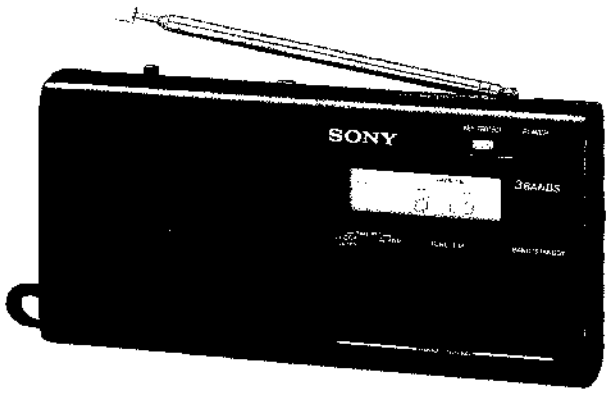
ICF-M350S

SERVICE MANUAL

AEP Model
E Model



SPECIFICATIONS

Frequency range	FM	87.5–108 MHz (0.05 MHz scan step)
	MW	531–1,602 kHz (9 kHz scan step) 530–1,610 kHz (10 kHz scan step)
	SW	5.80–6.40 MHz (5 kHz scan step)

Antennas: FM/SW: Telescopic antenna
MW: Built-in ferrite bar antenna

Speaker: Approx. 7.7 cm (3⅛ inches) dia.

Power output: 280 mW (at 10% harmonic distortion)

Output: Earphone jack (minijack)

Power requirements: 4.5 V DC
Three R6 (size AA) batteries
DC IN 4.5 V jack accepts:
Sony AC-E45M AC power adaptor (optional)
Sony DCC-E145L car battery cord (optional) for use with 12 V car battery

Battery life: Approx. 15 hours of listening for 4 hours a day at a normal volume using Sony batteries SUM-3 (NS)

Dimensions: Approx. 195 × 95 × 32.5 mm (w/h/d) (7¾×3¾×1⅜ inches) not incl. projecting parts and controls

Weight: Approx. 430 g (15.2 oz) incl batteries

Supplied accessory: FM antenna coupler (1. Models for Netherlands and Scandinavia)

Design and specifications subject to change without notice.

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

FEATURES

- A quartz–controlled PLL(Phase Locked Loop) synthesizer system using a microcomputer for easy pinpoint tuning.
- Up to 5 stations in each band can be preset.
- The tuned frequency is digitally displayed to make searching of the desired station easier.
- The radio can be turned on at the preset time.

Note on MW tuning interval

The MW tuning interval differs depending on areas. The tuning interval of this unit is factory-set to 10 kHz or to 9 kHz to match the frequency allocation system of the country as listed. You can change the interval. (See "Changing MW Tuning Interval" on page 2.)

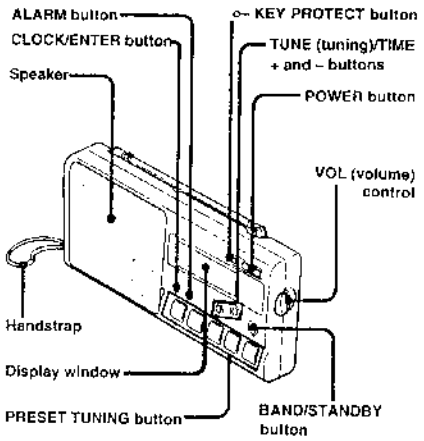
Area	MW tuning interval
North American countries	10 kHz
Other countries	9 kHz

FM/MW/SW 3 BAND PLL SYNTHESIZED RECEIVER

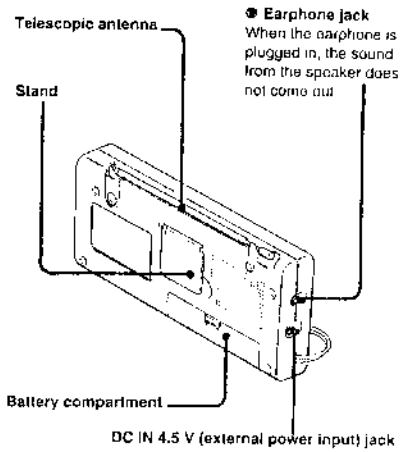
SONY®

Location and Function of Controls

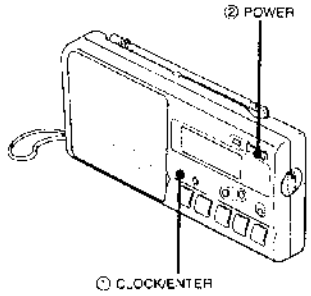
Front panel



Rear panel



Changing the MW Tuning Interval



1 **Make sure that the radio is turned off.**

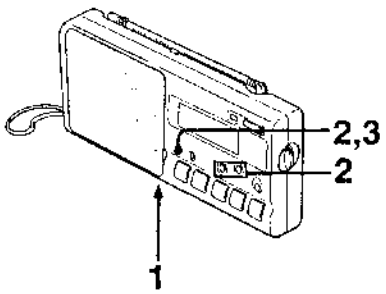
2 **While pressing the CLOCK/ENTER button ①, keep pressing the POWER button ② for more than 5 seconds.** The MW tuning interval has been changed. If you proceed step 2 again, the interval changes again.

