

ICF-C710L

SERVICE MANUAL

French Model



SPECIFICATIONS



Radio section	
Frequency range	FM: 87.6 – 107.5 MHz LW: 153 – 255 kHz
Antennas	FM: FM wire antenna LW: Built-in ferrite bar antenna
Speaker	Approx. 6.6 cm (2 ⁵ / ₈ inches) dia.
Power output	200 mW (at 10% harmonic distortion)
Output	Earphone jack (mini jack)
Power requirements	220V AC, 50 Hz For the power backup function: 9V DC, one 6F22 battery
Battery life	Approx. 80 hours, using Sony battery S-006P (U)
Dimensions	Approx. 251 × 71 × 158 mm (w/h/d) (10 × 2 ⁷ / ₈ × 6 ¹ / ₄ inches) incl. projecting parts and controls
Weight	Approx. 750 g (12 oz) not incl. battery

Design and specifications subject to change without notice.

FEATURES

- Dual alarm, FM/LW 2-band radio, combined with an electric digital alarm clock and sleep timer.
- Choice of awakening to radio alarm, buzzer alarm, or dual alarm: Alarm A (radio) and B (buzzer).
- 24-hour alarm preset system automatically turns alarm on at same time each day.
- REPEAT ALARM/SLEEP OFF, operable with a feather-light touch, offers functions; snooze alarm and sleep timer turn off.
- For private listening, this radio is equipped with an earphone jack.

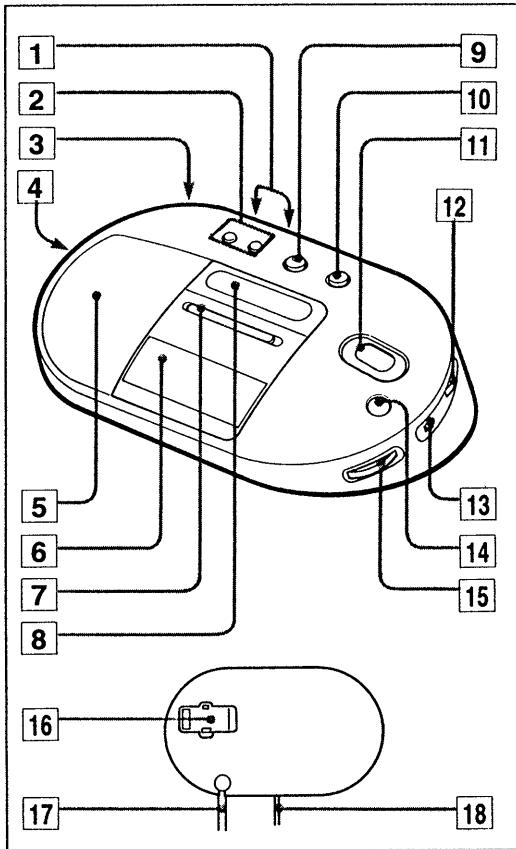
SAFETY-RELATED COMPONENT WARNING!!

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

DUAL ALARM FM/LW
DIGITAL CLOCK RADIO
SONY[®]

SECTION 1 GENERAL

LOCATION OF CONTROLS

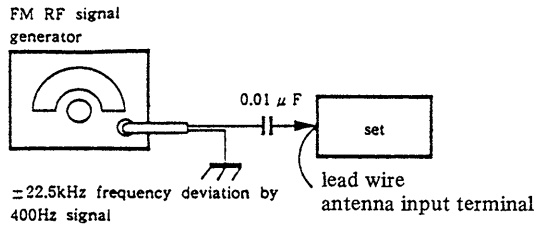


- 1 TIME SET buttons (H/M) (rear)
- 2 ALARM set buttons (A RADIO, B BUZZER)
- 3 CLOCK set button (rear)
- 4 Earphone jack (side)
- 5 Speaker
- 6 Time display
- 7 Function selector switch (OFF, SINGLE ALARM A RADIO, B BUZZER, DUAL ALARM A RADIO B BUZZER)
- 8 REPEAT ALARM/SLEEP OFF bar
- 9 SLEEP button
- 10 ALARM RESET/RADIO OFF button
- 11 Dial scale
- 12 TUNING control
- 13 BAND selector switch (FM/LW)
- 14 RADIO ON button
- 15 VOL (volume) control

