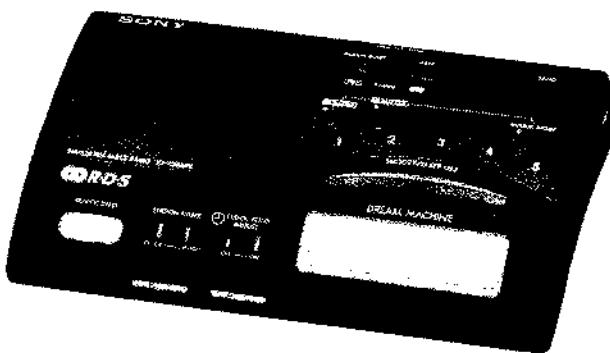


# ICF-C20RDS

## SERVICE MANUAL

AEP Model  
UK Model



### SPECIFICATIONS

**Time display:**

UK: 12-hour system

Other countries: 24-hour system

**Frequency range:**

Band	Frequency range	Channel step
FM	87.5–108 MHz	0.05* MHz(fixed)
AM (MW)	531–1,602 kHz	9 kHz(fixed)
LW	153–279 kHz	9 kHz(fixed)

\* The frequency display is raised or lowered by a step of 0.1 MHz. (Example: Frequency 88.05 MHz is displayed as "88.0 MHz".)

**Intermediate frequency:**

FM: 10.7 MHz, AM (MW): 450 kHz

**Speaker:**

Approx.6.6 cm (2 5/8 inches) dia., 8Ω

**Power output:**

250 mW (at 10 % harmonic distortion)

**Power requirements:**

UK: 240V AC, 50 Hz

Other countries: 220–230V AC, 50 Hz

**Dimensions:**

Approx.201 × 68.2 × 147 mm (w/h/d)  
(8 × 2 3/4 × 5 7/8 inches) incl. projecting parts  
and controls

**Mass:**

Approx.690 g (1 lb 8 oz)

**Accessory supplied:**

FM antenna coupler (1, Models for  
Netherlands, Belgium, Switzerland and  
Scandinavia only)

Design and specifications subject to change  
without notice.

**Note**

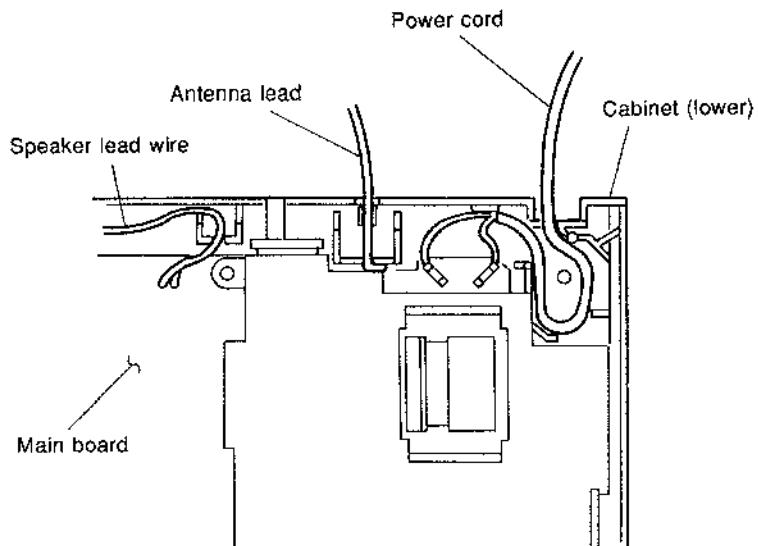
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

FM/AM RDS CLOCK RADIO  
FM/MW/LW 3BAND RDS CLOCK RADIO  
**SONY®**

## SECTION 1

### SERVICING NOTE

#### CORD DRESSING (POWER, ANTENNA, SPEAKER)



#### Notes on chip component replacement

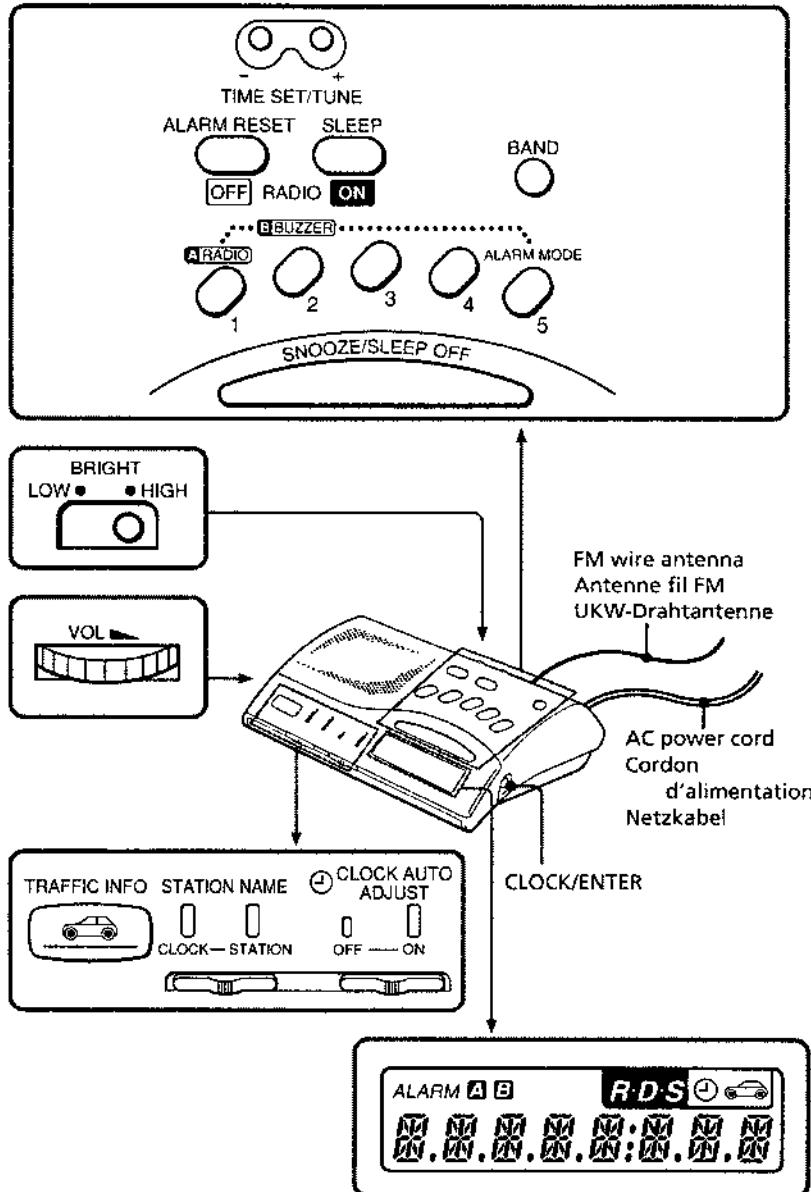
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

#### SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK  $\Delta$  OR DOTTED LINE WITH MARK  $\Delta$  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 2 GENERAL

This section is extracted from instruction manual.



### Setting the Alarm

You can set the radio and buzzer alarms.

1. Turn off the radio.
2. While holding down **A RADIO** or **B BUZZER**, press either **TIME SET/TUNE** – or + till the desired time appears in the display window.  
“**ALARM A**” or “**ALARM B**” flashes while these buttons are being held down.
3. When you release **A RADIO** or **B BUZZER**, the alarm time is set. The indication shows the current time.
4. Press **ALARM MODE** till the alarm you want to set appears in the display. Every push changes the alarm indication as follows.  
No alarm → **ALARM A** → **ALARM B**  
↑ **ALARM A** ↓ **ALARM B**

When you want to set both **A RADIO** and **B BUZZER** alarm, set both **A RADIO** and **B BUZZER** alarm time by performing steps 2 and 3 above.

