

ICF-C610

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
E Model
Australian Model*



SPECIFICATIONS

Radio section

Frequency range :

US, Canadian, E model:
FM: 87.6—108MHz, AM: 530—1,610kHz
AEP, Australian model:
FM: 87.6—107.5MHz, AM: 531—1,602kHz
Italian model:
FM: 87.5—108MHz, AM: 526.5—1,606.5kHz

Tape player section and general

Track system: 2-track, 1-channel, monaural
Frequency response: 50 Hz — 10,000 Hz with normal (TYPE I) tapes

Speaker: Approx. 7.7 cm (3 inches) dia.

Power output:

Radio section: 360 mW (at 10 % harmonic distortion)
Player section: 300 mW (at 10 % harmonic distortion)

Power requirements:

US, Canadian, E model:
120V AC, 60Hz
AEP, Italian model:
220—230V AC, 50Hz
Australian model:
240V AC, 50Hz

For the power backup function: 9 V DC, one 6F22 battery

Battery life: Approx. 32 hours, using Sony battery S-006P(U)

Dimensions: Approx. 254 × 128 × 101 mm (w/h/d) (10 × 5 × 4 inches) incl. projecting parts and controls

Mass: Approx. 1.3 kg (2 lb 14 oz) not incl. battery

Design and specifications subject to change without notice.

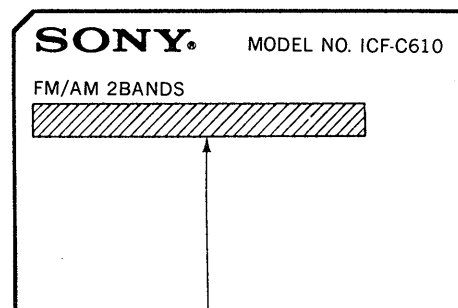
Features

- Wake up to your favorite music tape
- Dual alarm
- Date display
- Forward/reverse time setting

Model Name Using Similar Mechanism	ICF-C600
Tape Transport Mechanism Type	MF-C600

MODEL IDENTIFICATION

—Model Number Label—



US, Canadian, E model: AC: 120V~60Hz 5W
AEP, Italian model : AC: 220—230V~50Hz 5W
Australian model : AC: 240V~50Hz 5W

FM/AM CASSETTE PLAYER CLOCK RADIO
SONY[®]

SAFETY CHECK-OUT (US Model)

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 2V AC range are suitable. (See Fig. A)

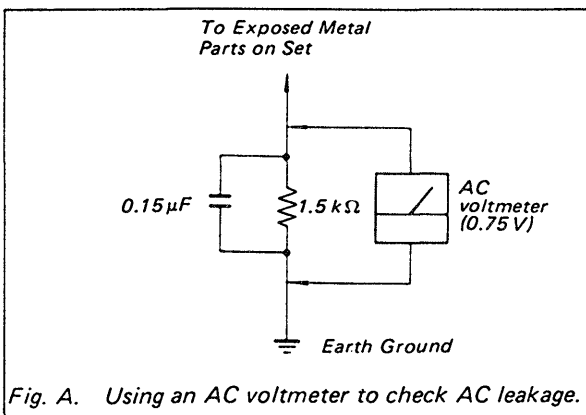


Fig. A. Using an AC voltmeter to check AC leakage.

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.

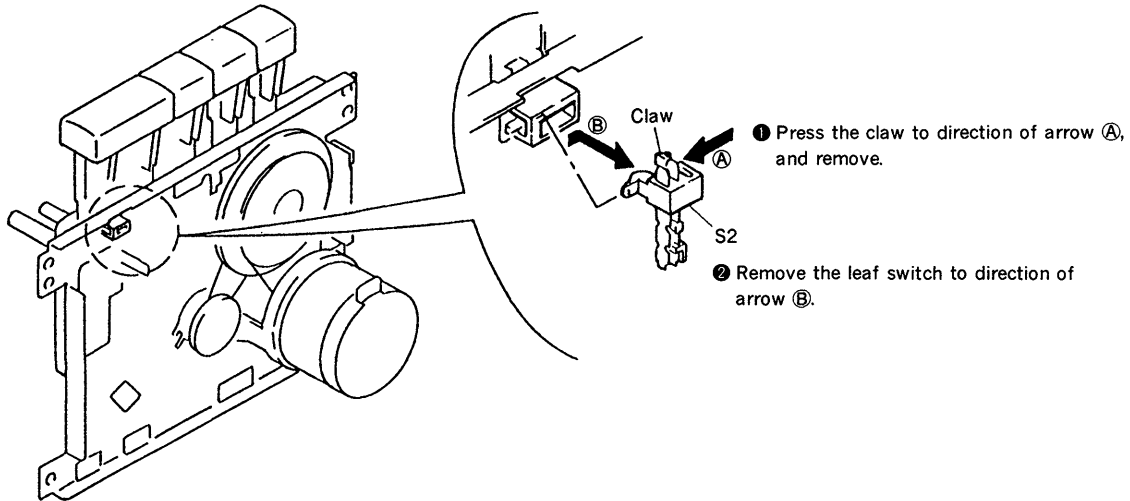
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle 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.