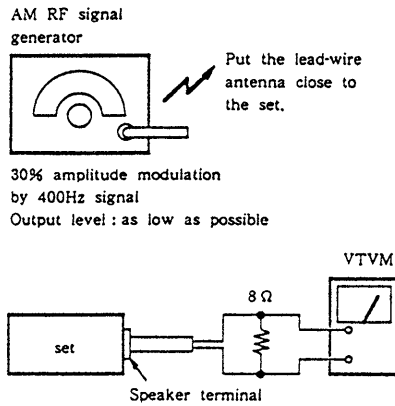
- Bottom**
- 16 Power backup battery compartment
 - 17 AC power cord
 - 18 FM wire antenna

SECTION 2 ELECTRICAL ADJUSTMENTS

FM Section

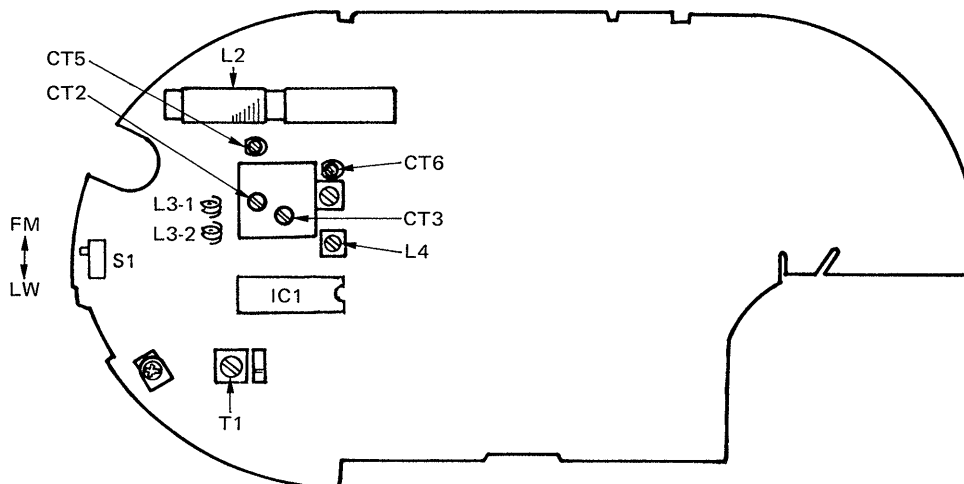


AM Section



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

Adjustment Location: main board



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

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT6	265 kHz

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	160kHz
CT5	240kHz

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	87.35 MHz
CT3	107.9 MHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L3-1, 3-2	87.35 MHz
CT2	107.9 MHz

