

# ICF-C400

## SERVICE MANUAL

US Model  
Canadian Model

REVISED

This set is the almost same as ICF-C320.  
Refer to ICF-C320/C322 Service Manual previously issued  
for the information of this set.  
The following parts differ from those in ICF-C320.

### 1. DIFFERENCE PORTION

— Specification —

Dimensions      Approx. 250×57×155mm (w/h/d)  
                         (9 7/8 × 2 1/4 × 6 1/8 inches)  
                         incl. projecting parts and controls

### 2. DIFFERENCE PARTS

— Mechanical Parts —

No.	Part No.	Description
1	3-901-722-01	(US) ...CABINET (UPPER) (LIGHT WOOD)
1	3-901-722-11	(Canadian) ...CABINET (UPPER) (DARK WOOD)
7	3-901-710-61	KNOB (BAND)
8	*3-901-702-61	KNOB (VOL)
9	*3-901-724-41	CABINET (LOWER)
12	*3-901-709-61	KNOB (TUNING)
13	3-901-713-61	BUTTON (DREAM BAR)
15	3-901-712-61	BUTTON (MAIN)
16	*3-901-706-11	PANEL, BACK
17	3-901-720-01	PLATE, TRANSPARENT
18	3-901-711-61	KNOB (FUNCTION)

Part No.	Description
*3-901-557-01	(US) ...INDIVIDUAL CARTON
*3-901-559-01	(Canadian) ...INDIVIDUAL CARTON

#### NOTE:

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

# FM/AM DIGITAL CLOCK RADIO

# SONY®

9-953-903-11  
(Including 9-953-903-91)

Sony Corporation  
Audio Group

English  
89F0233-1  
Printed in Japan  
©1989.6  
Published by A/V Engineering Service Dept.

# ICF-C320/C322

## SERVICE MANUAL

*US Model*

ICF-C320 :

*Canadian Model*

ICF-C320/C322 :

*AEP Model*

ICF-C320 :

*E Model*

ICF-C320 :

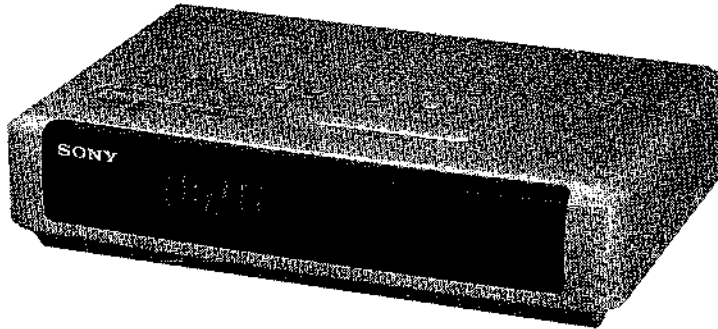


Photo : ICF-C320 (beige type)

### SPECIFICATIONS

Frequency range	FM : 87.6-108MHz (US, Canadian model) FM : 87.6-107.5MHz (AEP, E model) AM : 530-1,710kHz (US, Canadian model) AM : 531-1,602kHz (AEP, E model)
Antenna	FM : AC cord antenna AM : Built-in ferrite bar antenna
Speaker	Approx. 6.6cm (2 5/8 inches) dia.
Power output	200mW (at 10% harmonic distortion)
Power requirement	120V AC, 60Hz (US, Canadian, E model) 220V AC, 50Hz (AEP model) For the power backup function : 9V DC, one 6F22 battery
Battery life	Approx. 40 hours, using Sony battery S-006P (U)
Dimensions	Approx. 250×57×158mm (w/h/d) (9 7/8×2 1/4×6 1/4 inches) incl. projecting parts and controls
Weight	Approx. 800g (1lb 28 oz) not incl. battery

Design and specifications subject to change without notice.

### FEATURES

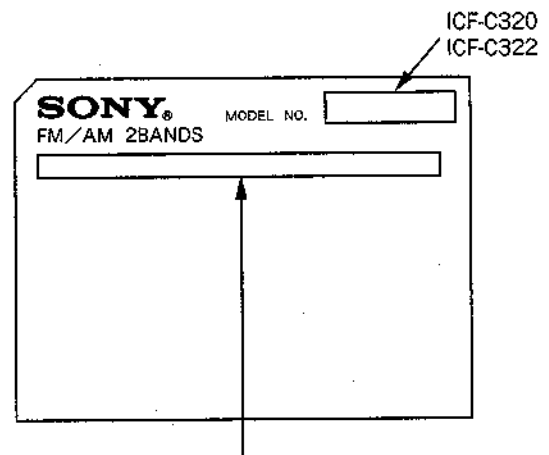
- High quality FM/AM 2 band radio combined with an electric digital alarm clock and timer.
- Choice of awakening to radio alarm, buzzer alarm, or dual alarm : Alarm [A] (radio) and alarm [B] (buzzer).
- Power backup function to keep the clock operating during a power interruption, using an optional 6F22 battery.
- DREAM BAR SNOOZE/SLEEP OFF (US, Canadian, E model), REPEAT ALARM/SLEEP OFF (AEP model) : feather-light touch to operate, and having functions : snooze alarm, and sleep timer off.