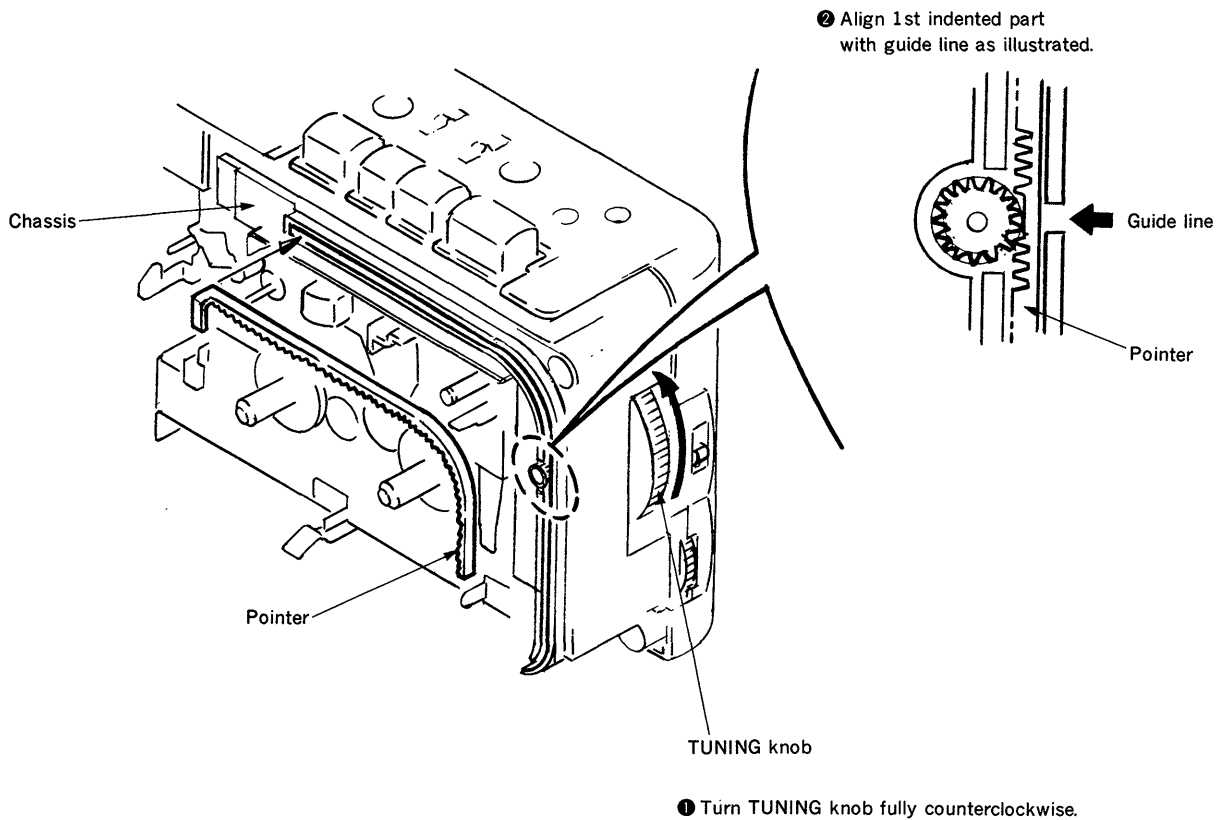
SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

2-1. REMOVE THE LEAF SWITCH



2-2. DIAL POINTER SETTING



SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
 - playback head pinch roller
 - capstan rubber belts
 - idlers
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustment apply suitable locking compound to the parts adjusted.
5. The adjustment should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Meter Reading	Torque Meter
Forward	30-60g·cm (0.42-0.83oz·inch)	CQ-102C
Fast Forward and Rewind	55-140g·cm (0.76-1.94oz·inch)	CQ-201B
Back Tension	1-5g·cm (0.014-0.069oz·inch)	CQ-102C

SECTION 4 ELECTRICAL ADJUSTMENTS

4-1. TAPE RECORDER SECTION

• Test Tape

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

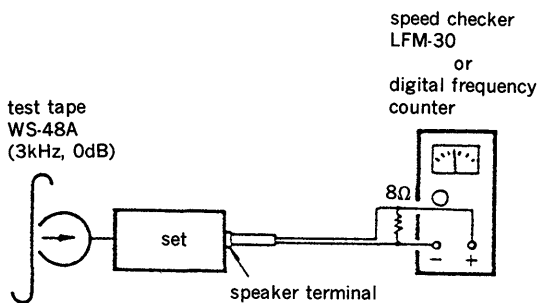
Tape Speed Adjustment

Setting :

VOL control : mechanical mid

Procedure :

1. Mode : playback

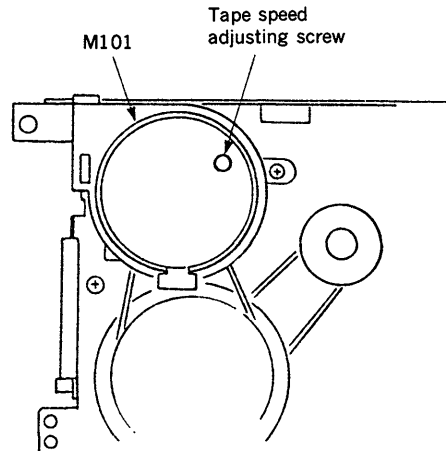


Adjustment Value :

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

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

Adjustment Location :



Playback Head Azimuth Adjustment

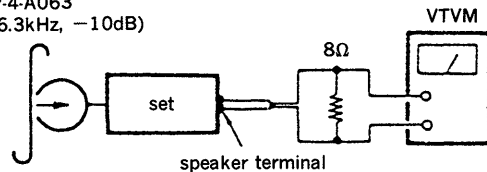
Setting :

VOL control : mechanical mid

Procedure :

1. Mode : playback

test tape
P-4-A063
(6.3kHz, -10dB)

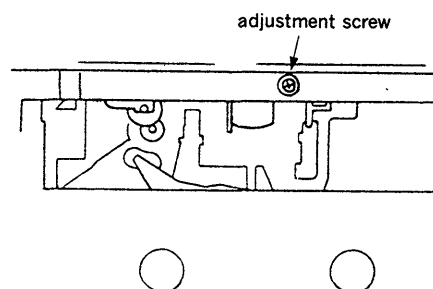


2. Turn the adjustment screw to obtain the maximum reading on VTVM.

Note : Several peaks may appear but take the maximum.

3. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location :



4-2. RADIO SECTION

AM

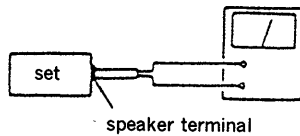
AM rf signal generator



Put the lead-wire antenna close to the set.