● Semiconductor Lead Layouts

2SA933S-QR
2SC2001-K2



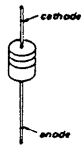
DTC114ES
2SC1740S-QR



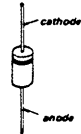
2SD773-3



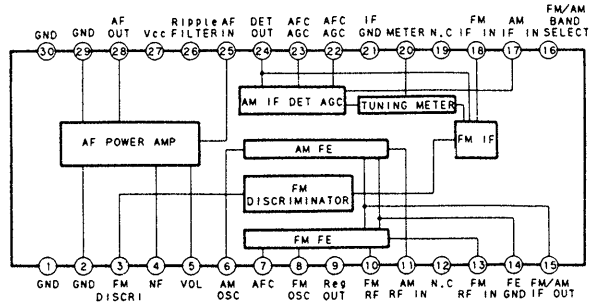
RD5.6ES-B2
1SS119



10E2



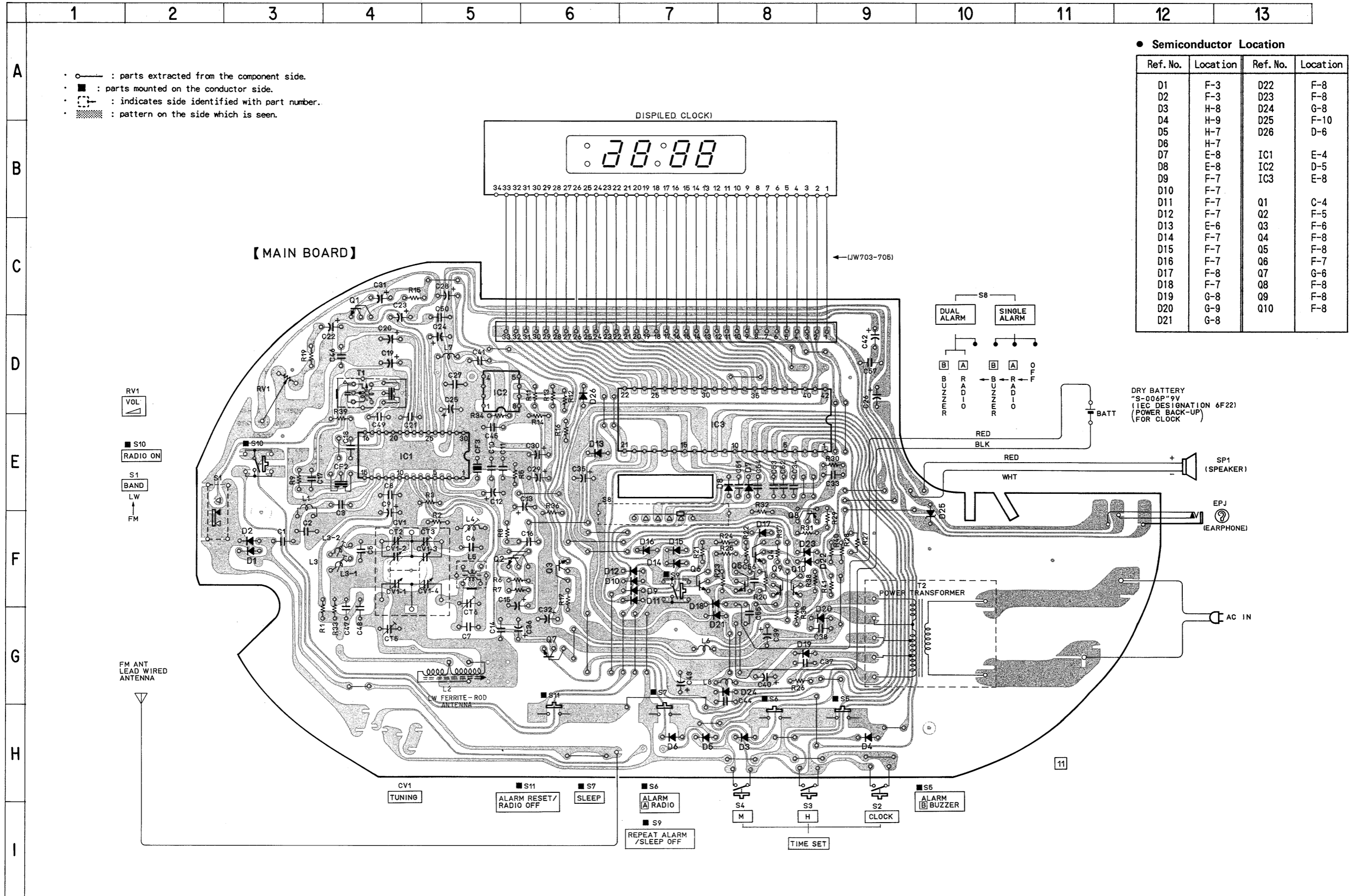
● IC Block Diagram
IC1 CXA1019S



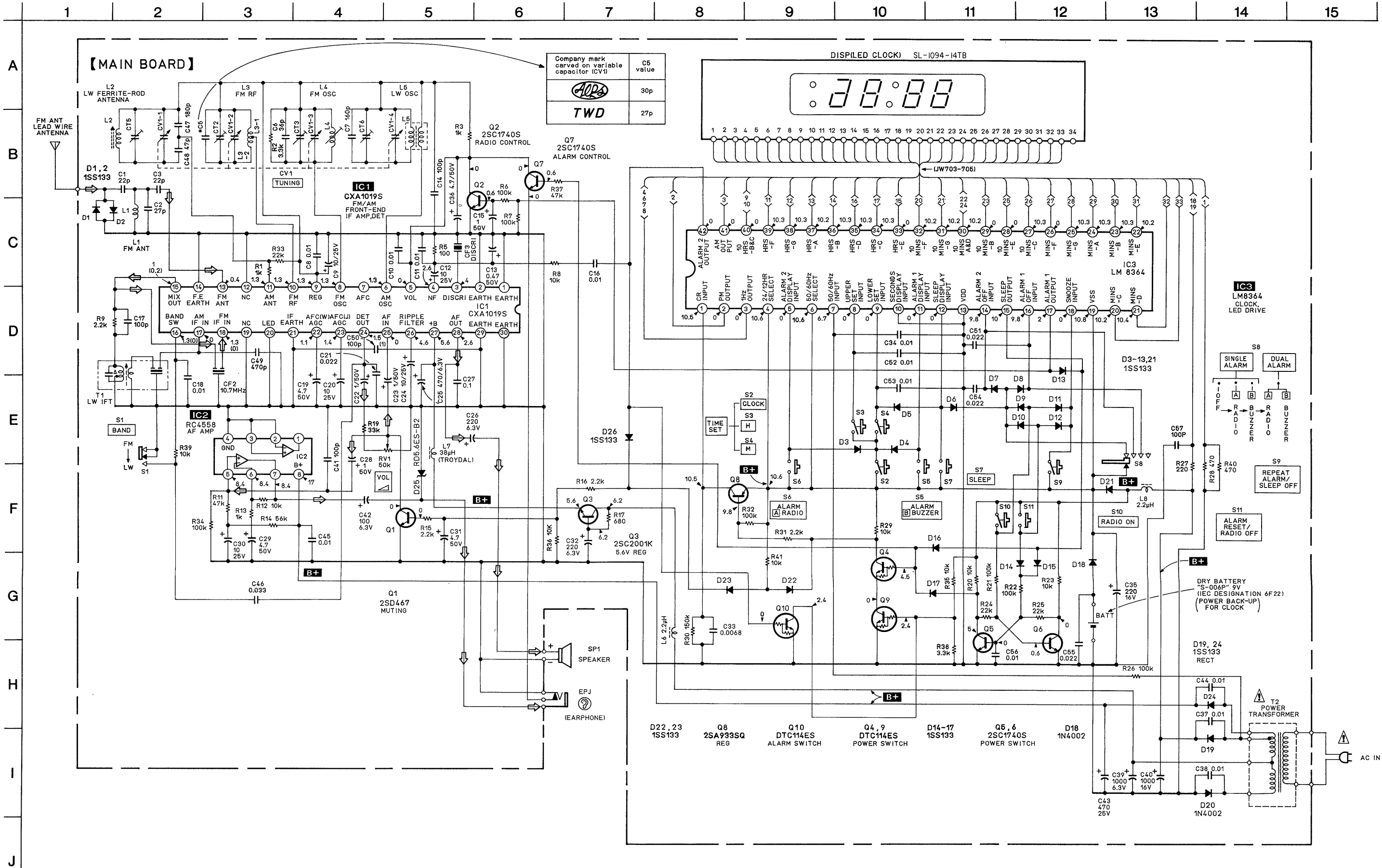
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4} \text{ W}$ or less unless otherwise specified.
- Δ : internal component.
- **B+** : B+ lines.
- Voltage and waveforms are dc with respect to ground under no signal conditions.
no mark : FM
() : LW
- Voltages are taken with a VOM. (input impedance 10 M Ω)
Voltage variations may be noted due to normal production tolerances.
- Signal path.
 \Leftrightarrow : FM

SECTION 3 DIAGRAMS

3-1. PRINTED WIRING BOARD • See page 4 for semiconductor lead layouts.



3-2. SCHEMATIC DIAGRAM • See page 4 for notes and IC1 block diagram.



