELECT 0.47MF 20% 50V
C112	1-124-925-11	ELECT 2.2MF 20% 50V
C113	1-124-902-00	ELECT 0.47MF 20% 50V
C114	1-124-902-00	ELECT 0.47MF 20% 50V
C115	1-162-294-31	CERAMIC 0.001MF 10% 50V
C116	1-124-443-00	ELECT 100MF 20% 10V
C117	1-124-604-00	ELECT 330MF 20% 10V
C118	1-130-489-00	MYLAR 0.033MF 5% 50V
C201	1-124-902-00	ELECT 0.47MF 20% 50V
C202	1-124-791-11	ELECT 1MF 20% 50V
C203	1-161-375-00	CERAMIC 0.0022MF 20% 16V
C204	1-162-294-31	CERAMIC 0.001MF 10% 50V
C205	1-161-374-11	CERAMIC 0.0015MF 20% 16V
C206	1-162-290-31	CERAMIC 470PF 10% 50V
C207	1-124-443-00	ELECT 100MF 20% 10V
C208	1-162-843-11	CERAMIC 0.022MF 10% 16V
C209	1-162-282-31	CERAMIC 100PF 10% 50V
C210	1-162-294-31	CERAMIC 0.001MF 10% 50V
C211	1-124-902-00	ELECT 0.47MF 20% 50V
C212	1-124-925-11	ELECT 2.2MF 20% 50V
C213	1-124-902-00	ELECT 0.47MF 20% 50V
C214	1-124-902-00	ELECT 0.47MF 20% 50V
C215	1-162-294-31	CERAMIC 0.001MF 10% 50V
C216	1-124-443-00	ELECT 100MF 20% 10V
C217	1-124-604-00	ELECT 330MF 20% 10V
C218	1-130-489-00	MYLAR 0.033MF 5% 50V
C301	1-161-057-00	CERAMIC 0.033MF 10% 16V
C303	1-161-379-00	CERAMIC 0.01MF 30% 16V

Ref.No.	Part No.	Description			
C304	1-124-477-11	ELECT	47MF	20%	16V
C305	1-124-963-11	ELECT	33MF	20%	16V
C306	1-126-103-11	ELECT	470MF	20%	16V
C307	1-162-294-31	CERAMIC	0.001MF	10%	50V
C308	1-126-233-11	ELECT	22MF	20%	25V
C309	1-124-472-11	ELECT	470MF	20%	10V
C310	1-124-472-11	ELECT	470MF	20%	10V
C311	1-123-875-11	ELECT	10MF	20%	50V
C312	1-124-791-11	ELECT	1MF	20%	50V
C313	1-124-791-11	ELECT	1MF	20%	50V
C314	1-124-791-11	ELECT	1MF	20%	50V
C318	1-124-791-11	ELECT	1MF	20%	50V
C319	1-124-791-11	ELECT	1MF	20%	50V
C321	1-124-902-00	ELECT	0.47MF	20%	50V
C322	1-124-902-00	ELECT	0.47MF	20%	50V
C323	1-162-294-31	CERAMIC	0.001MF	10%	50V
C324	1-130-489-00	MYLAR	0.033MF	5%	50V
C325	1-130-489-00	MYLAR	0.033MF	5%	50V
C326	1-124-443-00	ELECT	100MF	20%	10V
C330	1-124-443-00	ELECT	100MF	20%	10V
C331	1-124-902-00	ELECT	0.47MF	20%	50V
C332	1-124-604-00	ELECT	330MF	20%	10V
C333	1-162-286-31	CERAMIC	220PF	10%	50V
C334	1-124-887-00	ELECT	3300MF	20%	16V
C335	1-124-477-11	ELECT	47MF	20%	16V
C336	1-124-477-11	ELECT	47MF	20%	16V
C337	1-123-875-11	ELECT	10MF	20%	50V
C338	1-124-443-00	ELECT	100MF	20%	10V
C340	1-124-477-11	ELECT	47MF	20%	16V
C341	1-124-477-11	ELECT	47MF	20%	16V
C343	1-162-282-31	CERAMIC	100PF	10%	50V