The radio or buzzer will automatically sound at the preset time, and automatically turn itself off after 60 minutes, unless it is turned off manually.

- To shut off the alarm manually, press **RADIO OFF/ALARM RESET**. The alarm will come on at the preset time the next day.
- To cancel the alarm before the alarm time, press **ALARM MODE** till the appropriate alarm indication disappears.
- To check the preset time, press **A RADIO** or **B BUZZER**.

#### Notes

- When the radio alarm comes on, “**ALARM A**” indication flashes. If you want to keep on listening to radio and stop flashing, press the **RADIO ON/SLEEP**.
- The buzzer sound level is fixed, and independent of the **VOL**.
- If you set **A RADIO** and **B BUZZER** to the same desired time, only **A RADIO** will work.

#### To Doze for a Few More Minutes

1. Press **SNOOZE/SLEEP OFF**.  
The radio or buzzer will shut off but will automatically come on again after about 8 minutes.  
You can repeat this process within 1 hour.
- When the snooze alarm function is operating, the alarm indication flashes.

## Setting the Sleep Timer

Enjoy falling asleep to the radio using the built-in sleep timer that shuts off the radio automatically at a preset time.

### 1. Press **RADIO ON/SLEEP** repeatedly.

The radio turns on. You can set the sleep timer of about 90, 60, 30 or 15 minutes.

Every push changes the display as follows.

Current time → On → 90  
↑ ↓  
15 ← 30 ← 60

The radio will play for the time you set, then shut off.

### To Use Both Sleep Timer and Alarm Function

You can fall asleep to the radio sound and be awakened by the radio/buzzer alarm at the preset time.

1. Set the alarm. (See "Setting the Alarm".)
2. Set the sleep timer. (See "Setting the Sleep Timer".)

#### Note

When the alarm time arrives while the sleep timer is working, the sleep timer is canceled and the alarm sounds.

## Using the RDS Function

The following functions are available with this unit using the RDS data.

### Station Service Name Display

This function displays the name of the currently tuned station in the display window.

1. Select the **FM** band.
2. Tune in a desired station by using Manual tuning or Preset tuning.

If the unit receives a station transmitting the RDS data, "RDS" lights and the name of that station will appear in the display window. When the unit cannot receive the RDS data, "RDS" turns off.



To check the frequency you are listening, press **CLOCK/ENTER**. While the button is being held down, the frequency appears in the display.

#### Notes

- The RDS data can be received only on the FM band.
- The RDS function of this unit will not be activated if the FM station being received is not transmitting the RDS data.
- It may also not work properly in areas where the RDS transmissions are in the experimental stage.

## Receiving Traffic Announcements

This function searches and stands by for a traffic information using TP(Traffic Programme) and TA(Traffic Announcement) data.

Using this function, the unit automatically searches the traffic information from the station you are listening to, and changes its mode to receive the traffic announcement when the broadcasting starts.

1. Select the **FM** band.
2. Press **TRAFFIC INFO** to get "RDS" while "RDS" appears.

Reception of a traffic announcement is standing by.

The search for a traffic information starts. When a traffic announcement starts, "RDS" starts flashing and the sound becomes louder. You can listen to the traffic announcement.



#### Notes

- When the station you are listening to, is not a traffic information station nor station with EON data, a beep sounds.
- When the RDS data is not received continuously, "RDS" disappears in the display window even if the reception of a traffic information is standing by.
- When the radio is off, the traffic announcement is not functioned.

## Enhanced Other Networks EON

The EON function extends the faculty of the TP and TA function by enabling the unit to track other stations transmitting the EON data while it is tuned to a network station.

If the unit is receiving a station which is transmitting the EON data while "RDS" appears in the display window, it will automatically tune to another station (same network) when the station starts broadcasting a traffic announcement.

Example: While you are listening to the BBC 1 broadcasting, when the traffic information starts at the BBC KENT station, the unit tunes to the station automatically.



When the announcement is over, the unit will retune to the previous station.

- To stop the traffic information, press **TRAFFIC INFO**. The unit tunes to previous station automatically.

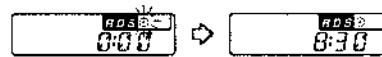
#### Notes

- If the MW or LW band is tuned in while the "RDS" indicator is in the display window, "RDS" turns off automatically. When you tune in FM again, "RDS" lights.
- If you press **TRAFFIC INFO** when the radio is turned off, this function does not work.
- Even when the volume is turned down, when the traffic announcement starts the sound becomes normal level.
- If the station has several frequencies, the unit will tune one by one automatically.
- In a case that stations are preset in the preset memories by preset tuning, the radio will choose the frequencies from the preset memories.

## Setting the Clock Using the CT Function of the RDS

The CT function of the RDS enables the built-in clock in the unit to automatically synchronize with the CT data being received.

1. Set the **STATION NAME** switch to **CLOCK**, while "RDS" appears in the display.  
The current time appears in the display window.
2. Set the **CLOCK AUTO ADJUST** switch to **ON**.  
The CT function activates and "RDS" starts to flash in the display window.  
When the current time is set by the CT data, "RDS" lights.



To cancel the function, set the **CLOCK AUTO ADJUST** switch to **OFF**.  
If the CT function is being activated while you adjust the clock manually, the clock will be automatically adjusted by the CT data the next time the unit receives it.

#### Note

There may be cases when the CT function may not be activated in some areas or stations. In this case, set the **CLOCK AUTO ADJUST** switch to **OFF**.

## SECTION 3

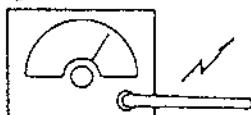
### ELECTRICAL ADJUSTMENTS

#### • MW/LW Section

**Setting :**

BAND switch : MW/LW

AM RF signal generator



Put the lead-wire antenna close to the set.

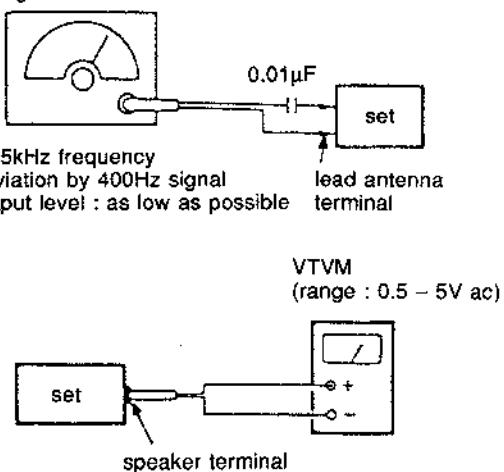
30% amplitude modulation by 400Hz signal output level : as low as possible

#### • FM Section

**Setting :**

BAND switch : FM

FM RF signal generator



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

#### MW IF ADJUSTMENT

Adjust for a maximum reading on VTVM.