### MODEL IDENTIFICATIONS

- Model Number Label -

ICF-C320 : US model	} Carved on lower cabinet
ICF-C320 : Canadian model	

ICF-C320 : AEP model	} Model number label
ICF-C320 : E model	
ICF-C322 : Canadian model	



US, Canadian model : AC : 120V 60Hz 5W  
 AEP model : AC : 220V~50Hz 5W  
 E (Panamanian) model : AC : 120V~60Hz 5W

FM/AM DIGITAL CLOCK RADIO  
**SONY**®



**SAFETY CHECK-OUT**

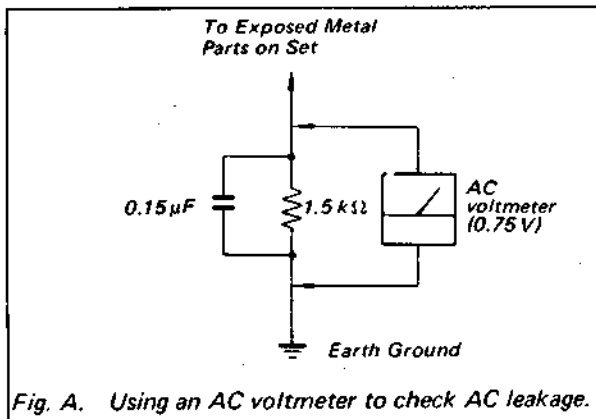
After correcting the original service problem, perform the following safety check before releasing the set to the customer:

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 microamperes). 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)

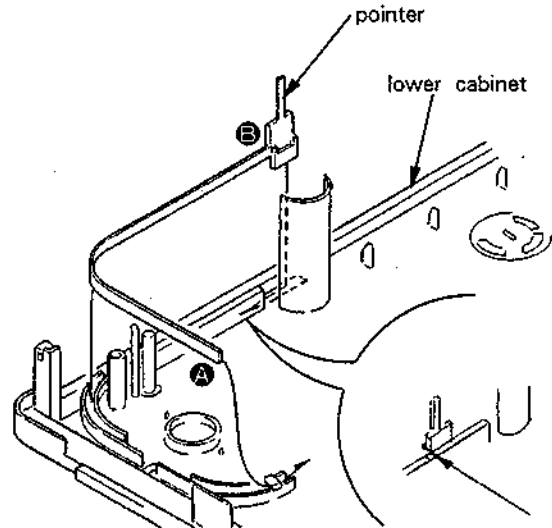


**SAFETY-RELATED COMPONENT WARNING!!**

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.

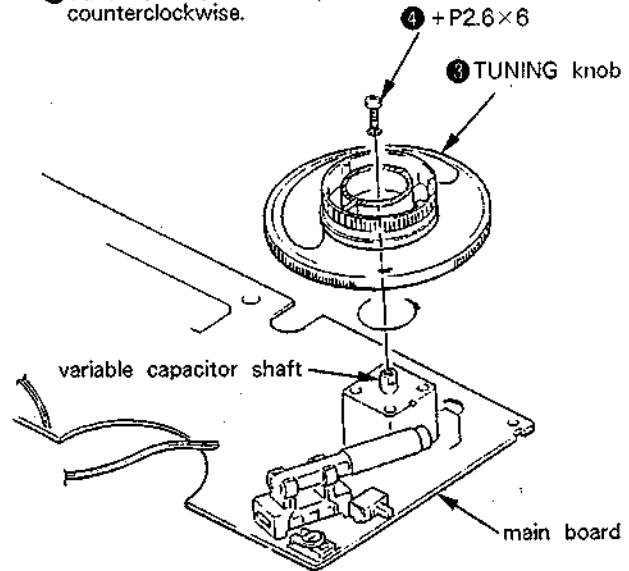
**SECTION 1  
DIAL POINTER SETTING**

- 1 Put the pointer in the groove of lower cabinet in alphabetical order.



- 2 Set the left end of the pointer to the right scratched line as illustrated.

- 5 Turn TUNING knob fully counterclockwise.

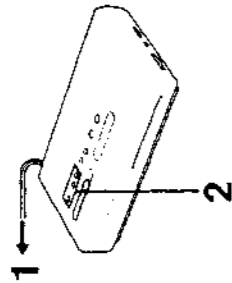


- 6 Install main board so that TUNING knob engages pointer gear.

**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.

### How to Set the Clock

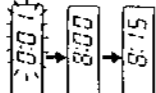


- 1 Connect the AC power cord to a wall outlet. Figures will appear and begin to flicker.

- 2 Adjust the clock to the correct time with the TIME SET buttons, H (hour) and M (minute), while holding down the CLOCK button.

24-hour system (AEP model)	12-hour system (E model)
0:00 = midnight 12:00 = noon	AM 12:00 = midnight PM 12:00 = noon

Example: To set to 6:15



Note: The minute digits advance to "00" after "59". The hour digits do not advance.

#### Zero Second Adjustment

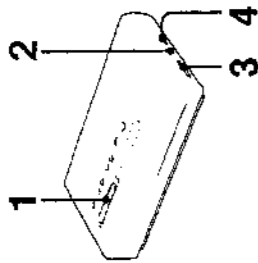
If you want to adjust the time exactly to the second with a radio or a telephone time signal, proceed as in the following example.

- 1 Adjust the time indication to 7:13 (as described before)
- 2 While holding down the CLOCK SET button, press the M button simultaneously with the radio or the telephone. The clock then will begin to operate, showing the precise time.

To advance the minute digits rapidly  
Keep the H and M buttons pressed while holding down the CLOCK SET button.

\* The illumination of the time display is for the model of 24-hour system.

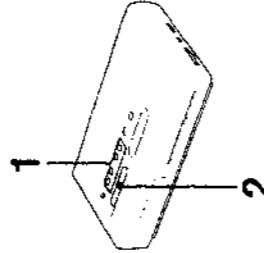
### Radio Operation



- 1 Set the function selector switch to RADIO ON.
- 2 Select the desired band.
- 3 Tune in the desired station.
- 4 Adjust the volume.

To turn off the radio, set the function selector switch to OFF.  
For Improved Reception  
FM: Extend the AC power cord fully to increase the FM sensitivity.  
AM: Since the reception is affected by the direction of the radio, rotate the unit horizontally for optimum reception.