C345	1-162-282-31	CERAMIC	100PF	10%	50V
C347	1-162-294-31	CERAMIC	0.001MF	10%	50V
C348	1-162-282-31	CERAMIC	100PF	10%	50V
C349	1-162-282-31	CERAMIC	100PF	10%	50V
C350	1-162-286-31	CERAMIC	220PF	10%	50V
C351	1-162-286-31	CERAMIC	220PF	10%	50V
C352	1-162-282-31	(AEP,IT)...CERAMIC	100PF	10%	50V
C353	1-126-233-11	ELECT	22MF	20%	25V
C354	1-126-233-11	ELECT	22MF	20%	25V
C355	1-126-233-11	ELECT	22MF	20%	25V
C356	1-162-282-31	CERAMIC	100PF	10%	50V
C357	1-162-847-11	CERAMIC	0.047MF	10%	16V
C360	1-124-477-11	ELECT	47MF	20%	16V
C361	1-162-280-31	CERAMIC	82PF	10%	50V
C362	1-161-327-00	CERAMIC	0.0033MF	30%	16V
C363	1-130-479-00	MYLAR	0.0047MF	5%	50V
C364	1-130-471-00	(AEP,IT)...MYLAR	0.001MF	5%	50V
C365	1-130-467-00	(AEP,IT)...MYLAR	470PF	5%	50V
C401	1-124-927-11	ELECT	4.7MF	20%	50V
C402	1-124-442-00	ELECT	330MF	20%	6.3V
C901	1-124-898-11	ELECT	4700MF	20%	16V
C902	1-161-051-00	CERAMIC	0.01MF	10%	50V
C903	1-101-006-00	CERAMIC	0.047MF		50V
C904	1-101-006-00	CERAMIC	0.047MF		50V
C905	1-101-005-00	(AEP,IT)...CERAMIC	0.022MF		50V
C906	1-101-005-00	(AEP,IT)...CERAMIC	0.022MF		50V

Ref.No.	Part No.	Description
CF1 CF3	1-567-166-00	FILTER, CERAMIC
CF2	1-527-870-00	FILTER
CN301	*1-560-530-00	(US,CND,E)...PIN, CONNECTOR 2P
CN301	*1-560-531-00	(AEP,IT).....PIN, CONNECTOR 5P
CN711	*1-565-302-11	PIN, CONNECTOR (PC BOARD) 6P
CN712	*1-566-779-11	PIN, CONNECTOR (PC BOARD) 4P
CN713	*1-566-214-11	PIN, CONNECTOR (PC BOARD) 2P
CN714	*1-566-001-21	PIN, CONNECTOR (PC BOARD) 4P
CN715	*1-566-824-11	PIN, CONNECTOR (PC BOARD) 3P
CN901	1-526-838-11	INLET, AC 2P
CN902	*1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P
CN903	*1-568-883-11	(US,CND,E)...SOCKET, CONNECTOR 2P
CNP21	*1-506-987-11	(US,CND,E)...PIN, CONNECTOR(PC BOARD)5P
CNP21	*1-506-988-11	(AEP,IT).....PIN, CONNECTOR(PC BOARD)6P
CT1-4 CV1-4	1-151-615-11	(AEP,IT).....CAP, VARIABLE
CT1-4 CV1-4	1-151-624-11	(US,CND,E)...CAP, VARIABLE
D11	8-719-918-76	LED GL-3PR9
D301	8-719-911-19	DIODE 1SS119
D302	8-719-109-97	DIODE RD6.8ES-B2
D303	8-719-911-19	DIODE 1SS119
D304	8-719-911-19	DIODE 1SS119
D305	8-719-911-19	DIODE 1SS119
D306	8-719-911-19	DIODE 1SS119
D307	8-719-911-19	DIODE 1SS119
D308	8-719-911-19	DIODE 1SS119
D309	8-719-911-19	(US,CND,E)...DIODE 1SS119
D310	8-719-911-19	DIODE 1SS119
D311	8-719-911-19	DIODE 1SS119
D312	8-719-911-19	DIODE 1SS119