L7

450kHz

#### MW VCO VOLTAGE ADJUSTMENT

Adjustment Part	Frequency Display	Reading on Digital voltmeter
L6	531kHz	2.7V ± 0.1V
(confirmation)	1,602kHz	8.6V ± 0.1V (check)

**Note :** Not use the AM RF signal generator in this adjustment.

#### MW TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.

L1

621kHz

CT1  
1,404kHz

LW VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
CT4	153kHz	2.2V ± 0.1V
(confirmation)	297kHz	8.6V ± 1.0V (check)

**Note :** Not use the AM RF signal generator in this adjustment.

#### LW TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.

L1

CT2

162kHz

243kHz

#### FM VCO VOLTAGE CHECK

Adjustment Part	Frequency Display	Reading on Digital voltmeter
(confirmation)	108.0MHz	9.0V ± 1.5V (check)
(confirmation)	87.5MHz	2.0V ± 0.3V (check)

**Note :** Not use the FM RF signal generator in this adjustment.

#### FM TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.

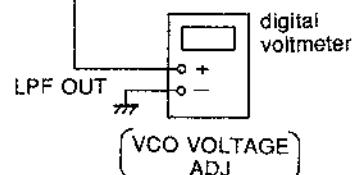
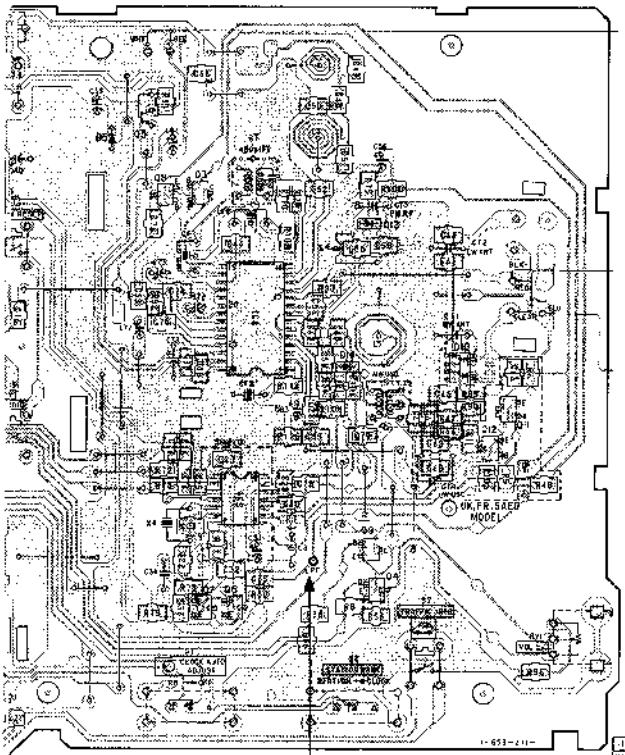
L4

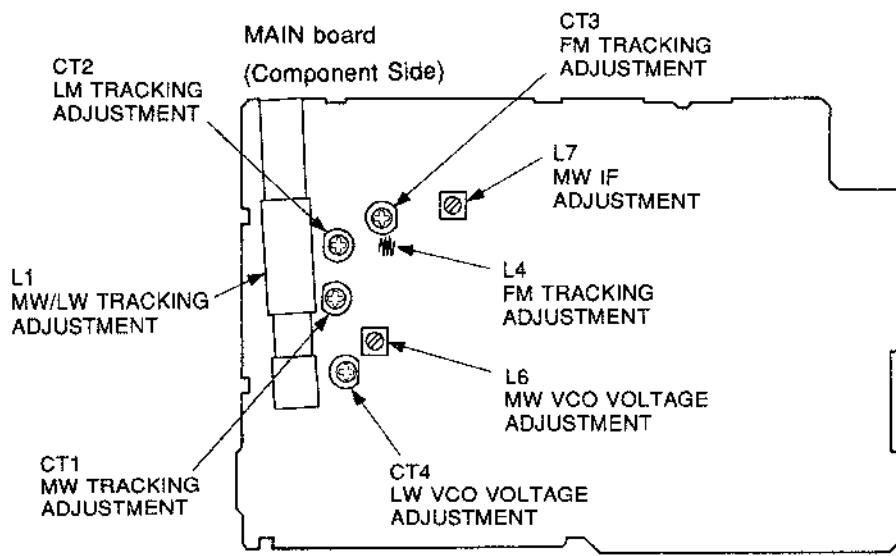
CT3

87.5MHz

108MHz

**Adjustment Location :** MAIN board (Conductor Side)

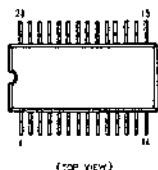




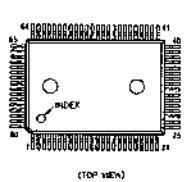
## SECTION 4 DIAGRAMS

### 4-1. SEMICONDUCTOR LEAD LAYOUTS

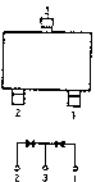
**CXA1019M**



**$\mu$ PD75308-SR7190**



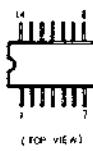
**KV1560**



**SLZ-235C-15**



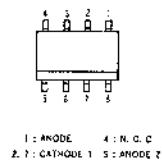
**CXD1118M**



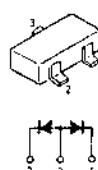
**DTA144EK  
2SA1162G  
2SC2712-YQ  
2SC2714-Y**