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

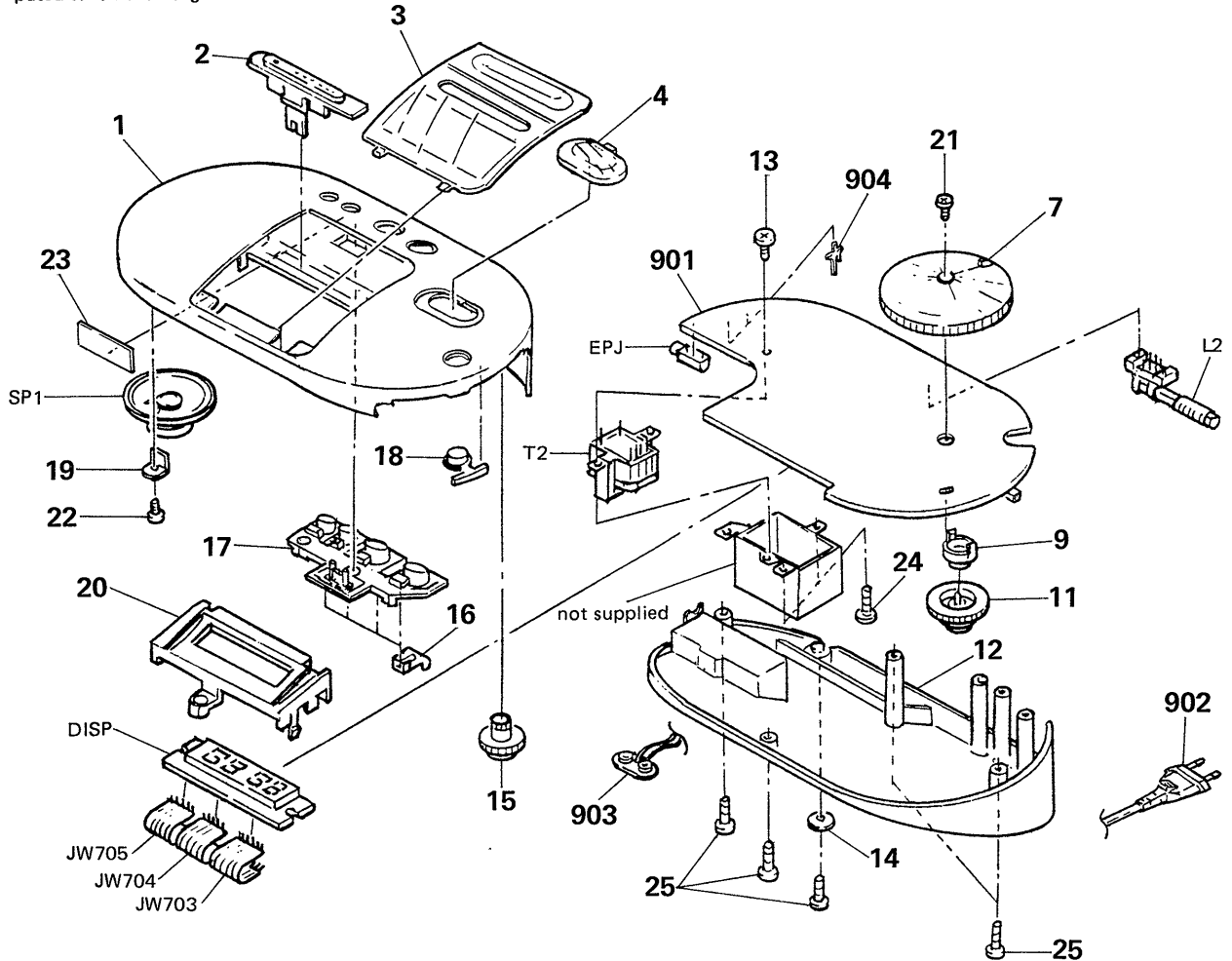
SECTION 4 EXPLODED VIEW

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.



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	3-902-712-41 3-902-712-51	(GRAY)...CABINET (UPPER) (WHITE)...CABINET (UPPER)		18	3-902-734-01 3-902-734-11	(GRAY)...BUTTON (P)(RADIO ON)(GRAY) (WHITE)...BUTTON (P)(RADIO ON)(VIOLET)	
2	3-902-720-01	KNOB (FUNCTION)		19	3-593-019-00	CLAW, SPEAKER	
3	3-902-714-11	PANEL		20	*3-902-723-01	HOLDER (LED)	
4	3-902-715-21	PLATE, INDICATION		21	7-621-773-86	SCREW +P 2.6X4	
7	3-902-724-61	DRUM, DIAL		22	7-685-646-79	SCREW +P 3X8 TYPE2 NON-SLIT	
9	3-902-722-01	HOLDER (VOL)		23	*3-902-737-01	SHEET, INSULATING	
11	3-902-719-01 3-902-719-21	(WHITE)...KNOB (VOL) (GRAY)...KNOB (VOL)		24	7-685-648-79	SCREW +P 3X12 TYPE2 NON-SLIT	
12	3-903-113-61 3-903-113-71	(WHITE)...CABINET (LOWER) (GRAY)...CABINET (LOWER)		25	7-685-649-79	SCREW +P 3X14 TYPE2 NON-SLIT	
13	7-682-547-04	SCREW +PTT 3X6 (S)		901	*A-3806-068-A	MOUNTED PCB (HAND)	
14	3-902-728-01 3-902-728-21	(WHITE)...STOPPER, CORD (GRAY)...STOPPER, CORD		902	★1-555-795-00	CORD, POWER	
15	3-902-718-01 3-902-718-21	(WHITE)...KNOB (TUNING) (GRAY)...KNOB (TUNING)		903	1-535-253-00	SNAP, BATTERY	
16	3-902-726-01	PLATE, CONTACT (S5-7,S11)		904	1-535-476-11	TERMINAL	
17	3-902-717-01 3-902-717-21	(WHITE)...BUTTON (C) (GRAY)...BUTTON (C)		DISP	1-807-243-41	DIODE SL-1094-14TB (LED BLOCK)	
				EPJ	1-563-836-21	JACK (EARPHONE)	
				JW703	1-575-159-21	CORD, CONNECTION	
				JW704	1-575-159-21	CORD, CONNECTION	
				JW705	1-575-159-21	CORD, CONNECTION	
				L2	1-402-404-11	ANTENNA, FERRITE-ROD (LW)	
				SP1	1-503-082-00	SPEAKER	
				T2	★1-449-529-11	TRANSFORMER, POWER	