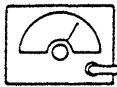
30% amplitude modulation by 400Hz signal

VTVM
(range: 0.5–5V ac)



FM

FM rf signal generator

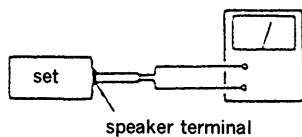


0.01 μ F

to FM antenna terminal

22.5kHz frequency deviation by 400Hz signal
output level: as low as possible

VTVM
(range: 0.5–5V ac)



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

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

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	CT4
520kHz (516.5kHz)	1,750kHz (1,631.5kHz) <1,650kHz>

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1	CT1
680kHz	1,320kHz

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L3	CT3
86.5MHz (87.35MHz)	109.5MHz (108.25MHz) <108.05MHz>

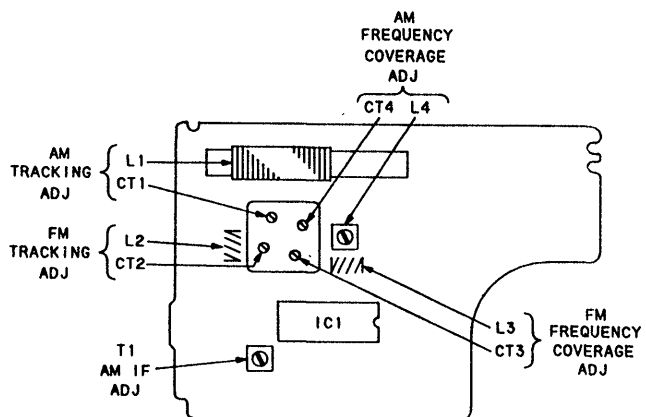
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	CT2
86.5MHz (87.35MHz)	109.5MHz (108.25MHz) <108.05MHz>

() : Italian model

< > : AEP, Australian model

() : AEP, Italian, Australian model

Adjustment Location : radio board

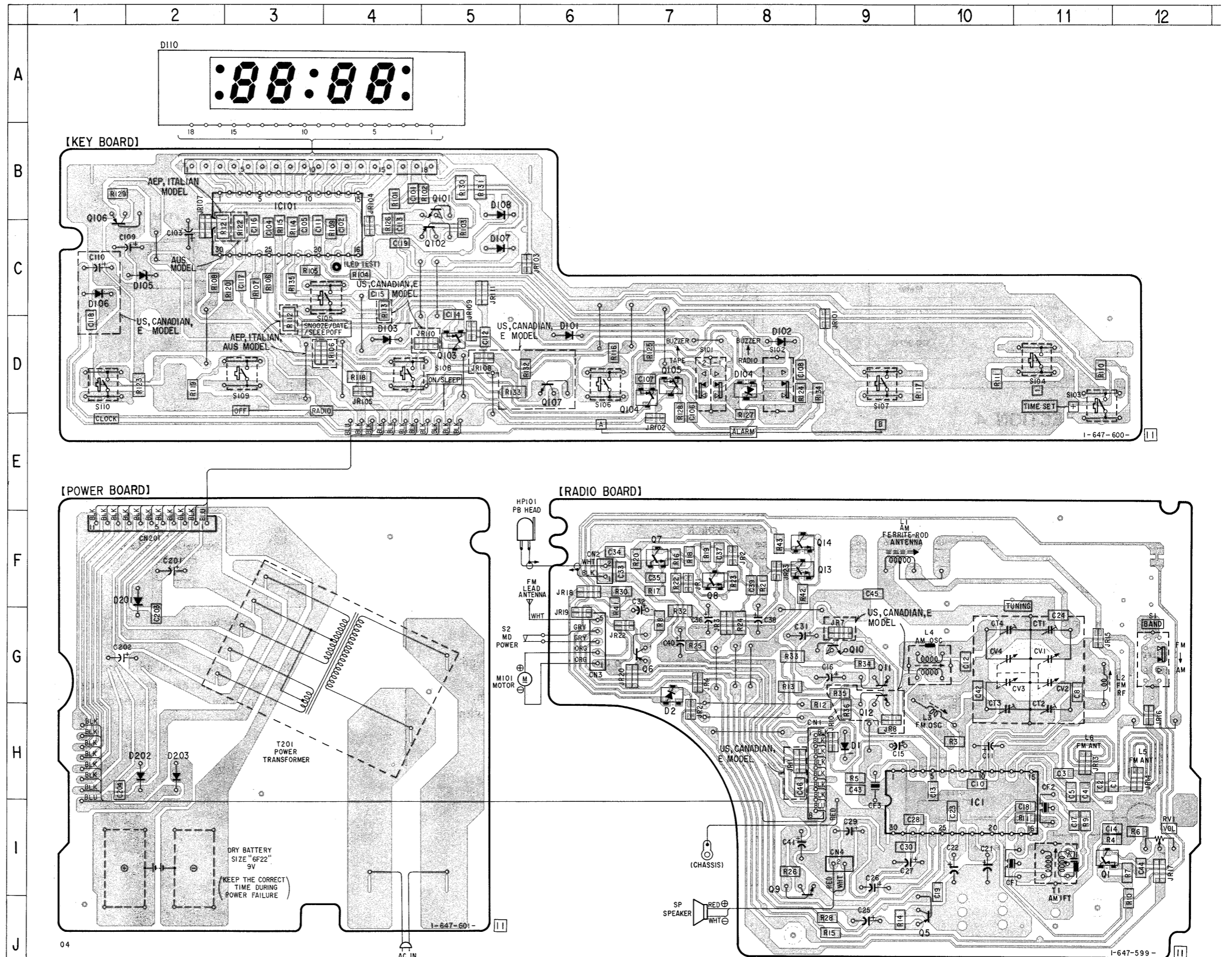


SECTION 5
DIAGRAMS

● Semiconductor Location

Ref. No.	Location
D1	H-9
D2	G-7
D101	D-6
D102	D-8
D103	D-4
D104	D-8
D105	C-2
D106	C-1
D107	C-5
D108	B-5
D110	A-2
D201	F-2
D202	H-2
D203	H-2
IC1	H-10
IC101	B-3
Q1	I-11
Q5	J-10
Q6	G-7
Q7	F-7
Q8	F-7
Q9	I-8
Q10	G-9
Q11	G-9
Q12	G-9
Q13	F-8
Q14	F-8
Q101	B-5
Q102	C-5
Q103	D-5
Q104	D-7
Q105	D-7
Q106	B-1
Q107	D-6