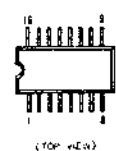
**KV1563M-3**



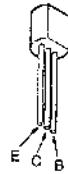
**1S2836**



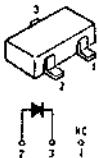
**SAA6579T**



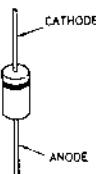
**2SC2001TP-K1K2**



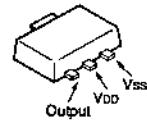
**SB007-03CP**



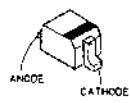
**10E2**



**S-80728AN-DR**



**DTZ5.1C  
1T362**

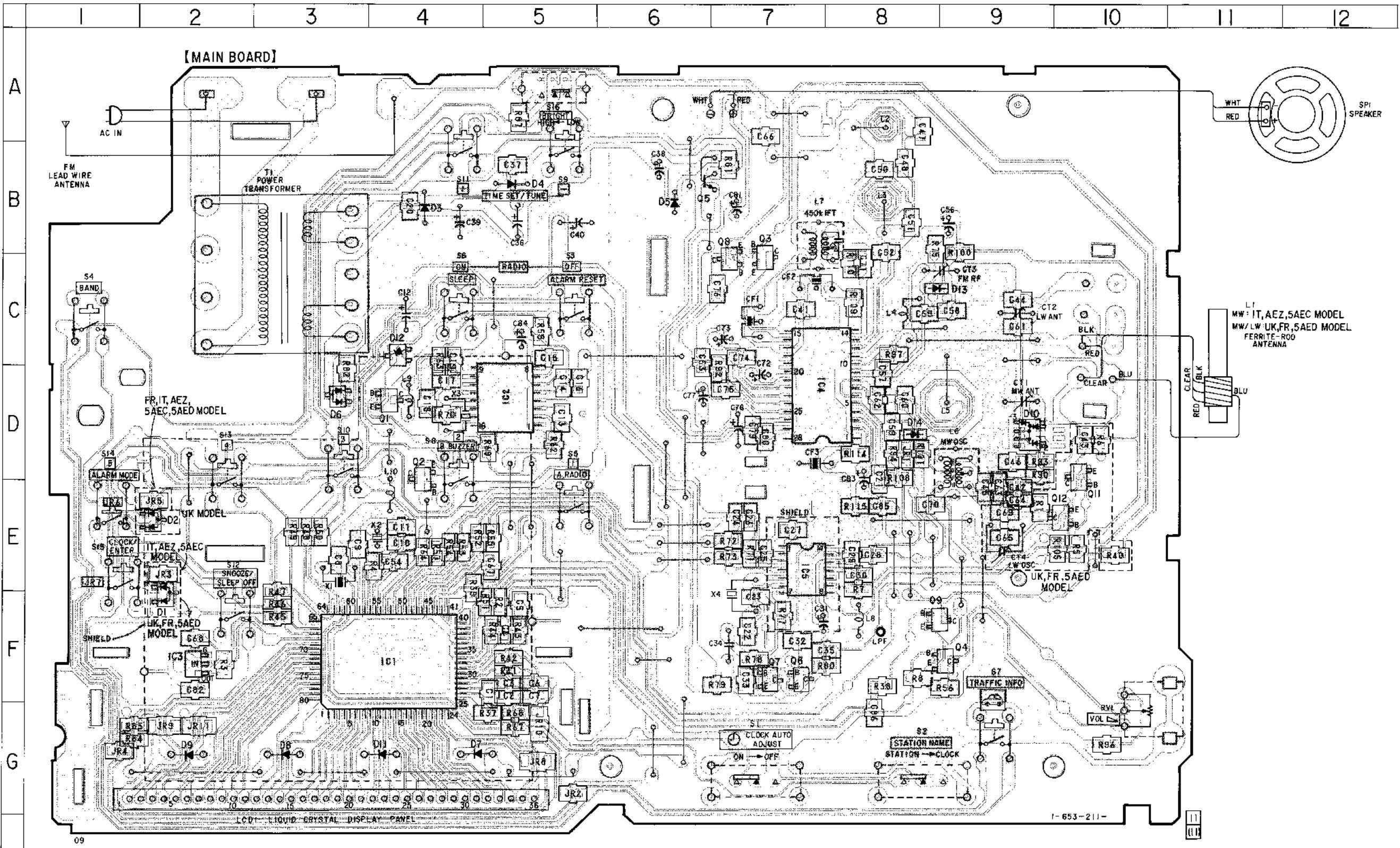


#### **4-2. PRINTED WIRING BOARD**

#### **PRINTED WIRING BOARD**

- Semiconductor Location

Ref. No.	Location
D1	F-2
D2	E-2
D3	B-4
D4	B-5
D5	B-6
D6	D-3
D7	G-4
D8	G-3
D9	G-2
D10	D-9
D11	G-4
D12	C-4
D13	C-8
D14	D-8
IC1	F-4
IC2	D-5
IC3	F-2
IC4	D-7
IC5	E-7
Q1	D-4
Q2	E-4
Q3	C-7
Q4	F-8
Q5	B-6
Q6	F-7
Q7	F-7
Q8	C-7
Q9	F-8
Q11	E-10
Q12	E-10

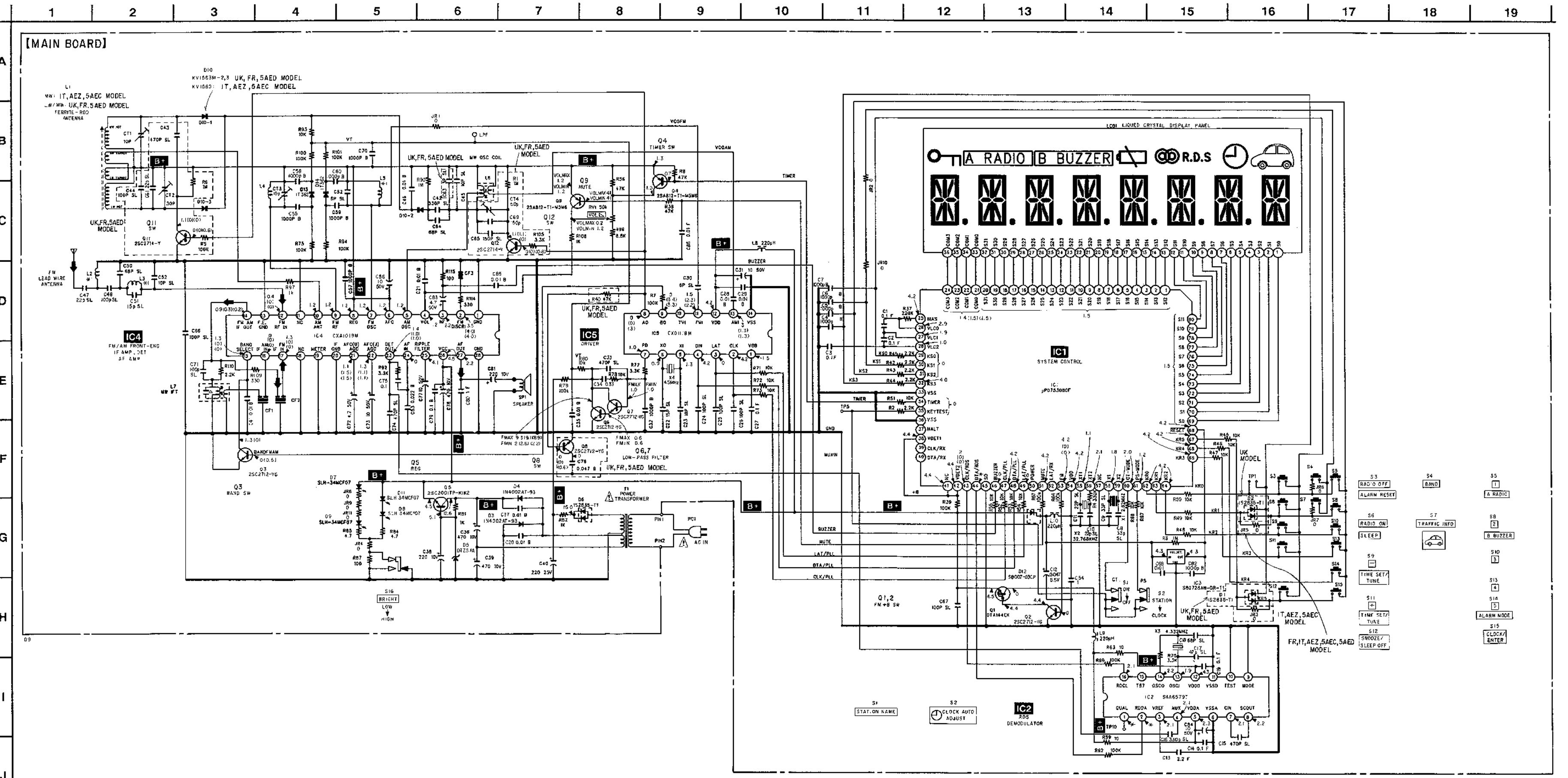


**Note:**

- : parts extracted from the component side.
  - △ : internal component.
  - [ ] : Pattern from the side which enable seeing

#### **4-3. SCHEMATIC DIAGRAM**

- See page 12 for IC Block Diagrams.
  - See page 13 for IC Pin Functions. (IC1)