### How to set the Alarm



- 1 Set the alarm time for radio or buzzer.  
Set the alarm time with TIME SET H and M while holding down ALARM (A) RADIO.  
Set the buzzer alarm time with TIME SET H and M while holding down ALARM (B) BUZZER.

To advance the minute digits rapidly  
Keep the H and M buttons pressed while holding down the ALARM button.

- 2 Set the function selector switch to the desired alarm position: SINGLE ALARM (A) RADIO, (B) BUZZER or DUAL ALARM.

The desired alarm sound will come on at the preset time.

#### For radio alarm

Tune in the desired station and adjust the volume as described in "Radio operation".

#### For dual alarm

If you set the radio and the buzzer to the same time, only the radio sound will be heard.

If the buzzer alarm is set for before the time the radio alarm stops, the alarm shifts from radio to buzzer at the alarm preset time.

#### When the Alarm Sound Comes on

The alarm sound will shut off automatically after 59 minutes.

To stop the radio or buzzer sound, set the function selector switch to OFF or press the ALARM RESET button.

If you wish to stop the dual alarm, press the ALARM RESET button once to stop the radio and once to stop the buzzer.

#### Snooze alarm function

If you wake to the alarm sound in the morning but want to close for a few more minutes, just lightly press the CREAM BAR SNOOZE/SLEEP OFF (US, Canada, E. model), REPEAT ALARM/SLEEP OFF (ASP model). The alarm sound will be silenced but will automatically come on again after about nine minutes. If you want to close more, press the bar again. You can repeat this snooze function as many times as you like. If you do not want the alarm sound any more after pressing the bar, press the ALARM RESET button.

To wake to the alarm sound at the same time the next day  
Stop the radio or buzzer sound by pressing the ALARM RESET button. Leave the function selector switch to SINGLE ALARM (A) RADIO, (B) BUZZER or DUAL ALARM.

If you want to listen to the radio continuously  
Set the function selector switch to RADIO ON, since the alarm radio stops after 59 minutes.

#### The volume of the alarm sound

The radio volume can be adjusted.  
The buzzer volume is fixed.

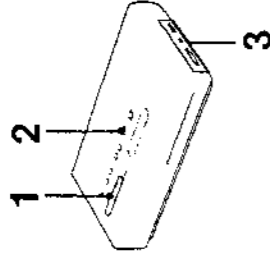
#### To check the preset time

Press ALARM (A) RADIO to check the radio preset time, and ALARM (B) BUZZER for the buzzer.

## SECTION 2 GENERAL

### How to Set the Sleep Timer

By using the sleep timer, you can fall asleep while listening to the radio. You can set the sleep time so that the radio turns off up to 59 minutes later.



- 1 Set the function selector switch to RADIO OFF.

- 2 Press SLEEP.  
The radio turns on. The radio will turn off after 59 minutes.

To set the desired time  
The digits will be reduced by keeping SLEEP pressed. So, you can set the desired time within the range from 59 minutes to 1 minute.

- 3 Tune in the desired station and adjust the volume.  
The radio will turn off automatically after the preset time had elapsed.

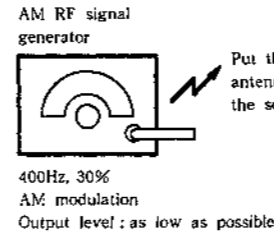
To turn off the radio before the preset time  
Press the DREAM BAR SNOOZE/SLEEP OFF (US, Canada, E. model), REPEAT ALARM/SLEEP OFF (ASP model).

To check the remaining minutes  
Press the SLEEP button lightly.

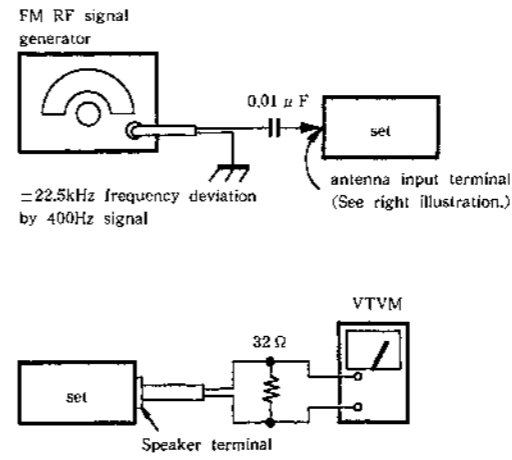
If the preset alarm time comes while the sleep timer is operating  
The alarm buzzer will not sound.