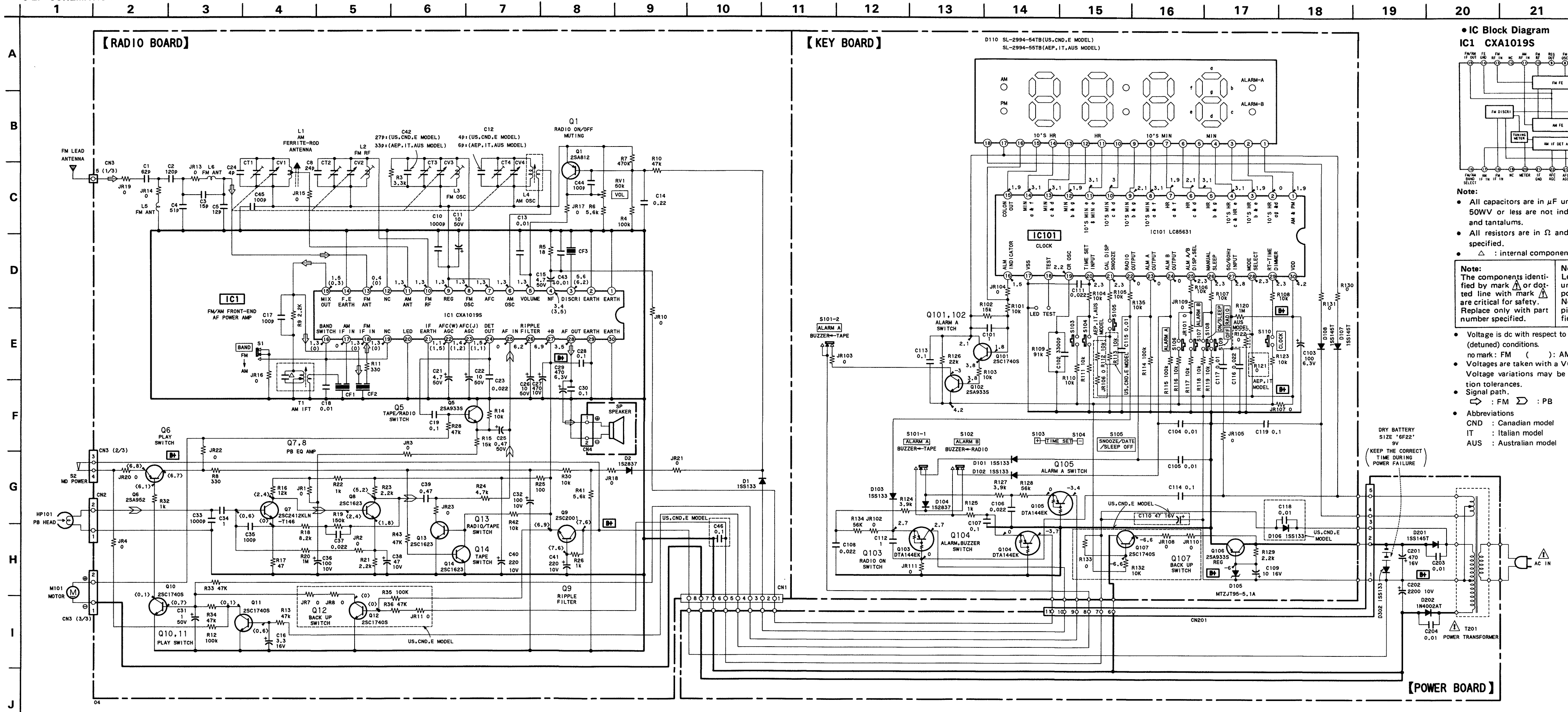
5-1. PRINTED WIRING BOARDS ● Refer to page 12 for Semiconductor Lead Layouts.



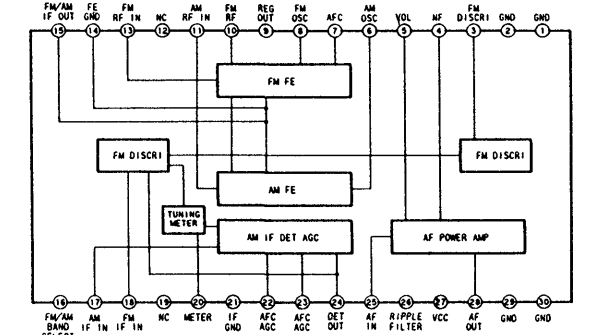
Note:

- ○ : parts extracted from the component side.
- □ : indicates side identified with part number.
- Abbreviation
- AUS: Australian model

5-2. SCHEMATIC DIAGRAM



• IC Block Diagram
IC1 CXA1019S



- Note:**
- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\text{F} \times 10^{-6}$. 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.
 - Δ : internal component.

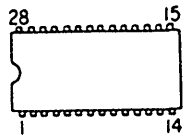
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

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

- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM () : AM (>) : PB
- Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- Abbreviations
CND : Canadian model
IT : Italian model
AUS : Australian model

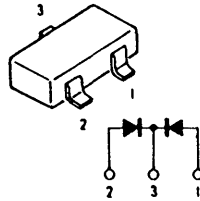
5-3. SEMICONDUCTOR LEAD LAYOUTS

CXA1019S

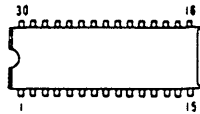


(TOPVIEW)

MA152WK

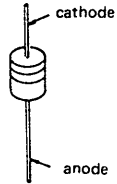


LC85631

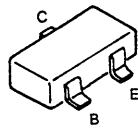


(TOP VIEW)

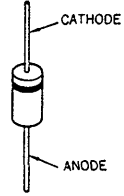
**MTZJ-5.1A
1SS119**



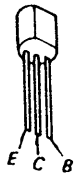
**DTA144EK
2SA1162-G
2SC1623-L5L6
2SC2412KLN-T146**