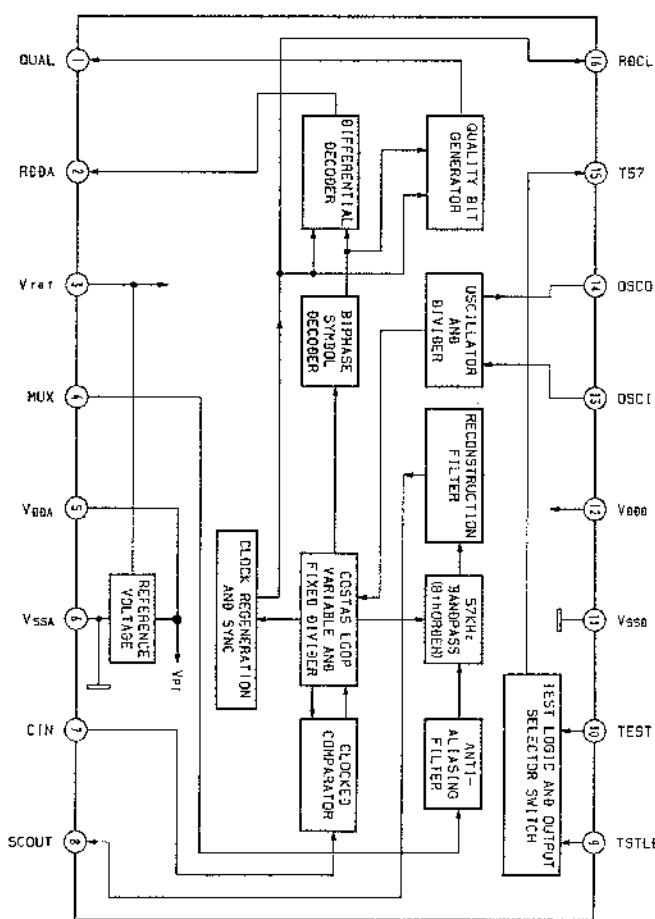
- itors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}:\mu\text{F}$   
ess are not indicated except for electrolytics and  
ors are in  $\Omega$  and 1/4W or less unless otherwise  
internal component.  
panel designation.

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

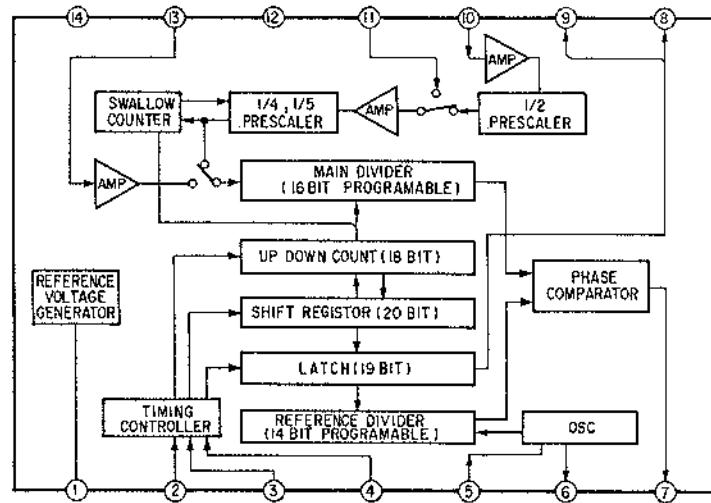
- 3+ Line adjustment for repair.
  - waveforms are dc with respect to ground
  - signal (deturned) conditions.
  - : FM
  - : MW
  - : LW
  - : can not be measured.
  - are taken with a VOM (Input impedance  $10M\Omega$ ).
  - variations may be noted due to normal production
  - s.
  - : Printed pattern functions as a kind of coil.
  - th.
  - EM

**4-4. IC BLOCK DIAGRAMS**

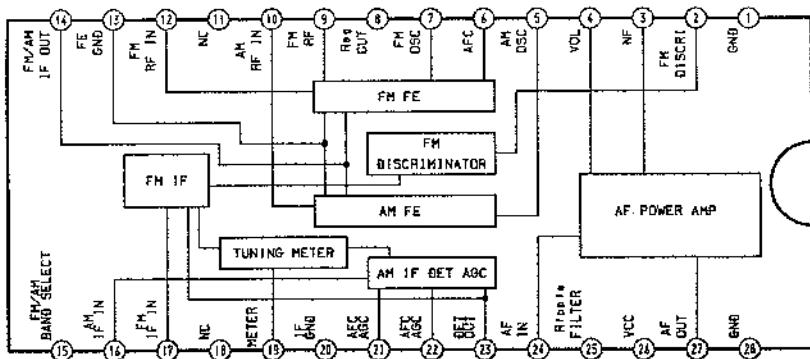
**IC2 SAA6579T**



**IC5 CXD1118M**



**IC4 CXA1019M**



#### 4-5. IC PIN FUNCTIONS

- **$\mu$ PD75308GF-R90-3B9 (IC1)**

Pin No.	Pin Name	I/O	Function
1 to 20	S12 to S20	O	LCD indication segment.
21 to 24	COM0 to COM3	O	LCD indication common.
25	BIAS	O	Bias output.
26 to 28	VLC0 to VLC2	-	Power supply of LCD DRIVER.
29 to 32	KS0 to KS3	O	Key source.
33	VSS	-	GND
34	TIMER	O	TIMER. (H: Alarm operation at radio, turn up the volume slightly when a traffic information is received)
35	KEYTEST	O	L: Under the key test.
36	VSS	-	GND
37	HALT	O	H: When HALT operating. (Not used)
38	VDET1	I	Reduced voltage detection 1. (L: Reduced voltage)
39	CLK/RX	O	Receiving level output clock. (Not used)
40	DTA/RX	O	Receiving level output data. (Not used)
41	NC	-	Not used.
42	VDET2	I	Reduced voltage detection 2. (L: Reduced voltage)
43	CLK/RDS	I	RDS clock.
44	DTA/RDS	I	RDS data.
45	SD	I	Station signal. (L: A broadcasting station is existed)
46	BUZZER	O	Buzzer output.
47	CLK/PLL	O	PLL clock.
48	DTA/PLL	O	PLL data.
49	LAT/PLL	O	PLL latch.
50	POWER	O	Power supply of radio. (H: Power on)
51	MUTE	O	Mute. (L: Mute on)
52	LAT/RX	O	Receiving level output latch. (Not used)
53	FM	O	FM output. (H: When FM receiving)
54	VDD	-	Power supply. (+5V)
55	XT1	O	Crystal oscillation. (32.768 Hz)
56	XT2	I	
57	NC	-	Not used.
58	X1	O	Ceramic oscillation. (2.62 MHz)
59	X2	I	
60	CT-MODE	I	CT mode switching switch. (L: Automatic time setting, H: Non)
61	PS-MODE	I	PS indication switching switch. (L: Frequency/station name indication, H: Present time indication)
62 to 67	KR0 to KR5	I	Key return.
68	RESET	I	Reset.
69 to 80	S0 to S11	O	LCD indication segment.