## SECTION 3 ELECTRICAL ADJUSTMENTS

### AM Section

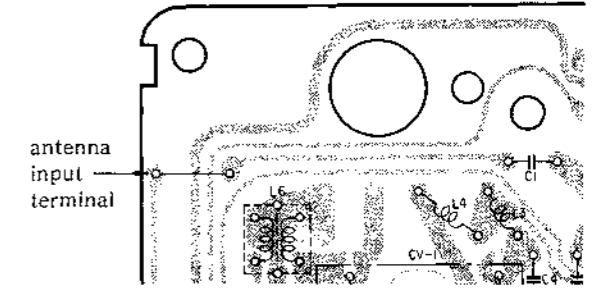


### FM Section



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

### [MAIN BOARD] (Conductor Side)



( ): AEP, E model

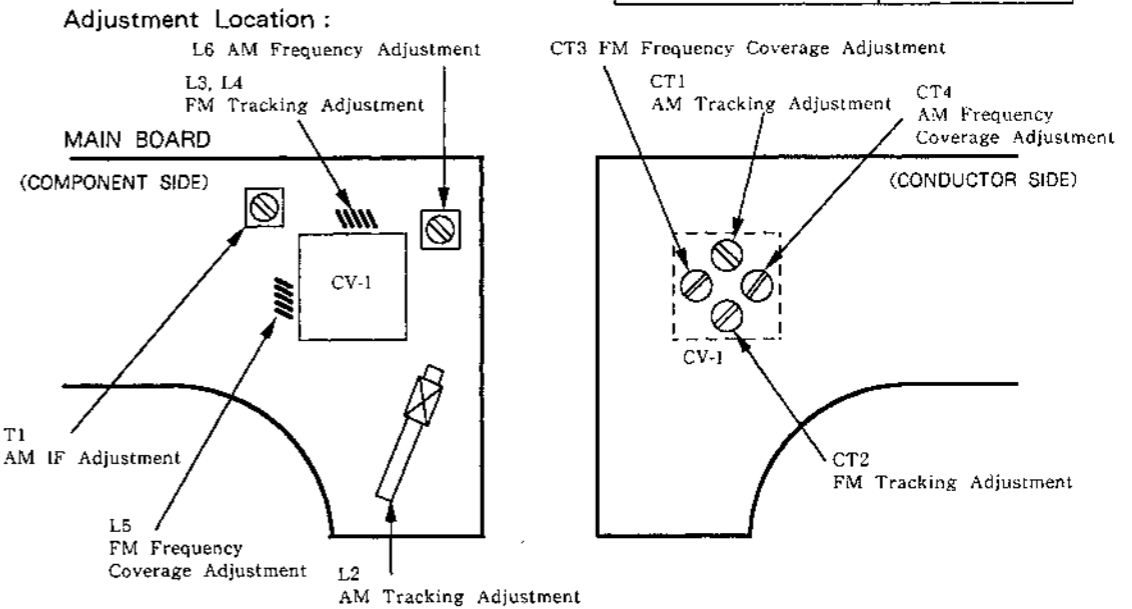
AM IF ADJUSTMENT	
Adjust for a maximum reading on VTVM	
T1	455kHz

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM	
L6	520kHz
CT4	1750 (1680) kHz

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM	
L2	600kHz
CT1	1400kHz

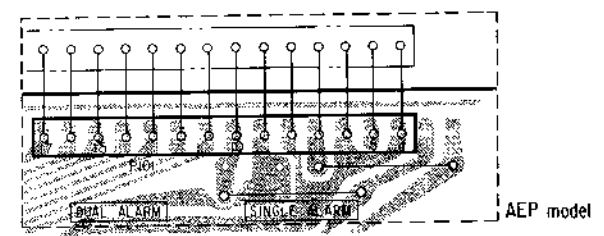
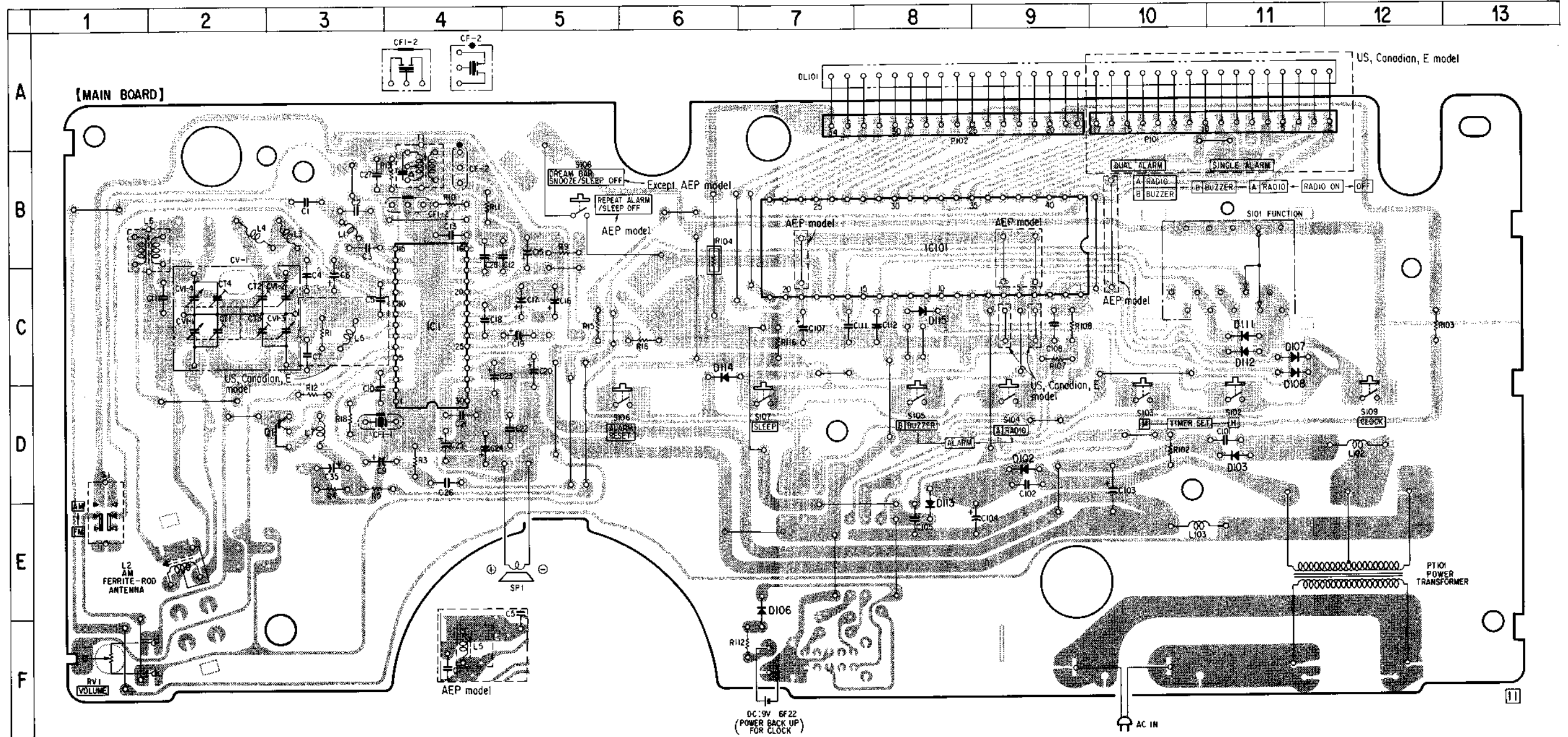
FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM	
L5	86.5 (87.0) MHz
CT3	109.5 (108.3) MHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM	
L3, L4	86.5 (87.0) MHz
CT2	109.5 (108.3) MHz