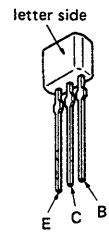
10E2



**2SA952
2SC2001-K1K2**



**2SA1175-HFE
2SC2785-HFE**



SECTION 6 EXPLODED VIEW

NOTE:

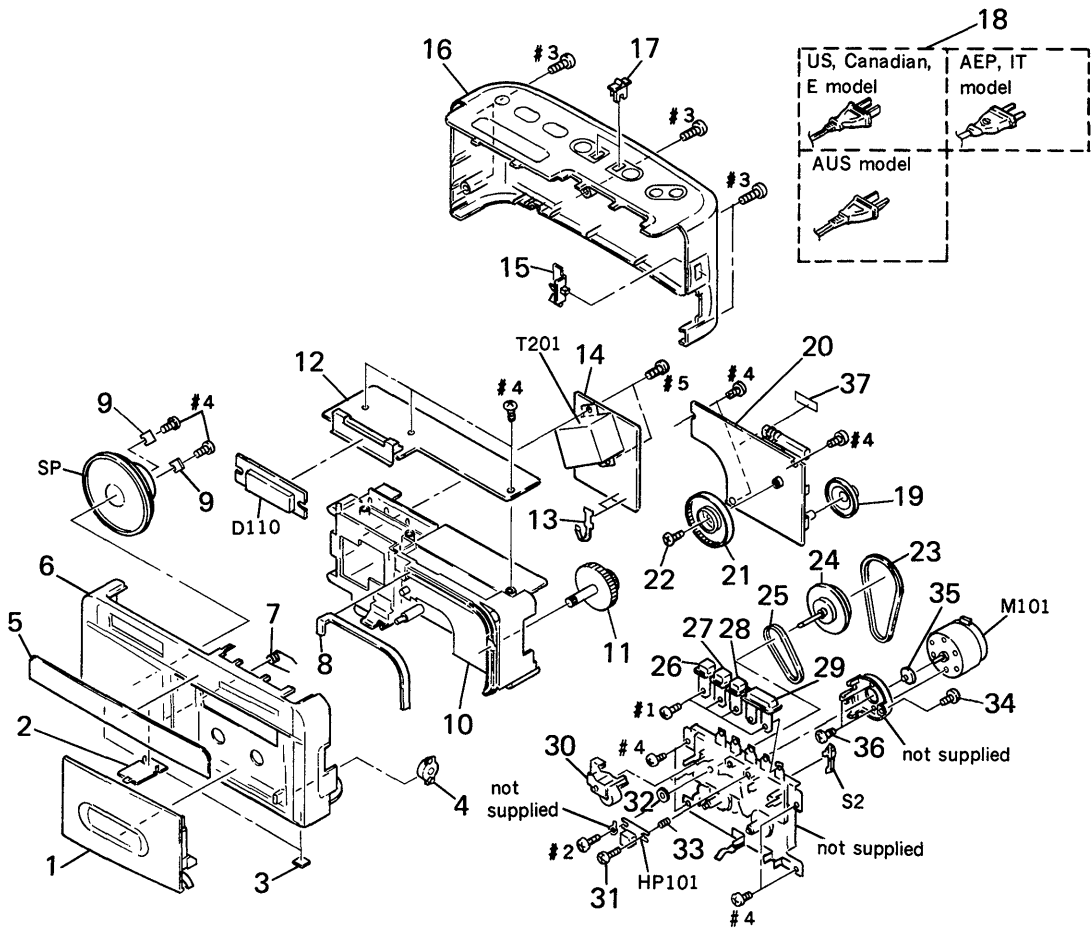
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example :
KNOB, BALANCE (WHITE)... (RED)
 ↑ ↑
 Parts Color Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.

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

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

- Abbreviations
IT : Italian model
AUS : Australian model



Ref. No.	Part No.	Description	Remark
1	X-3366-503-1	LID ASSY, CASSETTE	
2	3-369-135-01	LID, BATTERY CASE	
3	3-368-852-01	FOOT	
4	3-343-248-01	DAMPER (P), SMALL	
5	3-385-664-01	PANEL (US, Canadian, E)	
5	3-385-664-11	PANEL (IT)	
5	3-385-664-31	PANEL (AEP)	
5	3-385-664-51	PANEL (AUS)	
6	3-385-661-01	CABINET (FRONT)	
7	3-902-031-01	SPRING, TORSION	
8	3-385-671-01	POINTER	
9	3-903-217-01	CLAW, SPEAKER	
* 10	3-385-663-01	CHASSIS	
11	3-385-667-01	KNOB (T)	
* 12	A-3679-493-A	KEY BOARD, COMPLETE (US, Canadian, E)	
* 12	A-3679-499-A	KEY BOARD, COMPLETE (AEP, IT)	
* 12	A-3679-526-A	KEY BOARD, COMPLETE (AUS)	
13	3-385-677-01	TERMINAL, BATTERY	
* 14	1-647-601-11	POWER BOARD	
15	3-385-668-01	KNOB (B)	
16	X-3366-502-1	CABINET (REAR) ASSY (US, Canadian, E)	
16	X-3366-860-1	CABINET (REAR) ASSY (AEP, IT)	
16	X-3367-336-1	CABINET (REAR) ASSY (AUS)	
17	3-385-669-01	KNOB (A)	
△18	1-555-795-00	CORD, POWER (AEP, IT)	
△18	1-696-008-11	CORD, POWER (US, Canadian)	
△18	1-558-566-21	CORD, POWER (E)	
△18	1-559-912-11	CORD, POWER (AUS)	