## SECTION 5

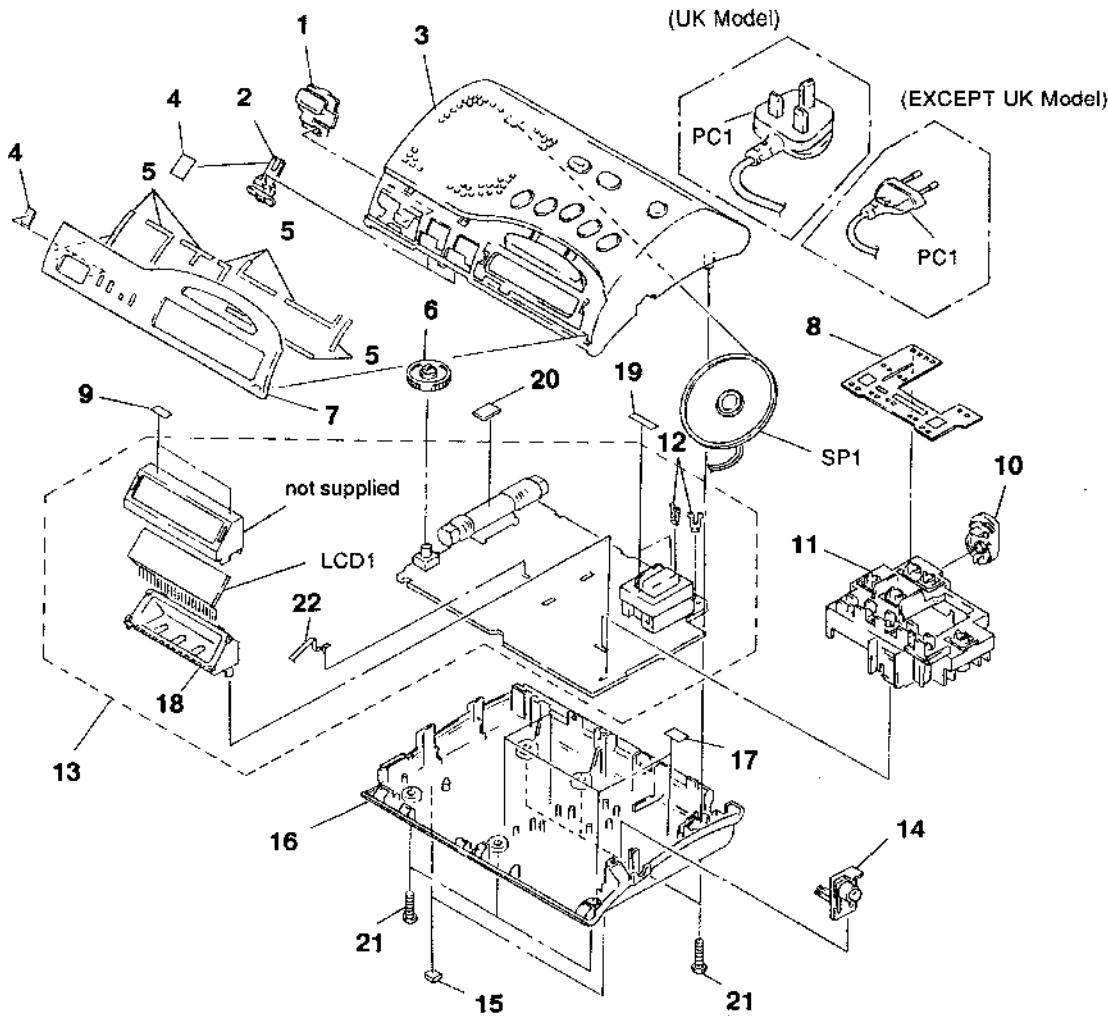
### EXPLODED VIEWS

**NOTE:**

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.

- Abbreviation
  - IT : Italian model
  - FR : French model
  - SAED : Swiss and Belgian model
  - 5AEC : Netherlands, Norwegian and Austrian model
  - AEZ : German, Spanish and Portuguese model

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



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-914-196-01	BUTTON (RDS)		* 13	A-3662-068-A	MAIN BOARD, COMPLETE (UK)	
2	3-914-197-01	KNOB (RDS)		14	3-377-647-21	BUTTON (MODE)	
3	X-3369-588-1	CABINET (UPPER) ASSY (IT, AEZ, 5AEC)		15	3-368-852-01	FOOT	
3	X-3369-588-2	CABINET (UPPER) ASSY (UK, FR, SAED)		16	3-377-653-41	CABINET (LOWER) (UK, FR, 5AED)	
4	3-831-441-XX	CUSHION		16	3-377-653-71	CABINET (LOWER) (IT, AEZ, 5AEC)	
* 5	3-915-385-01	SHEET (A), ADHESIVE		17	9-911-840-XX	CUSHION	
6	3-368-840-21	KNOB (VOL)		18	3-914-547-01	REFLECTOR	
7	3-914-193-01	PANEL, TRANSPARENT		19	3-919-378-01	CUSHION (TRANS)	
8	3-919-466-01	SHEET (BUTTON)		20	3-919-377-01	CUSHION (ANT)	
9	9-911-838-XX	SHEET, RUBBER		21	7-685-649-79	SCREW +P 3X14 TYPE2 NON-SLIT	
10	3-914-198-01	KNOB (BRIGHT)		22	3-918-998-01	PLATE (X'TAL), CONTACT	
* 11	3-914-195-01	BUTTON, MIDDLE		LCD1	1-810-640-11	DISPLAY PANEL, LIQUID CRYSTAL	
* 12	1-535-771-11	TERMINAL		△PC1	1-555-795-00	COAD, POWER (EXCEPT UK)	
* 13	A-3662-062-A	MAIN BOARD, COMPLETE (FR, 5AED)		△PC1	1-696-572-21	COAD, POWER (UK)	
* 13	A-3662-065-A	MAIN BOARD, COMPLETE (IT, AEZ, 5AEC)		SP1	1-503-082-00	SPEAKER (6.6CM)	

## SECTION 6

### ELECTRICAL PARTS LIST

**MAIN**

**NOTE:**

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

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

- 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.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Abbreviation
  - IT : Italian model
  - FR : French model
  - SAED : Swiss and Belgian model
  - 5AEC : Netherlands, Norwegian and Austrian model
  - AEZ : German, Spanish and Portuguese model

**• RESISTORS**

All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable

**• SEMICONDUCTORS**

In each case, u:  $\mu$ , for example:  
uA...:  $\mu$ A..., uPA...:  $\mu$ PA..., uPB...:  $\mu$ PB...,  
uPC...:  $\mu$ PC..., uPD...:  $\mu$ PD...

**• CAPACITORS**

uF :  $\mu$ F

**• COILS**

uH :  $\mu$ H

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-3662-062-A	MAIN BOARD, COMPLETE (FR, 5AED)	*****	C31	1-124-907-11	ELECT	10uF 20% 50V
*	A-3662-065-A	MAIN BOARD, COMPLETE (IT, AEZ, 5AEC)	*****	C32	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
*	A-3662-068-A	MAIN BOARD, COMPLETE (UK)	*****	C33	1-163-133-00	CERAMIC CHIP	470PF 5% 50V
*	1-535-771-11	TERMINAL		C34	1-136-171-00	FILM	0.33uF 5% 50V
	3-914-547-01	REFLECTOR		C35	1-164-232-11	CERAMIC CHIP	0.01uF 50V
		< CAPACITOR >		C36	1-124-472-11	ELECT	470uF 20% 10V
C1	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C37	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C2	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C38	1-126-176-11	ELECT	220uF 20% 10V
C3	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C39	1-124-472-11	ELECT	470uF 20% 10V
C4	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	C40	1-124-120-11	ELECT	220uF 20% 25V
C5	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	C41	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C6	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	C42	1-163-129-00	CERAMIC CHIP	330PF 5% 50V
C7	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	C43	1-163-133-00	CERAMIC CHIP	470PF 5% 50V
C8	1-163-105-00	CERAMIC CHIP	33PF 5% 50V	C44	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C9	1-163-105-00	CERAMIC CHIP	33PF 5% 50V	C45	1-163-093-00	CERAMIC CHIP	10PF 5% 50V
C10	1-163-101-00	CERAMIC CHIP	22PF 5% 50V	C46	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C11	1-163-101-00	CERAMIC CHIP	22PF 5% 50V	C47	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C12	1-125-701-11	DOUBLE LAYER	0.047F 5.5V	C48	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C13	1-164-505-11	CERAMIC CHIP	2.2uF 16V	C50	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
C14	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C51	1-163-097-00	CERAMIC CHIP	15PF 5% 50V
C15	1-163-133-00	CERAMIC CHIP	470PF 5% 50V	C52	1-163-093-00	CERAMIC CHIP	10PF 5% 50V
C16	1-163-129-00	CERAMIC CHIP	330PF 5% 50V	C53	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
C17	1-163-109-00	CERAMIC CHIP	47PF 5% 50V	C54	1-164-346-11	CERAMIC CHIP	1uF 16V
C18	1-163-113-00	CERAMIC CHIP	68PF 5% 50V	C55	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C19	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C56	1-124-907-11	ELECT	10uF 20% 50V
C20	1-164-232-11	CERAMIC CHIP	0.01uF 50V	C57	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C21	1-164-232-11	CERAMIC CHIP	0.01uF 50V	C58	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C22	1-163-097-00	CERAMIC CHIP	15PF 5% 50V	C59	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C23	1-163-093-00	CERAMIC CHIP	10PF 5% 50V	C60	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C24	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	C61	1-163-101-00	CERAMIC CHIP	22PF 5% 50V
C25	1-163-117-00	CERAMIC CHIP	100PF 5% 50V				(UK, FR, SAED)
C26	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	C62	1-163-089-00	CERAMIC CHIP	6PF 50V
C27	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C63	1-163-086-00	CERAMIC CHIP	3PF 50V
C28	1-164-232-11	CERAMIC CHIP	0.01uF 50V	C64	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
C29	1-164-232-11	CERAMIC CHIP	0.01uF 50V	C65	1-163-121-00	CERAMIC CHIP	150PF 5% 50V
C30	1-163-089-00	CERAMIC CHIP	6PF 50V	C66	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
				C67	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
				C68	1-163-031-11	CERAMIC CHIP	0.01uF 50V