# SECTION 4 DIAGRAMS

4-1. PRINTED WIRING BOARD

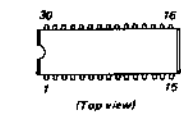


Note on Printed Wiring Boards :

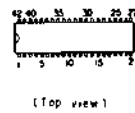
- : parts extracted from the component side.
- ⊕ indicates side identified with part number.

### SEMICONDUCTOR LEAD LAYOUTS

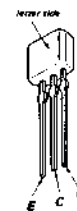
CXA1019S



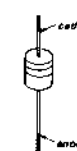
LM8364



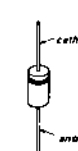
2SA1175-HFE



1SS119



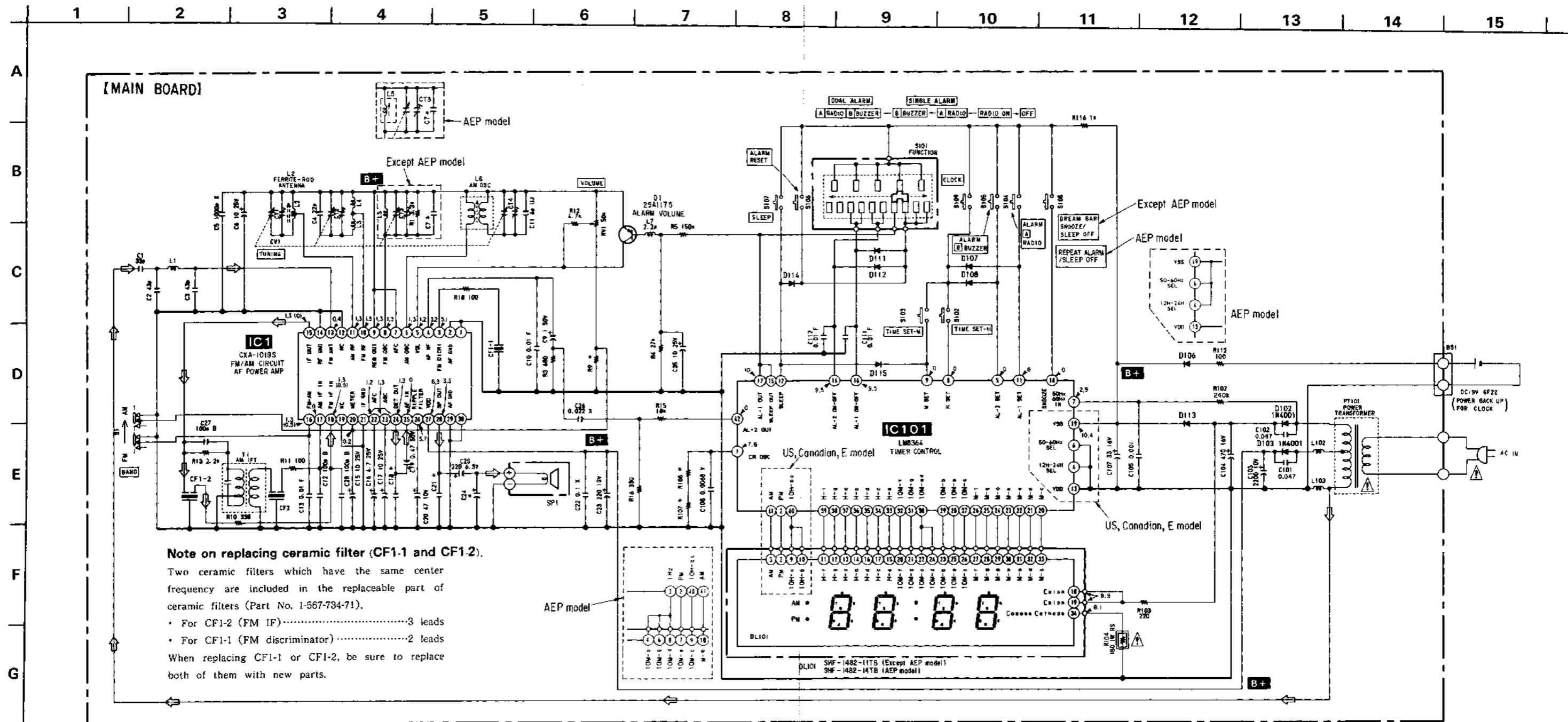
10E-2



### SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
IC1	C-4	D111	C-11
IC101	B-8	D112	C-11
Q1	D-3	D113	E-8
		D114	C-6
		D115	C-8
D102	D-9		
D103	D-11		
D106	E-7		
D107	C-11		
D108	C-11		

4-2. SCHEMATIC DIAGRAM



- All capacitors are in  $\mu F$  unless otherwise noted. pF :  $\mu \mu F$   
50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}W$  or less unless otherwise specified.
- $\Delta$  : internal component.
- $\square$  : nonflammable resistor.