Ref. No.	Part No.	Description	Remark
19	3-382-175-21	KNOB (V)	
* 20	A-3661-769-A	RADIO BOARD, COMPLETE (US, Canadian, E)	
* 20	A-3661-792-A	RADIO BOARD, COMPLETE (AEP, IT, AUS)	
21	3-385-670-01	GEAR, VC	
22	3-725-329-11	SCREW, +B M2. 6X6	
23	3-986-414-01	BELT, MAIN	
24	3-348-356-01	FLYWHEEL ASSY	
25	3-596-931-01	BELT, RF	
26	3-385-675-01	BUTTON (STOP)	
27	3-385-674-01	BUTTON (FF)	
28	3-385-673-01	BUTTON (REW)	
29	3-385-672-01	BUTTON (PLAY)	
30	3-986-417-01	ARM ASSY, PINCH ROLLER	
31	3-986-415-01	SCREW (M2X3), + BIND	
32	3-986-416-01	WASHER, POLY-SLIDER	
33	3-598-845-01	SPRING	
34	3-986-412-01	SCREW, MB COLOR	
35	3-986-413-01	PULLEY, MOTOR	
36	3-348-362-01	SCREW, M COLOR	
37	3-831-441-XX	CUSHION	
D110	1-810-027-11	DIODE SL-2994-54TB (US, Canadian, E)	
D110	1-810-027-21	DIODE SL-2994-55TB (AEP, IT, AUS)	
HP101	1-543-625-11	HEAD, MAGNETIC (PLAYBACK)	
M101	1-541-662-11	MOTOR, DC	
S2	1-571-745-11	SWITCH, LEAF (MD POWER)	
SP	1-544-140-21	SPEAKER	
△T201	1-423-683-11	TRANSFORMER, POWER (US, Canadian, E)	
△T201	1-423-701-11	TRANSFORMER, POWER (AEP, IT, AUS)	

SECTION 7 ELECTRICAL PARTS LIST

KEY

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.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA ..: μ A. uPA ..: μ PA.
uPB ..: μ PB. uPC ..: μ PC. uPD ..: μ PD.
- CAPACITORS
uF: μ F
- COILS
uH: μ H

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

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

When indicating parts by reference number, please include the board.

- Abbreviations
IT : Italian model
AUS : Australian model

Ref. No.	Part No.	Description	Remark
*	A-3679-493-A	KEY BOARD, COMPLETE (US, Canadian, E)	
*	A-3679-499-A	KEY BOARD, COMPLETE (AEP, IT)	
*	A-3679-526-A	KEY BOARD, COMPLETE (AUS)	

	1-751-224-11	CORD, CONNECTION	
< CAPACITOR >			
C101	1-164-346-11	CERAMIC CHIP 1uF	16V
C102	1-164-182-11	CERAMIC CHIP 0.0033uF	10% 50V
C103	1-124-584-00	ELECT 100uF	20% 10V
C104	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C105	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C106	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C107	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C108	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C109	1-126-157-11	ELECT 10uF	20% 16V
C110	1-124-589-11	ELECT 47uF	20% 16V
(US, Canadian, E)			
C111	1-163-033-00	CERAMIC CHIP 0.022uF	50V
C112	1-164-346-11	CERAMIC CHIP 1uF	16V
C113	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C114	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C115	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C116	1-163-033-00	CERAMIC CHIP 0.022uF	50V
C117	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C118	1-163-031-11	CERAMIC CHIP 0.01uF	50V
(US, Canadian, E)			
C119	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
< DIODE >			
D101-103			
	8-719-911-19	DIODE 1SS119	
D104	8-719-400-18	DIODE MA152WK	
D105	8-719-921-42	DIODE MTZJ-5.1A	
D106	8-719-911-19	DIODE 1SS119 (US, Canadian, E)	
D107	8-719-911-19	DIODE 1SS119	
D108	8-719-911-19	DIODE 1SS119	
D110	1-810-027-11	DIODE SL-2994-54TB (US, Canadian, E)	
D110	1-810-027-21	DIODE SL-2994-55TB (AEP, IT, AUS)	

Ref. No.	Part No.	Description	Remark
< IC >			
IC101	8-759-095-52	IC LC85631	
< JUMPER RESISTOR >			
JR101-105			
	1-216-295-00	METAL CHIP 0	5% 1/10W
JR106	1-216-296-00	METAL CHIP 0	5% 1/8W
(AEP, IT, AUS)			
JR107	1-216-296-00	METAL CHIP 0	5% 1/8W
JR108	1-216-295-00	METAL CHIP 0	5% 1/10W
(US, Canadian, E)			
JR109	1-216-295-00	METAL CHIP 0	5% 1/10W
JR110	1-216-296-00	METAL CHIP 0	5% 1/8W
(US, Canadian, E)			
JR111	1-216-296-00	METAL CHIP 0	5% 1/8W
< TRANSISTOR >			
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q102	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q103-105			
	8-729-901-06	TRANSISTOR DTA144EK	
Q106	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE	(US, Canadian, E)
< RESISTOR >			
R101	1-216-073-00	METAL CHIP 10K	5% 1/10W
R102	1-216-077-00	METAL CHIP 15K	5% 1/10W
R103-108			
	1-216-073-00	METAL CHIP 10K	5% 1/10W
R109	1-216-096-00	METAL GLAZE 91K	5% 1/10W
R110	1-216-073-00	METAL CHIP 10K	5% 1/10W
R111	1-216-073-00	METAL CHIP 10K	5% 1/10W
R112	1-216-222-00	METAL GLAZE 10K	5% 1/8W
(AEP, IT, AUS)			
R113	1-216-073-00	METAL CHIP 10K	5% 1/10W
(US, Canadian, E)			
R114	1-216-097-00	METAL CHIP 100K	5% 1/10W
R115	1-216-097-00	METAL CHIP 100K	5% 1/10W
R116	1-216-073-00	METAL CHIP 10K	5% 1/10W