# MAIN

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
C69	1-163-121-00	CERAMIC CHIP	150PF 5% 50V (UK, FR, 5AED)			< IC >	
C70	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	IC1	8-759-278-22	IC uPD75308GF-R90-3B9	
C71	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	IC2	8-759-065-98	IC SAA6579T	
C72	1-124-927-11	ELECT	4.7uF 20% 100V	IC3	8-759-096-23	IC S-80728AN-DR	
C73	1-124-907-11	ELECT	10uF 20% 50V	IC4	8-752-050-16	IC CXA1019M	
C74	1-163-133-00	CERAMIC CHIP	470PF 5% 50V	IC5	8-752-323-84	IC CXD1118M	
C75	1-163-038-00	CERAMIC CHIP	0.1uF 25V			< JUMPER RESISTOR >	
C76	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V (UK, FR, 5AED)	JR1	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C77	1-124-907-11	ELECT	10uF 20% 50V	JR2	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C78	1-124-472-11	ELECT	470uF 20% 10V	JR3	1-216-295-91	METAL GLAZE 0 5% 1/10W (IT, AEZ, 5AEC)	
C79	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	JR4	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C80	1-164-346-11	CERAMIC CHIP	1uF 16V	JR5	1-216-295-91	METAL GLAZE 0 5% 1/10W (FR, IT, AEZ, 5AEC, 5AED)	
C81	1-126-176-11	ELECT	220uF 20% 10V	JR6	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C82	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JR7	1-216-296-91	METAL GLAZE 0 5% 1/8W	
C83	1-124-927-11	ELECT	4.7uF 20% 100V	JR8	1-216-296-91	METAL GLAZE 0 5% 1/8W	
C84	1-124-907-11	ELECT	10uF 20% 50V	JR9	1-216-296-91	METAL GLAZE 0 5% 1/8W	
C85	1-164-232-11	CERAMIC CHIP	0.01uF 50V	JR10	1-216-296-91	METAL GLAZE 0 5% 1/8W	
C86	1-163-031-11	CERAMIC CHIP	0.01uF 50V	JR11	1-216-296-91	METAL GLAZE 0 5% 1/8W	
						< FILTER >	
CF1	1-577-072-21	FILTER, CERAMIC	(IT, AEZ, 5AEC)			< COIL >	
CF1	1-578-677-21	FILTER, CRYSTAL	(UK, FR, 5AED)	L1	1-402-616-11	ANTENNA, FERRITE-ROD (MW) (IT, AEZ, 5AEC)	
CF2	1-579-632-11	FILTER, CERAMIC		L1	1-501-715-11	ANTENNA, FERRITE-ROD (LW/MW) (UK, FR, 5AED)	
CF3	1-579-632-11	FILTER, CERAMIC		L4	1-406-545-11	COIL, AIR-CORE	
				L6	1-406-485-11	COIL (OSC)	
				L7	1-404-341-00	TRANSFORMER, IF (IT, AEZ, 5AEC)	
CT1	1-141-304-21	CAP, TRIMMER	10PF	L7	1-404-902-21	TRANSFORMER, IF (UK, FR, 5AED)	
CT2	1-141-443-11	TRIMMER, CERAMIC	30PF (UK, FR, 5AED)	L8	1-410-336-11	INDUCTOR 220uH	
CT3	1-141-304-21	CAP, TRIMMER	10PF	L9	1-410-336-11	INDUCTOR 220uH	
CT4	1-141-444-11	TRIMMER, CERAMIC	50PF (UK, FR, 5AED)	L10	1-410-336-11	INDUCTOR 220uH	
						< DIODE >	
D1	8-719-104-34	DIODE	1S2836 (UK, FR, 5AED)			< LIQUID CRYSTAL DISPLAY >	
D2	8-719-104-34	DIODE	1S2836 (UK)	LCD1	1-810-640-11	DISPLAY PANEL, LIQUID CRYSTAL	
D3	8-719-200-02	DIODE	10EZ			< POWER CORD >	
D4	8-719-200-02	DIODE	10E2	PC1	1-555-795-00	CORD, POWER (FR, IT, AEZ, 5AEC, 5AED)	
D5	8-719-977-00	DIODE	DT25. 1C	PC1	1-696-572-21	CORD, POWER (UK)	
D6	8-719-104-34	DIODE	1S2836			< TRANSISTOR >	
D7	8-719-042-10	DIODE	SLZ-235C-15	Q1	8-729-901-06	TRANSISTOR DTA144EK	
D8	8-719-042-10	DIODE	SLZ-235C-15	Q2	8-729-230-49	TRANSISTOR 2SC2712-YG	
D9	8-719-042-10	DIODE	SLZ-235C-15	Q3	8-729-230-49	TRANSISTOR 2SC2712-YG	
D10	8-719-023-XX	DIODE	KV1563MTL-3 (UK, FR, 5AED)	Q4	8-729-216-22	TRANSISTOR 2SA1162-G	
D10	8-719-951-05	DIODE	KV1560 (IT, AEZ, 5AEC)	Q5	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2	
D11	8-719-042-10	DIODE	SLZ-235C-15	Q6	8-729-230-49	TRANSISTOR 2SC2712-YG	
D12	8-719-941-04	DIODE	SB007-03CP	Q7	8-729-230-49	TRANSISTOR 2SC2712-YG	
D13	8-713-100-11	DIODE	1T362	Q8	8-729-230-49	TRANSISTOR 2SC2712-YG (UK, FR, 5AED)	
D14	8-713-100-11	DIODE	1T362	Q9	8-729-216-22	TRANSISTOR 2SA1162-G	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
Q11	8-729-200-87	TRANSISTOR	2SC2714-Y (UK, FR, 5AED)	R78	1-216-073-00	METAL CHIP	10K 5% 1/10W				
Q12	8-729-200-87	TRANSISTOR	2SC2714-Y (UK, FR, 5AED)	R79	1-216-097-00	METAL CHIP	100K 5% 1/10W				
< RESISTOR >											
R1	1-216-121-00	METAL CHIP	1M 5% 1/10W (UK, FR, 5AED)	R80	1-216-073-00	METAL CHIP	10K 5% 1/10W				
R2	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R81	1-216-049-00	METAL CHIP	1K 5% 1/10W				
R3	1-216-121-00	METAL CHIP	1M 5% 1/10W	R82	1-216-049-00	METAL CHIP	1K 5% 1/10W				
R4	1-216-109-00	METAL CHIP	330K 5% 1/10W	R84	1-216-308-00	METAL CHIP	4.7 5% 1/10W				
R5	1-216-097-00	METAL CHIP	100K 5% 1/10W (UK, FR, 5AED)	R85	1-216-308-00	METAL CHIP	4.7 5% 1/10W				
R6	1-216-121-00	METAL CHIP	1M 5% 1/10W (UK, FR, 5AED)	R87	1-216-025-00	METAL CHIP	100 5% 1/10W				