- **B+** : B+ Line
- Voltages are taken with a VOM (50k  $\Omega/V$ ).  
Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\curvearrowright$  : FM

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

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

\* :

Ref. No.	US, Canadian model	AEP model	E model
C7	27p	30p	30p
C18	0.027	0.022	0.022
C21	0.1	0.22	0.22
C24	0.47/50V	10/25V	10/25V
R9	10k	20k	20k
R107	20k	24k	20k
R108	110k	130k	110k

## SECTION 5 EXPLODED VIEW

**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.

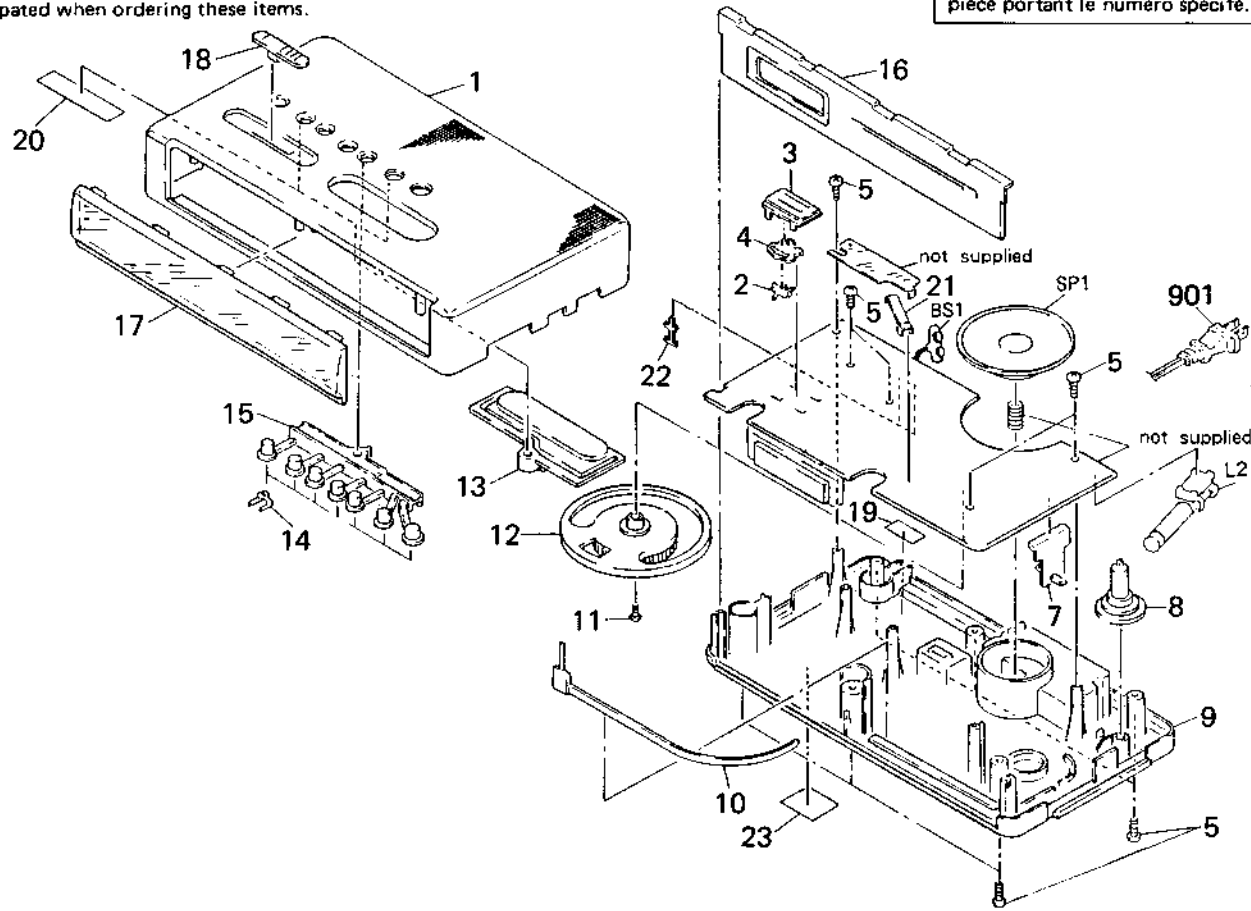
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.

- 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.