KEY POWER RADIO

Ref. No.	Part No.	Description	Remark		
R117	1-216-073-00	METAL CHIP	10K	5%	1/10W
R118	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R119	1-216-073-00	METAL CHIP	10K	5%	1/10W
R120	1-216-121-00	METAL CHIP	1M	5%	1/10W
R121	1-216-296-00	METAL CHIP (AEP, IT)	0	5%	1/8W
R122	1-216-295-00	METAL CHIP	0	5%	1/10W (AUS)
R123	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R124	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R125	1-216-049-00	METAL CHIP	1K	5%	1/10W
R126	1-216-081-00	METAL CHIP	22K	5%	1/10W
R127	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R128	1-216-091-00	METAL CHIP	56K	5%	1/10W
R129	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R130	1-216-296-00	METAL CHIP	0	5%	1/8W
R131	1-216-296-00	METAL CHIP	0	5%	1/8W
R132	1-216-073-00	METAL CHIP (US, Canadian, E)	10K	5%	1/10W
R133	1-216-296-00	METAL CHIP (US, Canadian, E)	0	5%	1/8W
R134	1-216-091-00	METAL CHIP	56K	5%	1/10W
R135	1-216-073-00	METAL CHIP	10K	5%	1/10W
< SWITCH >					
S101	1-571-478-11	SWITCH, SLIDE (TAPE/BUZZER)			
S102	1-571-478-11	SWITCH, SLIDE (RADIO/BUZZER)			
S103	1-554-937-11	SWITCH, KEY BOARD (TIME SET +)			
S104	1-554-937-11	SWITCH, KEY BOARD (TIME SET -)			
S105	1-554-937-11	SWITCH, KEY BOARD (SNOOZE/DATE/SLEEP OFF)			
S106	1-554-937-11	SWITCH, KEY BOARD (ALARM A)			
S107	1-554-937-11	SWITCH, KEY BOARD (ALARM B)			
S108	1-554-937-11	SWITCH, KEY BOARD (RADIO ON/SLEEP)			
S109	1-554-937-11	SWITCH, KEY BOARD (RADIO OFF)			
S110	1-554-937-11	SWITCH, KEY BOARD (CLOCK)			

*	1-647-601-11	POWER BOARD *****			
	1-751-223-11	CORD, CONNECTION			
*	1-535-771-11	TERMINAL (AEP, IT, AUS)			
	3-385-677-01	TERMINAL, BATTERY			
< CAPACITOR >					
C201	1-126-103-11	ELECT	470uF	20%	16V
C202	1-124-893-11	ELECT	2200uF	20%	10V
C203	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C204	1-163-031-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description	Remark		
< CONNECTOR >					
* CN201	1-750-661-11	SOCKET, CONNECTOR 11P			
< DIODE >					
D201	8-719-911-19	DIODE	1SS119		
D202	8-719-200-02	DIODE	10E2		
D203	8-719-911-19	DIODE	1SS119		
< TRANSFORMER >					
△T201	1-423-683-11	TRANSFORMER, POWER (US, Canadian, E)			
△T201	1-423-701-11	TRANSFORMER, POWER (AEP, IT, AUS)			

*	A-3661-769-A	RADIO BOARD, COMPLETE (US, Canadian, E)			
*	A-3661-792-A	RADIO BOARD, COMPLETE (AEP, IT, AUS)			

< CAPACITOR >					
C1	1-163-112-00	CERAMIC CHIP	62PF	5%	50V
C2	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C3	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C4	1-163-110-00	CERAMIC CHIP	51PF	5%	50V
C5	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C8	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C10	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-124-907-11	ELECT	10uF	20%	50V
C12	1-163-087-00	CERAMIC CHIP (US, Canadian, E)	4PF		50V
C12	1-163-089-00	CERAMIC CHIP (AEP, IT, AUS)	6PF		50V
C13	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C14	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C15	1-124-927-11	ELECT	4.7uF	20%	100V
C16	1-124-034-51	ELECT	33uF	20%	16V
C17	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C18	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C19	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C21	1-124-927-11	ELECT	4.7uF	20%	100V
C22	1-124-907-11	ELECT	10uF	20%	50V
C23	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C24	1-163-087-00	CERAMIC CHIP	4PF		50V
C25	1-124-902-00	ELECT	0.47uF	20%	50V
C26	1-124-907-11	ELECT	10uF	20%	50V
C27	1-124-472-11	ELECT	470uF	20%	10V
C28	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C29	1-124-472-11	ELECT	470uF	20%	10V
C30	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C31	1-124-903-11	ELECT	1uF	20%	50V
C32	1-124-443-00	ELECT	100uF	20%	10V