SECTION 5 ELECTRICAL PARTS LIST

NOTE:

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

CAPACITORS:

MF: μF , PF: $\mu\mu F$.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μH

SEMICONDUCTORS

In each case, U: μ , for example:

UA....: μA, UPA....: μPA,

UPC....: μPC , UPD....: μPD

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



Ref.No.	Part No.	Description	Ref.No.	Part No.	Description						
901	*A-3806-068-A	MOUNTED PCB (HAND)	C39	1-124-471-00	ELECT	1000MF	20%	6.3V			
902	Δ 1-555-795-00	CORD, POWER	C40	1-124-360-00	ELECT	1000MF	20%	16V			
903	1-535-253-00	SNAP, BATTERY	C41	1-102-973-00	CERAMIC	100PF	10%	50V			
904	1-535-476-11	TERMINAL	C42	1-124-443-00	ELECT	100MF	20%	6.3V			
C1	1-102-959-00	CERAMIC	22PF	5%	50V	C43	1-124-480-11	ELECT	470MF	20%	25V
C2	1-102-961-00	CERAMIC	27PF	5%	50V	C44	1-101-004-00	CERAMIC	0.01MF		50V
C3	1-102-959-00	CERAMIC	22PF	5%	50V	C45	1-161-051-00	CERAMIC	0.01MF	20%	25V
C5	1-102-961-00	CERAMIC	27PF	5%	50V	C46	1-161-057-00	CERAMIC	0.033MF	10%	25V
C5	1-102-962-00	CERAMIC	30PF	5%	50V	C47	1-102-976-00	CERAMIC	180PF	5%	50V
(Note on replacing C5. Change the value of C5 by company mark carved on variable capacitor (CV1). (See page 7.)											
C6	1-102-964-00	CERAMIC	36PF	5%	50V	C48	1-101-880-00	CERAMIC	47PF	5%	50V
C7	1-103-706-00	STYROL	160PF	5%	50V	C49	1-102-824-00	CERAMIC	470PF	5%	50V
C8	1-161-051-00	CERAMIC	0.01MF	20%	25V	C50	1-102-973-00	CERAMIC	100PF	10%	50V
C9	1-123-356-00	ELECT	10MF	20%	25V	C51	1-101-005-00	CERAMIC	0.022MF		50V
C10	1-161-051-00	CERAMIC	0.01MF	20%	25V	C52	1-101-004-00	CERAMIC	0.01MF		50V
C11	1-161-051-00	CERAMIC	0.01MF	20%	25V	C53	1-101-004-00	CERAMIC	0.01MF		50V
C12	1-123-356-00	ELECT	10MF	20%	25V	C54	1-101-005-00	CERAMIC	0.022MF		50V
C13	1-124-902-00	ELECT	0.47MF	20%	50V	C55	1-101-005-00	CERAMIC	0.022MF		50V
C14	1-102-973-00	CERAMIC	100PF	10%	50V	C56	1-101-004-00	CERAMIC	0.01MF		50V
C15	1-124-791-11	ELECT	1MF	20%	50V	C57	1-102-973-00	CERAMIC	100PF	10%	50V
C16	1-161-051-00	CERAMIC	0.01MF	20%	25V	CF2 } 1-567-538-71	FILTER, CERAMIC (10.7MHz)				
C17	1-102-973-00	CERAMIC	100PF	10%	50V	CF3 }					
C18	1-161-051-00	CERAMIC	0.01MF	20%	25V	CT5	1-141-245-00	CAP, TRIMMER			
C19	1-124-927-11	ELECT	4.7MF	20%	50V	CT6	1-141-245-00	CAP, TRIMMER			
C20	1-123-356-00	ELECT	10MF	20%	25V	CT2,3 } 1-151-614-11	CAP, VARIABLE				
C21	1-161-055-00	CERAMIC	0.022MF	10%	25V	CV1 }					
C22	1-124-791-11	ELECT	1MF	20%	50V	D1	8-719-911-19	DIODE 1SS119			
C23	1-124-791-11	ELECT	1MF	20%	50V	D2	8-719-911-19	DIODE 1SS119			
C24	1-123-356-00	ELECT	10MF	20%	25V	D3	8-719-911-19	DIODE 1SS119			
C25	1-124-472-11	ELECT	470MF	20%	6.3V	D4	8-719-911-19	DIODE 1SS119			
C26	1-126-176-11	ELECT	220MF	20%	6.3V	D5	8-719-911-19	DIODE 1SS119			
C27	1-162-851-11	CERAMIC	0.1MF	20%	16V	D6	8-719-911-19	DIODE 1SS119			
C28	1-124-791-11	ELECT	1MF	20%	50V	D7	8-719-911-19	DIODE 1SS119			
C29	1-124-927-11	ELECT	4.7MF	20%	50V	D8	8-719-911-19	DIODE 1SS119			
C30	1-123-356-00	ELECT	10MF	20%	25V	D9	8-719-911-19	DIODE 1SS119			
C31	1-124-927-11	ELECT	4.7MF	20%	50V	D10	8-719-911-19	DIODE 1SS119			
C32	1-126-176-11	ELECT	220MF	20%	6.3V	D11	8-719-911-19	DIODE 1SS119			
C33	1-130-481-00	MYLAR	0.0068MF	5%	50V	D12	8-719-911-19	DIODE 1SS119			
C34	1-101-004-00	CERAMIC	0.01MF		50V	D13	8-719-911-19	DIODE 1SS119			
C35	1-124-120-11	ELECT	220MF	20%	16V	D14	8-719-911-19	DIODE 1SS119			
C36	1-124-927-11	ELECT	4.7MF	20%	50V	D15	8-719-911-19	DIODE 1SS119			
C37	1-101-004-00	CERAMIC	0.01MF		50V	D16	8-719-911-19	DIODE 1SS119			
C38	1-101-004-00	CERAMIC	0.01MF		50V	D17	8-719-911-19	DIODE 1SS119			
						D18	8-719-200-02	DIODE 10E2			
						D19	8-719-911-19	DIODE 1SS119			
						D20	8-719-200-02	DIODE 10E2			
						D21	8-719-911-19	DIODE 1SS119			