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	3-901-721-01	(EXCEPT AEP:BLK)....CABINET (UPPER)		13	3-901-716-01	(BLK)....BUTTON (DREAM BAR)	
	3-901-721-11	(EXCEPT AEP:BEIGE)....CABINET (UPPER)			3-901-716-11	(BEIGE)....BUTTON (DREAM BAR)	
	3-901-721-21	(EXCEPT AEP:WHT)....CABINET (UPPER)			3-901-716-21	(WHT)....BUTTON (DREAM BAR)	
	3-901-721-31	(EXCEPT AEP:GRY)....CABINET (UPPER)		14	3-901-703-01	PLATE, CONTACT (S102-107,S109)	
	3-901-721-41	(AEP:WHT)....CABINET (UPPER)		15	3-901-717-01	(BLK)....BUTTON (MAIN)	
	3-901-721-51	(AEP:BLK)....CABINET (UPPER)			3-901-717-11	(BEIGE)....BUTTON (MAIN)	
2	3-986-304-01	PLATE (FUNCTION), CONTACT (S101)			3-901-717-21	(WHT)....BUTTON (MAIN)	
3	*3-986-306-01	HOLDER (FUNCTION)		16	*3-901-705-01	(US,Canadian)...PANEL, BACK	
4	*3-986-305-01	SLIDER (FUNCTION)			*3-901-706-31	(AEP)....PANEL, BACK	
5	7-685-648-79	SCREW +P 3X12 TYPE2 NON-SLIT			*3-901-706-61	(E)....PANEL, BACK	
7	3-901-715-01	(BLK)....KNOB (BAND)		17	3-901-719-01	PLATE, TRANSPARENT	
	3-901-715-11	(BEIGE)....KNOB (BAND)		18	3-901-716-01	(BLK)....KNOB (FUNCTION)	
	3-901-715-21	(WHT)....KNOB (BAND)			3-901-716-11	(BEIGE)....KNOB (FUNCTION)	
	3-901-715-41	(GRY)....KNOB (BAND)			3-901-716-21	(WHT)....KNOB (FUNCTION)	
8	*3-901-704-01	(BLK)....KNOB (VOL)			3-901-716-41	(GRY)....KNOB (FUNCTION)	
	*3-901-704-11	(BEIGE)....KNOB (VOL)		19	3-831-441-xx	CUSHION, STOPPER (t=0.5)	
	*3-901-704-21	(WHT)....KNOB (VOL)		20	3-831-441-11	CUSHION, SIDE PLATE (t=0.5)	
	*3-901-704-41	(GRY)....KNOB (VOL)		21	*3-888-208-11	PLATE, CONTACT (S108)	
9	*3-901-724-01	(BLK)....CABINET (LOWER)		22	*3-893-625-01	(AEP)....TERMINAL	
	*3-901-724-11	(BEIGE)....CABINET (LOWER)		23	*3-901-788-01	(C322)...LABEL, MODEL NUMBER	
	*3-901-724-21	(WHT)....CABINET (LOWER)			*3-902-065-01	(AEP)....LABEL, MODEL NUMBER	
	*3-901-724-31	(GRY)....CABINET (LOWER)			*3-902-080-01	(E)....LABEL, MODEL NUMBER	
10	*3-901-707-01	POINTER		901	1-555-795-00	(AEP)....CORD, POWER	
11	7-621-770-67	SCREW +P 2.6X6			1-558-091-11	(US,Canadian,E)....CORD, POWER	
12	*3-901-714-01	(BLK)....KNOB (TUNING)		BS1	1-535-253-00	SNAP, BATTERY	
	*3-901-714-11	(BEIGE)....KNOB (TUNING)		L2	1-402-405-11	(AEP,E)....ANTENNA, FERRITE-ROD	
	*3-901-714-21	(WHT)....KNOB (TUNING)		L2	1-402-413-21	(US,Canadian)....ANTENNA, FERRITE-ROD	
	*3-901-714-41	(GRY)....KNOB (TUNING)		SP1	1-503-940-21	SPEAKER	

## SECTION 6 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:  $\mu$ F, PF:  $\mu$ PF.

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

COILS  
• MMH: mH, UH:  $\mu$ H

SEMICONDUCTORS  
In each case, U:  $\mu$ , for example:  
UA...:  $\mu$ A..., UPA...:  $\mu$ PA...,  
UPC...:  $\mu$ PC, UPD...:  $\mu$ PD...

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.

Ref.No.	Part No.	Description					Ref.No.	Part No.	Description				
901	1-555-795-00	(AEP)....CORD, POWER					C105	1-102-074-00	CERAMIC	0.001MF	10%	50V	
	1-558-091-11	(US,Canadian,E)....CORD, POWER					C107	1-124-963-11	ELECT	33MF	20%	16V	
BS1	1-535-253-00	SNAP, BATTERY					C108	1-161-049-00	CERAMIC	0.0068MF	5%	25V	
C1	1-102-963-00	CERAMIC	33PF	5%	50V		C111	1-101-004-00	CERAMIC	0.01MF		50V	
C2	1-102-966-00	CERAMIC	43PF	5%	50V		C112	1-101-004-00	CERAMIC	0.01MF		50V	
C3	1-102-966-00	CERAMIC	43PF	5%	50V		CF1	1-567-734-71	FILTER, CERAMIC (10.7MHz)				
C4	1-102-959-00	CERAMIC	22PF	5%	50V		CF2	1-577-072-11	FILTER, CERAMIC (455kHz)				
C5	1-161-039-00	CERAMIC	0.001MF	10%	25V		CT1-4	1-151-631-11	(US,Canadian)....CAP, VARIABLE				
C6	1-123-356-00	ELECT	10MF	20%	25V		CV1	1-151-631-11	(US,Canadian)....CAP, VARIABLE				
C7	1-102-961-00	(US,Canadian)					CT1-4	1-151-635-11	(AEP,E)....CAP, VARIABLE				
		...CERAMIC	27PF	5%	50V		D102	8-719-200-02	DIODE 10E-2				
C7	1-102-962-00	(AEP,E)....CERAMIC	30PF	5%	50V		D103	8-719-200-02	DIODE 10E-2				
C9	1-123-380-00	ELECT	1MF	20%	50V		D106	8-719-911-19	DIODE 1SS119				
C10	1-101-004-00	CERAMIC	0.01MF		50V		D107	8-719-911-19	DIODE 1SS119				
C11	1-101-998-00	CERAMIC	6PF	0.5PF	50V		D108	8-719-911-19	DIODE 1SS119				
C12	1-102-106-00	CERAMIC	100PF	10%	50V		D111	8-719-911-19	DIODE 1SS119				
C13	1-101-004-00	CERAMIC	0.01MF		50V		D112	8-719-911-19	DIODE 1SS119				
C15	1-123-356-00	ELECT	10MF	20%	25V		D113	8-719-911-19	DIODE 1SS119				
C16	1-123-369-00	ELECT	4.7MF	20%	25V		D114	8-719-911-19	DIODE 1SS119				
C17	1-123-356-00	ELECT	10MF	20%	25V		D115	8-719-911-19	DIODE 1SS119				
C18	1-161-055-00	(AEP,E)....CERAMIC	0.022MF	10%	25V		DL101	8-719-974-89	(US,Canadian,E)....DIODE SHF-1482-11TB				
C18	1-161-056-00	(US,Canadian)					DL101	8-719-974-90	(AEP)....DIODE SHF-1482-14TB				
		...CERAMIC	0.027MF	10%	25V		IC1	8-752-035-29	IC CXA1019S				
C19	1-123-379-00	ELECT	0.47MF	20%	50V		IC101	1-807-266-11	IC LM8364				
C20	1-123-306-00	ELECT	47MF	20%	10V		L1	1-401-228-00	ANTENNA COIL				
C21	1-161-772-11	(US,Canadian)					L2	1-402-405-11	(AEP,E)....ANTENNA, FERRITE-ROD				
		...CERAMIC	0.1MF	10%	25V		L2	1-402-413-21	(US,Canadian)....ANTENNA, FERRITE-ROD				
C21	1-161-896-11	(AEP,E)....CERAMIC	0.22MF		25V		L3	*1-426-074-00	(US,Canadian)....COIL, FM RF (A)				
C22	1-161-772-11	CERAMIC	0.1MF	10%	25V		L3	1-426-253-11	(AEP,E)....COIL, FM RF (1)				
C23	1-126-335-11	ELECT	220MF	20%	10V		L4	1-406-042-00	(US,Canadian)....COIL, FM RF				
C24	1-123-356-00	(AEP,E)....ELECT	10MF	20%	25V		L4	1-426-254-11	(AEP,E)....COIL, FM RF (2)				
C24	1-123-379-00	(US,Canadian)					L5	*1-422-230-11	(US,Canadian,E)....COIL, VHF				
		...ELECT	0.47MF	20%	50V		L5	1-459-815-11	(AEP)....COIL (WITH CORE)				
C25	1-126-335-11	ELECT	220MF	20%	6.3V		L6	1-406-028-00	COIL, OSC (MW)				
C26	1-161-055-00	CERAMIC	0.022MF	10%	25V		L7	1-408-109-00	INDUCTOR 2.2UH				
C27	1-102-106-00	CERAMIC	100PF	10%	50V		L102	*1-422-229-11	COIL, AIR-CORE				
C28	1-102-106-00	CERAMIC	100PF	10%	50V		L103	*1-422-229-11	COIL, AIR-CORE				
C35	1-123-356-00	ELECT	10MF	20%	25V		PT101A	1-449-268-11	(Canadian)....TRANSFORMER, POWER				
C101	1-101-006-00	CERAMIC	0.047MF		50V		PT101A	1-449-269-11	(US,E)....TRANSFORMER, POWER				
C102	1-101-006-00	CERAMIC	0.047MF		50V		PT101A	1-449-324-11	(AEP)....TRANSFORMER, POWER				
C103	1-126-234-11	ELECT	2200MF	20%	10V		Q1	8-729-119-76	TRANSISTOR 2SA1175-HFE				
C104	1-126-103-11	ELECT	470MF	20%	16V								