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.
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C33	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JR8	1-216-295-00	METAL CHIP 0 5% 1/10W (US, Canadian, E)	
C34	1-164-346-11	CERAMIC CHIP	1uF 16V	JR10	1-216-295-00	METAL CHIP 0 5% 1/10W	
C35	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	JR11	1-216-296-00	METAL CHIP 0 5% 1/8W (US, Canadian, E)	
C36	1-124-443-00	ELECT	100uF 20% 10V	JR13	1-216-296-00	METAL CHIP 0 5% 1/8W	
C37	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V	JR14	1-216-296-00	METAL CHIP 0 5% 1/8W	
C38	1-124-126-00	ELECT	47uF 20% 10V	JR15	1-216-295-00	METAL CHIP 0 5% 1/10W	
C39	1-164-005-11	CERAMIC CHIP	0.47uF 25V	JR16	1-216-295-00	METAL CHIP 0 5% 1/10W	
C40	1-126-176-11	ELECT	220uF 20% 10V	JR17	1-216-296-00	METAL CHIP 0 5% 1/8W	
C41	1-126-176-11	ELECT	220uF 20% 10V	JR18	1-216-296-00	METAL CHIP 0 5% 1/8W	
C42	1-163-103-00	CERAMIC CHIP (US, Canadian, E)	27PF 5% 50V	JR19	1-216-295-00	METAL CHIP 0 5% 1/10W	
C42	1-163-105-00	CERAMIC CHIP (AEP, IT, AUS)	33PF 5% 50V	JR20	1-216-296-00	METAL CHIP 0 5% 1/8W	
C43	1-163-031-11	CERAMIC CHIP	0.01uF 50V	JR21-23	1-216-295-00	METAL CHIP 0 5% 1/10W	
C44	1-163-117-00	CERAMIC CHIP	100PF 5% 50V			< COIL >	
C45	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	L1	1-402-413-21	ANTENNA, FERRITE-ROD (MW)	
C46	1-163-038-00	CERAMIC CHIP (US, Canadian, E)	0.1uF 25V	* L2	1-422-624-11	COIL, AIR CORE	
		< FILTER >		L3	1-428-229-11	COIL, AIR CORE (US, Canadian, E)	
CF1	1-577-072-11	FILTER, CERAMIC		L3	1-406-425-11	COIL (AEP, IT, AUS)	
CF2	1-567-097-61	FILTER, CERAMIC		L4	1-406-028-00	COIL, OSC (MW)	
CF3	1-567-097-61	FILTER, CERAMIC				< TRANSISTOR >	
		< CONNECTOR >		Q1	8-729-216-22	TRANSISTOR 2SA1162-G	
* CN1	1-568-283-11	SOCKET, CONNECTOR 8P		Q5	8-729-119-76	TRANSISTOR 2SA1175-HFE	
* CN2	1-691-573-11	PIN, CONNECTOR (PC BOARD) 2P		Q6	8-729-195-23	TRANSISTOR 2SA952	
* CN3	1-568-271-11	SOCKET, CONNECTOR 5P		Q7	8-729-160-80	TRANSISTOR 2SC2412KLN-T146	
CN4	1-568-277-11	SOCKET, CONNECTOR 2P		Q8	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< VARIABLE CAPACITOR >		Q9	8-729-011-92	TRANSISTOR 2SC2001-K1K2	
CT1-4 } CV1-4 }	1-151-628-11	CAP, VARIABLE (TUNING)		Q10	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		< DIODE >		Q11	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D1	8-719-911-19	DIODE 1SS119		Q12	8-729-119-78	TRANSISTOR 2SC2785-HFE (US, Canadian, E)	
D2	8-719-400-18	DIODE MA152WK		Q13	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< IC >		Q14	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC1	8-752-035-29	IC CXA1019S				< RESISTOR >	
		< JUMPER RESISTOR >		R3	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
JR1	1-216-295-00	METAL CHIP 0 5% 1/10W		R4	1-216-097-00	METAL CHIP 100K 5% 1/10W	
JR2	1-216-295-00	METAL CHIP 0 5% 1/10W		R5	1-216-007-00	METAL CHIP 18 5% 1/10W	
JR3	1-216-296-00	METAL CHIP 0 5% 1/8W		R6	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
JR4	1-216-295-00	METAL CHIP 0 5% 1/10W		R7	1-216-113-00	METAL CHIP 470K 5% 1/10W	
JR7	1-216-296-00	METAL CHIP 0 5% 1/8W (US, Canadian, E)		R8	1-216-037-00	METAL CHIP 330 5% 1/10W	
				R9	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
				R10	1-216-089-00	METAL CHIP 47K 5% 1/10W	
				R11	1-216-037-00	METAL CHIP 330 5% 1/10W	
				R12	1-216-097-00	METAL CHIP 100K 5% 1/10W	
				R13	1-216-238-00	METAL GLAZE 47K 5% 1/8W	
				R14	1-216-073-00	METAL CHIP 10K 5% 1/10W	

RADIO

Ref. No.	Part No.	Description	Remark
R15	1-216-077-00	METAL CHIP	15K 5% 1/10W
R16	1-216-075-00	METAL CHIP	12K 5% 1/10W
R17	1-216-017-00	METAL CHIP	47 5% 1/10W
R18	1-216-071-00	METAL CHIP	8.2K 5% 1/10W
R19	1-216-101-00	METAL CHIP	150K 5% 1/10W
R20	1-216-121-00	METAL CHIP	1M 5% 1/10W
R21	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R22	1-216-049-00	METAL CHIP	1K 5% 1/10W
R23	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R24	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W
R25	1-216-025-00	METAL CHIP	100 5% 1/10W
R26	1-216-049-00	METAL CHIP	1K 5% 1/10W
R28	1-216-089-00	METAL CHIP	47K 5% 1/10W
R30	1-216-073-00	METAL CHIP	10K 5% 1/10W
R32	1-216-198-00	METAL CHIP	1K 5% 1/8W
R33	1-216-238-00	METAL GLAZE	47K 5% 1/8W
R34	1-216-089-00	METAL CHIP	47K 5% 1/10W
R35	1-216-097-00	METAL CHIP (US, Canadian, E)	100K 5% 1/10W
R36	1-216-089-00	METAL CHIP (US, Canadian, E)	47K 5% 1/10W
R41	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R42	1-216-073-00	METAL CHIP	10K 5% 1/10W
R43	1-216-089-00	METAL CHIP	47K 5% 1/10W
< VARIABLE RESISTOR >			
RV1	1-241-586-11	RES, VAR, CARBON 50K (VOL)	
< SWITCH >			
S1	1-571-478-11	SWITCH, SLIDE (BAND)	
< TRANSFORMER >			
T1	1-404-341-00	TRANSFORMER, IF	

MISCELLANEOUS			

△18	1-555-795-00	CORD, POWER (AEP, IT)	
△18	1-696-008-11	CORD, POWER (US, Canadian)	
△18	1-558-566-21	CORD, POWER (E)	
△18	1-559-912-11	CORD, POWER (AUS)	
HP101	1-543-625-11	HEAD, MAGNETIC (PLAYBACK)	
M101	1-541-662-11	MOTOR, DC	
S2	1-571-745-11	SWITCH, LEAF (MD POWER)	
SP	1-544-140-21	SPEAKER	

Ref. No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS			

*	3-388-376-01	INDIVIDUAL CARTON (US, E)	
	3-756-529-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, DUTCH) (Canadian, E, AUS)	
	3-756-529-21	MANUAL, INSTRUCTION (ENGLISH) (US)	
	3-756-529-41	MANUAL, INSTRUCTION (SPANISH, ITALIAN, PORTUGUESE) (AEP, IT)	
*	3-904-079-01	INDIVIDUAL CARTON (AEP, IT, AUS)	
*	3-904-081-01	INDIVIDUAL CARTON (Canadian)	

HARDWARE LIST			

#1	7-621-255-10	SCREW +BVTT 2X3 (S)	
#2	7-621-255-45	SCREW, TOTSU PWH 2X6	
#3	7-685-154-19	SCREW +P 3X35 TYPE2 NON-SLIT	
#4	7-685-646-79	SCREW +P 3X8 TYPE2 NON-SLIT	
#5	7-685-648-79	SCREW +P 3X12 TYPE2 NON-SLIT	

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