Ref.No.	Part No.	Description
D22	8-719-911-19	DIODE 1SS119
D23	8-719-911-19	DIODE 1SS119
D24	8-719-911-19	DIODE 1SS119
D25	8-719-109-89	DIODE RD5.6ES-B2
D26	8-719-911-19	DIODE 1SS119
DISP	1-807-243-41	DIODE SL-1094-14TB (LED BLOCK)
EPJ	1-563-836-21	JACK (EARPHONE)
IC1	8-752-035-29	IC CXA1019S
IC2	8-759-945-58	IC RC4558P
IC3	8-759-821-56	IC LM8364DG
JW703	1-575-159-21	CORD, CONNECTION
JW704	1-575-159-21	CORD, CONNECTION
JW705	1-575-159-21	CORD, CONNECTION
L1	1-401-228-00	ANTENNA COIL (FM)
L2	1-402-404-11	ANTENNA, FERRITE-ROD (LW)
L3-1	*1-422-349-11	COIL, AIR-CORE
L3-2	*1-422-349-11	COIL, AIR-CORE
L4	1-406-273-11	COIL, FM OSC
L5	1-406-028-00	COIL, OSC (LW)
L6	1-410-501-11	INDUCTOR 2.2UH
L7	1-410-294-11	INDUCTOR, MICRO 38UH
L8	1-410-501-11	INDUCTOR 2.2UH
Q1	8-729-177-32	TRANSISTOR 2SD773-3
Q2	8-729-920-70	TRANSISTOR 2SC1740S-QR
Q3	8-729-100-13	TRANSISTOR 2SC2001-K2
Q4	8-729-900-80	TRANSISTOR DTC114ES
Q5	8-729-920-70	TRANSISTOR 2SC1740S-QR
Q6	8-729-920-70	TRANSISTOR 2SC1740S-QR
Q7	8-729-920-70	TRANSISTOR 2SC1740S-QR
Q8	8-729-920-68	TRANSISTOR 2SA933S-QR
Q9	8-729-900-80	TRANSISTOR DTC114ES
Q10	8-729-900-80	TRANSISTOR DTC114ES
R1	1-249-417-11	CARBON 1K 5% 1/4W
R2	1-249-423-11	CARBON 3.3K 5% 1/4W
R3	1-249-417-11	CARBON 1K 5% 1/4W
R5	1-249-405-11	CARBON 100 5% 1/4W
R6	1-249-441-11	CARBON 100K 5% 1/4W
R7	1-249-441-11	CARBON 100K 5% 1/4W
R8	1-249-429-11	CARBON 10K 5% 1/4W
R9	1-249-421-11	CARBON 2.2K 5% 1/4W
R11	1-249-437-11	CARBON 47K 5% 1/4W
R12	1-249-429-11	CARBON 10K 5% 1/4W
R13	1-249-417-11	CARBON 1K 5% 1/4W
R14	1-249-438-11	CARBON 56K 5% 1/4W
R15	1-249-421-11	CARBON 2.2K 5% 1/4W
R16	1-249-421-11	CARBON 2.2K 5% 1/4W
R17	1-249-415-11	CARBON 680 5% 1/4W
R19	1-249-435-11	CARBON 33K 5% 1/4W
R20	1-249-429-11	CARBON 10K 5% 1/4W
R21	1-249-441-11	CARBON 100K 5% 1/4W
R22	1-249-441-11	CARBON 100K 5% 1/4W
R23	1-249-429-11	CARBON 10K 5% 1/4W
R24	1-249-433-11	CARBON 22K 5% 1/4W