Ref.No.	Part No.	Description
R1	1-249-423-11	(US,Canadian,E) ...CARBON 3.3K 5% 1/4W
R3	1-249-415-11	CARBON 680 5% 1/4W
R4	1-249-434-11	CARBON 27K 5% 1/4W
R5	1-247-883-00	CARBON 150K 5% 1/4W
R9	1-247-862-11	(AEP,E)...CARBON 20K 5% 1/4W
R9	1-249-429-11	(US,Canadian) ...CARBON 10K 5% 1/4W
R10	1-249-411-11	CARBON 330 5% 1/4W
R11	1-249-405-11	CARBON 100 5% 1/4W
R12	1-249-425-11	CARBON 4.7K 5% 1/4W
R13	1-249-421-11	CARBON 2.2K 5% 1/4W
R15	1-249-432-11	CARBON 18K 5% 1/4W
R16	1-249-411-11	CARBON 330 5% 1/4W
R18	1-249-405-11	CARBON 100 5% 1/4W
R102	1-247-888-11	CARBON 240K 5% 1/4W
R103	1-249-409-11	CARBON 220 5% 1/4W
R104	△ 1-216-428-00	METAL OXIDE 180 5% 1W F
R107	1-247-862-11	(US,Canadian,E) ...CARBON 20K 5% 1/4W
R107	1-247-864-11	(AEP)...CARBON 24K 5% 1/4W
R108	1-247-880-11	(US,Canadian,E) ...CARBON 110K 5% 1/4W
R108	1-247-882-11	(AEP)...CARBON 130K 5% 1/4W
R112	1-249-405-11	CARBON 100 5% 1/4W
R116	1-249-417-11	CARBON 1K 5% 1/4W
RV1	1-228-790-21	RES, VAR, CARBON 50K (VOL)
S1	1-554-222-00	SWITCH, SLIDE (BAND)
SP1	1-503-940-21	SPEAKER
T1	1-404-790-11	TRANSFORMER, IF (AM)

ACCESSORY & PACKING MATERIAL

3-750-243-11	(AEP,E).....MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)
3-750-243-21	(US).....MANUAL, INSTRUCTION (ENGLISH,FRENCH)
3-750-243-31	(Canadian)...MANUAL, INSTRUCTION (ENGLISH,FRENCH)
3-750-243-41	(AEP).....MANUAL, INSTRUCTION (GERMAN,DUTCH,SWEDISH)
*3-764-869-11	(AEP)...INSTRUCTION, DBP CAUTION
*3-901-564-01	(C320:US).....INDIVIDUAL CARTON
*3-901-569-01	(C320:Canadian)...INDIVIDUAL CARTON
*3-901-570-01	(C320:AEP,E).....INDIVIDUAL CARTON
*3-901-573-01	(C322).....INDIVIDUAL CARTON
*3-901-565-01	CUSHION (LEFT)
*3-901-566-01	CUSHION (RIGHT)

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

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



LOCATION AND FUNCTION OF CONTROLS