D313	8-719-911-19	DIODE 1SS119
D314	8-719-911-19	DIODE 1SS119
D316	8-719-911-19	DIODE 1SS119
D317	8-719-911-19	DIODE 1SS119
D318	8-719-911-19	DIODE 1SS119
D322	8-719-911-19	DIODE 1SS119
D323	8-719-911-19	DIODE 1SS119
D401	8-719-911-19	DIODE 1SS119
D402	8-719-911-19	DIODE 1SS119
D403	8-719-911-19	DIODE 1SS119
D404	8-719-911-19	DIODE 1SS119
D405	8-719-918-76	LED GL-3PR9
D406	8-719-918-76	LED GL-3PR9
D901	⚠8-719-902-17	(CND).....DIODE U15G
D901	⚠8-719-979-32	(US,E,AEP,IT)...DIODE RL202-M11
D902	⚠8-719-902-17	(CND).....DIODE U15G
D902	⚠8-719-979-32	(US,E,AEP,IT)...DIODE RL202-M11
D903	⚠8-719-902-17	(CND).....DIODE U15G
D903	⚠8-719-979-32	(US,E,AEP,IT)...DIODE RL202-M11
D904	⚠8-719-902-17	(CND).....DIODE U15G
D904	⚠8-719-979-32	(US,E,AEP,IT)...DIODE RL202-M11
F901	1-532-237-00	(AEP,IT)...FUSE, TIME-LAG 3.15A
FL1	1-236-022-11	FILTER, BAND PASS

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Ref.No.	Part No.	Description
HE301	1-543-649-11	HEAD, MAGNETIC (ERASE)
HRP301	1-543-389-51	HEAD, MAGNETIC (REC/PB)
IC1	8-752-035-68	IC CXA1238S
IC101	8-759-978-54	IC BA3420AL
IC102	8-752-036-59	IC CXA1350S
IC103	8-759-821-92	IC LA4630-N
J101	1-507-806-00	JACK 1P (PHONES)
KH1	*1-565-386-11	(US,CND,E)...HOLDER, CABLE 5P
KH2	*1-565-384-11	HOLDER, CABLE 3P
KH3	*1-565-384-11	HOLDER, CABLE 3P
L1	*1-420-855-00	(US,CND,E)...COIL, FM ANT
L1	*1-422-180-11	(AEP,IT).....COIL, AIR-CORE (RF)
L2	*1-406-161-11	(NEW TYPE-3:US,CND,E) ...COIL, FM OSCILLATOR
L2	1-459-418-00	(NEW TYPE-2:AEP,IT)...COIL (WITH CORE)
L2	1-459-815-11	(NEW TYPE-1).....COIL (WITH CORE)
L3	1-402-158-11	(AEP,IT).....ANTENNA, FERRITE-ROD (MW)
L3	1-402-416-11	(US,CND,E)...ANTENNA, FERRITE-ROD (AM)
L4	1-406-040-00	COIL (OSC)
L301	1-410-521-11	INDUCTOR 100UH
M401	A-3133-210-A	MOTOR ASSY, DC (WITH PULLEY)
MIC301	1-542-092-11	MICROPHONE, ELECTRET CONDENSER
PM401	1-454-355-00	SOLENOID, PLUNGER
Q1	8-729-119-78	(AEP,IT)...TRANSISTOR 2SC2785-HFE
Q101	8-729-900-74	TRANSISTOR DTC143TS
Q201	8-729-900-74	TRANSISTOR DTC143TS
Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q302	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q303	8-729-900-80	TRANSISTOR DTC114ES
Q304	8-729-900-61	TRANSISTOR DTA114ES
Q305	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q306	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q307	8-729-904-52	TRANSISTOR DTA114TS