Ref.No.	Part No.	Description
R25	1-249-433-11	CARBON 22K 5% 1/4W
R26	1-249-441-11	CARBON 100K 5% 1/4W
R27	1-249-409-11	CARBON 220 5% 1/4W
R28	1-249-413-11	CARBON 470 5% 1/4W
R29	1-249-429-11	CARBON 10K 5% 1/4W
R30	1-247-883-00	CARBON 150K 5% 1/4W
R31	1-249-421-11	CARBON 2.2K 5% 1/4W
R32	1-249-441-11	CARBON 100K 5% 1/4W
R33	1-249-433-11	CARBON 22K 5% 1/4W
R34	1-249-441-11	CARBON 100K 5% 1/4W
R35	1-249-429-11	CARBON 10K 5% 1/4W
R36	1-249-429-11	CARBON 10K 5% 1/4W
R37	1-249-437-11	CARBON 47K 5% 1/4W
R38	1-249-423-11	CARBON 3.3K 5% 1/4W
R39	1-249-429-11	CARBON 10K 5% 1/4W
R40	1-249-413-11	CARBON 470 5% 1/4W
R41	1-249-429-11	CARBON 10K 5% 1/4W
RV1	1-228-790-00	RES, VAR, CARBON 50K (VOL)
S1	1-552-370-00	SWITCH, SLIDE (BAND)
S2	1-554-088-00	SWITCH, KEY BOARD (TIME SET-CLOCK)
S3	1-554-088-00	SWITCH, KEY BOARD (TIME SET-H)
S4	1-554-088-00	SWITCH, KEY BOARD (TIME SET-M)
S8	1-572-133-11	SWITCH, SLIDE (FUNCTION)
S9	1-553-856-00	SWITCH, KEY BOARD (REPEAT ALARM/SLEEP OFF)
S10	1-571-527-11	SWITCH, KEY BOARD (RADIO ON)
SP1	1-503-082-00	SPEAKER
T1	1-236-385-11	ENCAPSULATED COMPONENT
T2	△,1-449-529-11	TRANSFORMER, POWER

ACCESSORY & PACKING MATERIAL

3-751-387-51	MANUAL, INSTRUCTION
*3-902-745-01	CUSHION
*3-902-732-11	INDIVIDUAL CARTON

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