R7	1-216-097-00	METAL CHIP	100K 5% 1/10W	R90	1-216-121-00	METAL CHIP	1M 5% 1/10W				
R8	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R92	1-216-061-00	METAL CHIP	3.3K 5% 1/10W				
R37	1-216-105-00	METAL CHIP	220K 5% 1/10W	R93	1-216-073-00	METAL CHIP	10K 5% 1/10W				
R38	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R94	1-216-097-00	METAL CHIP	100K 5% 1/10W				
R39	1-216-097-00	METAL CHIP	100K 5% 1/10W	R96	1-216-069-00	METAL CHIP	6.8K 5% 1/10W				
R40	1-216-089-91	METAL GLAZE	47K 5% 1/10W (UK, FR, 5AED)	R97	1-216-049-00	METAL CHIP	1K 5% 1/10W				
R41	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R100	1-216-097-00	METAL CHIP	100K 5% 1/10W				
R42	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R101	1-216-097-00	METAL CHIP	100K 5% 1/10W				
R43	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R105	1-216-061-00	METAL CHIP	3.3K 5% 1/10W (UK, FR, 5AED)				
R44	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R108	1-216-049-00	METAL CHIP	1K 5% 1/10W				
R45	1-216-073-00	METAL CHIP	10K 5% 1/10W	R109	1-216-037-00	METAL CHIP	330 5% 1/10W				
R46	1-216-073-00	METAL CHIP	10K 5% 1/10W	R110	1-216-057-00	METAL CHIP	2.2K 5% 1/10W				
R47	1-216-073-00	METAL CHIP	10K 5% 1/10W	R114	1-216-037-00	METAL CHIP	330 5% 1/10W				
R48	1-216-073-00	METAL CHIP	10K 5% 1/10W	R115	1-216-025-00	METAL CHIP	100 5% 1/10W				
< VARIABLE RESISTOR >											
RV1 1-241-586-11 RES. VAR. CARBON 50K (VOL □)											
< SWITCH >											
R49	1-216-073-00	METAL CHIP	10K 5% 1/10W	S1	1-552-370-00	SWITCH, SLIDE (STATION NAME)					
R50	1-216-073-00	METAL CHIP	10K 5% 1/10W	S2	1-552-370-00	SWITCH, SLIDE (CLOCK AUTO ADJUST)					
R51	1-216-073-00	METAL CHIP	10K 5% 1/10W	S3	1-554-937-11	SWITCH, KEY BOARD(RADIO OFF/ALARM RESET)					
R52	1-216-073-00	METAL CHIP	10K 5% 1/10W	S4	1-554-937-11	SWITCH, KEY BOARD (BAND)					
R53	1-216-073-00	METAL CHIP	10K 5% 1/10W	S5	1-554-937-11	SWITCH, KEY BOARD (1/A RADIO)					
R54	1-216-073-00	METAL CHIP	10K 5% 1/10W	S6	1-554-937-11	SWITCH, KEY BOARD (RADIO ON/SLEEP)					
R55	1-216-073-00	METAL CHIP	10K 5% 1/10W	S7	1-554-937-11	SWITCH, KEY BOARD (TRAFFIC INFO)					
R56	1-216-089-91	METAL GLAZE	47K 5% 1/10W	S8	1-554-937-11	SWITCH, KEY BOARD (2/B BUZZER)					
R57	1-216-097-00	METAL CHIP	100K 5% 1/10W	S9	1-554-937-11	SWITCH, KEY BOARD (TIMESET/TUNE/-)					
R59	1-216-001-00	METAL CHIP	10 5% 1/10W	S10	1-554-937-11	SWITCH, KEY BOARD (3)					
R62	1-216-097-00	METAL CHIP	100K 5% 1/10W	S11	1-554-937-11	SWITCH, KEY BOARD (TIMESET/TUNE/+)					
R63	1-216-001-00	METAL CHIP	10 5% 1/10W	S12	1-554-937-11	SWITCH, KEY BOARD (SNOOZE/SLEEP OFF)					
R64	1-216-097-00	METAL CHIP	100K 5% 1/10W	S13	1-554-937-11	SWITCH, KEY BOARD (4)					
R67	1-216-073-00	METAL CHIP	10K 5% 1/10W	S14	1-554-937-11	SWITCH, KEY BOARD (5/ALARM MODE)					
R68	1-216-073-00	METAL CHIP	10K 5% 1/10W	S15	1-554-937-11	SWITCH, KEY BOARD (CLOCK/ENTER)					
R69	1-216-097-00	METAL CHIP	100K 5% 1/10W	S16	1-571-478-11	SWITCH, SLIDE (BRIGHT)					
R70	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	< TRANSFORMER >							
R71	1-216-073-00	METAL CHIP	10K 5% 1/10W	▲T1	1-450-923-11	TRANSFORMER, POWER					
R72	1-216-073-00	METAL CHIP	10K 5% 1/10W								
R73	1-216-073-00	METAL CHIP	10K 5% 1/10W								
R75	1-216-097-00	METAL CHIP	100K 5% 1/10W								
R77	1-216-061-00	METAL CHIP	3.3K 5% 1/10W								

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

**MAIN**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
< VIBRATOR >			
X1	1-579-825-11	VIBRATOR, CERAMIC (2.62MHz)	
X2	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	
X3	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz)	
X4	1-578-785-11	VIBRATOR, CRYSTAL (4.5MHz)	
*****			
MISCELLANEOUS			
*****			
* 12	1-535-771-11	TERMINAL	
LCD1	1-810-640-11	DISPLAY PANEL, LIQUID CRYSTAL	
△PC1	1-555-795-00	COAD, POWER (EXCEPT UK)	
△PC1	1-696-572-21	COAD, POWER (UK)	
SPI	1-503-082-00	SPEAKER (6.6CM)	
*****			
ACCESSORIES & PACKING MATERIALS			
*****			
	1-501-499-11	COUPLER, ANTENNA (SAED)	
	3-759-163-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN) (UK, FR, AEZ, SAEC, SAED)	
	3-759-163-41	MANUAL, INSTRUCTION (DUTCH, SWEDISH, ITALIAN) (IT, SABC, SAED)	
	3-759-163-51	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (AEZ)	
*	3-916-741-01	INDIVIDUAL CARTON (FR, SAED)	
*	3-916-743-01	INDIVIDUAL CARTON (UK, IT, AEZ, SAEC)	

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