Q310	8-729-177-32	TRANSISTOR 2SD773
Q311	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q401	8-729-195-23	TRANSISTOR 2SA952
Q402	8-729-900-85	TRANSISTOR DTC144WS
Q403	8-729-177-32	TRANSISTOR 2SD773
Q404	8-729-904-52	TRANSISTOR DTA114TS
R01	1-249-413-11	CARBON 470 5% 1/4W
R02	1-249-405-11	CARBON 100 5% 1/4W
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
R21	1-249-411-11	CARBON 330 5% 1/4W
R23	1-249-429-11	(AEP,IT)...CARBON 10K 5% 1/4W
R101	1-249-429-11	CARBON 10K 5% 1/4W
R102	1-249-419-11	CARBON 1.5K 5% 1/4W
R103	1-249-429-11	CARBON 10K 5% 1/4W
R104	1-249-401-11	CARBON 47 5% 1/4W
R105	1-247-850-11	CARBON 6.2K 5% 1/4W
R106	1-249-430-11	CARBON 12K 5% 1/4W
R107	1-249-425-11	CARBON 4.7K 5% 1/4W
R110	1-249-428-11	CARBON 8.2K 5% 1/4W
R111	1-249-417-11	CARBON 1K 5% 1/4W
R112	1-249-385-11	CARBON 2.2 5% 1/4W
R113	1-249-405-11	CARBON 100 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	1-249-429-11	CARBON 10K 5% 1/4W
R204	1-249-401-11	CARBON 47 5% 1/4W
R205	1-247-850-11	CARBON 6.2K 5% 1/4W
R206	1-249-430-11	CARBON 12K 5% 1/4W
R207	1-249-425-11	CARBON 4.7K 5% 1/4W
R210	1-249-428-11	CARBON 8.2K 5% 1/4W
R211	1-249-417-11	CARBON 1K 5% 1/4W
R212	1-249-385-11	CARBON 2.2 5% 1/4W
R213	1-249-405-11	CARBON 100 5% 1/4W
R301	1-249-417-11	CARBON 1K 5% 1/4W
R303	1-249-421-11	CARBON 2.2K 5% 1/4W
R305	1-249-432-11	CARBON 18K 5% 1/4W
R306	1-249-425-11	CARBON 4.7K 5% 1/4W
R307	1-249-405-11	CARBON 100 5% 1/4W
R308	1-249-408-11	CARBON 180 5% 1/4W
R310	1-247-887-00	CARBON 220K 5% 1/4W
R311	1-249-429-11	CARBON 10K 5% 1/4W
R312	1-249-429-11	CARBON 10K 5% 1/4W
R313	1-249-429-11	CARBON 10K 5% 1/4W
R314	1-249-429-11	CARBON 10K 5% 1/4W
R315	1-249-429-11	CARBON 10K 5% 1/4W
R316	1-249-423-11	CARBON 3.3K 5% 1/4W
R317	1-249-425-11	CARBON 4.7K 5% 1/4W
R319 ⚠	1-217-639-00	FUSIBLE 2.2 5% 1/4W F
R320 ⚠	1-217-639-00	FUSIBLE 2.2 5% 1/4W F
R321	1-249-430-11	CARBON 12K 5% 1/4W
R322	1-249-437-11	(AEP,IT)...CARBON 47K 5% 1/4W
R323	1-249-425-11	CARBON 4.7K 5% 1/4W
R324	1-249-425-11	CARBON 4.7K 5% 1/4W
R325	1-249-425-11	CARBON 4.7K 5% 1/4W
R326	1-249-437-11	CARBON 47K 5% 1/4W
R327	1-249-437-11	CARBON 47K 5% 1/4W
R328	1-249-437-11	CARBON 47K 5% 1/4W
R330	1-249-417-11	CARBON 1K 5% 1/4W
R331	1-249-411-11	CARBON 330 5% 1/4W
R332	1-249-411-11	CARBON 330 5% 1/4W
R333	1-249-441-11	CARBON 100K 5% 1/4W
R334	1-249-425-11	CARBON 4.7K 5% 1/4W
R335	1-249-429-11	CARBON 10K 5% 1/4W
R338	1-249-430-11	CARBON 12K 5% 1/4W
R339	1-249-425-11	CARBON 4.7K 5% 1/4W
R340	1-249-425-11	CARBON 4.7K 5% 1/4W
R341	1-249-425-11	CARBON 4.7K 5% 1/4W
R342	1-249-435-11	CARBON 33K 5% 1/4W
R343	1-249-429-11	CARBON 10K 5% 1/4W
R361	1-249-407-11	CARBON 150 5% 1/4W

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Ref.No.	Part No.	Description				
R362	1-249-438-11	CARBON	56K	5%	1/4W	
R363	1-249-393-11	CARBON	10	5%	1/4W	
R371	⚠1-217-639-00	FUSIBLE	2.2	5%	1/4W	F
R401	1-249-441-11	CARBON	100K	5%	1/4W	
R402	1-249-417-11	CARBON	1K	5%	1/4W	
R403	1-249-417-11	CARBON	1K	5%	1/4W	
R404	1-249-413-11	CARBON	470	5%	1/4W	
R405	1-249-407-11	(AEP,IT).....CARBON	150	5%	1/4W	
R405	1-249-408-11	(US,CND,E)...CARBON	180	5%	1/4W	
R406	1-249-421-11	CARBON	2.2K	5%	1/4W	
R407	1-249-405-11	CARBON	100	5%	1/4W	
R408	1-249-441-11	CARBON	100K	5%	1/4W	
RV1	1-228-995-00	RES, ADJ, CARBON 22K				
S301	1-571-950-11	SWITCH, SLIDE (REC/PB)				
S302	1-571-964-11	SWITCH, LEVER SLIDE (FUNCTION)				
S303	1-571-832-11	SWITCH, PUSH (1 KEY)(DIR MODE)				
S501	1-570-012-11	SWITCH, LEAF (PLAY)				
S502	1-570-012-11	SWITCH, LEAF (FF/REW)				
S503	1-571-904-11	SWITCH, SLIDE (HEAD)				
S504	1-570-012-11	SWITCH, LEAF (DIR)				
S901	1-571-307-11	(AEP,IT)...SWITCH, SLIDE (ISS/FM MODE)				
SP101	1-544-154-11	SPEAKER (L-CH)				
SP201	1-544-154-11	SPEAKER (R-CH)				
SP301	1-544-193-11	SPEAKER (MEGA BASS)				
T1	1-404-355-00	TRANSFORMER, IF				
T301	1-433-268-00	TRANSFORMER, BIAS OSCILLATOR				
T901	⚠1-449-199-11	(US,E).....TRANSFORMER, POWER				
T901	⚠1-449-200-11	(AEP,IT)...TRANSFORMER, POWER				
T901	⚠1-449-350-11	(CND).....TRANSFORMER, POWER				
VR101	1-238-535-11	RES, VAR, SLIDE 50KX6				

ACCESSORY & PACKING MATERIAL

⚠1-558-835-11	(AEP,IT).....CORD, POWER
⚠1-559-047-21	(US,CND,E)...CORD, POWER
*3-336-883-01	CUSHION (RIGHT)
*3-336-884-01	CUSHION (LEFT)
*3-338-476-01	(US,E,AEP,IT)...INDIVIDUAL CARTON
*3-338-477-01	(CND).....INDIVIDUAL CARTON
3-750-600-21	(US,CND,E)...MANUAL, INSTRUCTION(English)
3-750-600-31	(CND).....MANUAL, INSTRUCTION(French)
3-750-600-51	(IT).....MANUAL, INSTRUCTION(Italian)
3-750-600-61	(AEP).....MANUAL, INSTRUCTION (English,Spanish,Dutch,Swedish)

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