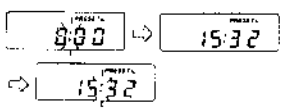
Note

If you proceed with the step above, the clock and the preset memory are erased, and "0:00" flashes.

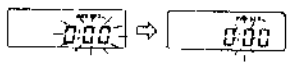
Setting the Clock

Set the clock or display time when the radio is turned off.





1 **When you insert the batteries for the first time, digits flash in the display window.** To stop flashing, press the CLOCK/ENTER button.



0:00 = midnight
12:00 = noon

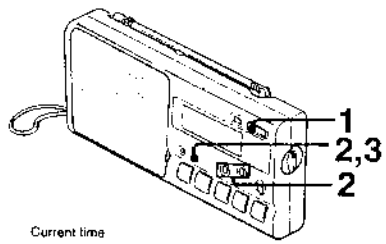
2 **While pressing the CLOCK/ENTER button, press the TUNE/TIME + or – button to set the clock to the current time.** Each time the button pressed, the digits move forward or back by one. When you keep the button pressed, the digits change rapidly.

3 **When you release the CLOCK/ENTER button, the clock starts operating, and ":" starts flashing.** If you release the CLOCK/ENTER button simultaneously with the time signal as it sounds, the clock starts from zero second.

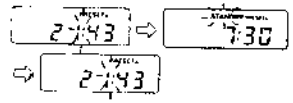
Using the Alarm Function

You can turn the radio on at the preset time. It will be tuned in the station before the radio was turned off. The radio will automatically turn off after about 60 minutes, unless you turn it off.

Setting the Alarm Time



Current time



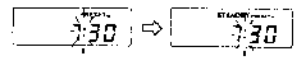
1 **Make sure the radio is turned off.**

2 **While keeping the ALARM button pressed, set the time by pressing the TUNE/TIME + or – button.**
While the ALARM button is pressed, the "STANDBY" indication is flashing in the display window.

3 **Release the ALARM button.**
The alarm time is set. The indication becomes the current time.

Setting the Alarm

1 **Make sure the radio is turned off.**
2 **Press the BAND/STANDBY button.**
The "STANDBY" indication appears in the display window.



To cancel the alarm function

Press the BAND/STANDBY button. The "STANDBY" indication disappears.

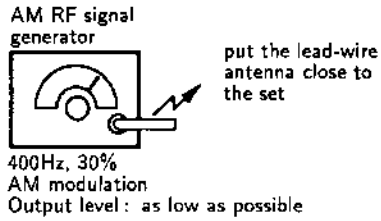
Note

When "0:00" is flashing, you cannot set the alarm time nor set the alarm.

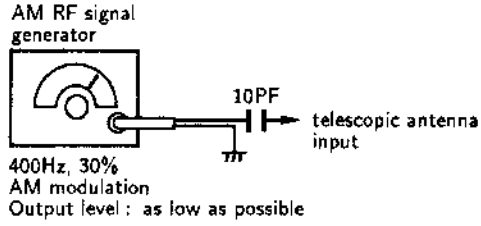
This section is extracted from instruction manual.

SECTION 2
ADJUSTMENTS

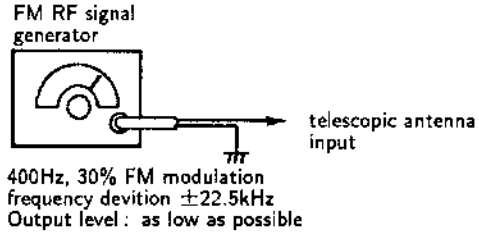
MW SECTION

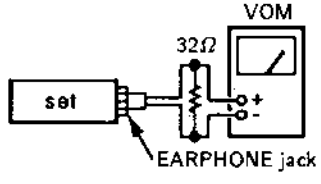


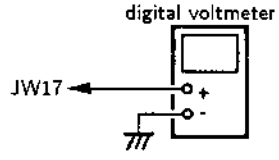
SW SECTION



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.

AM IF ADJUSTMENT	
Adjust for a maximum reading on VOM.	
T1	450 kHz

MW FREQUENCY COVERAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L11	1602 kHz	8±0.1V

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

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM.	
L8	621 kHz
CT3	1395 kHz

SW FREQUENCY COVERAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L7	6400 kHz	8±0.1V

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

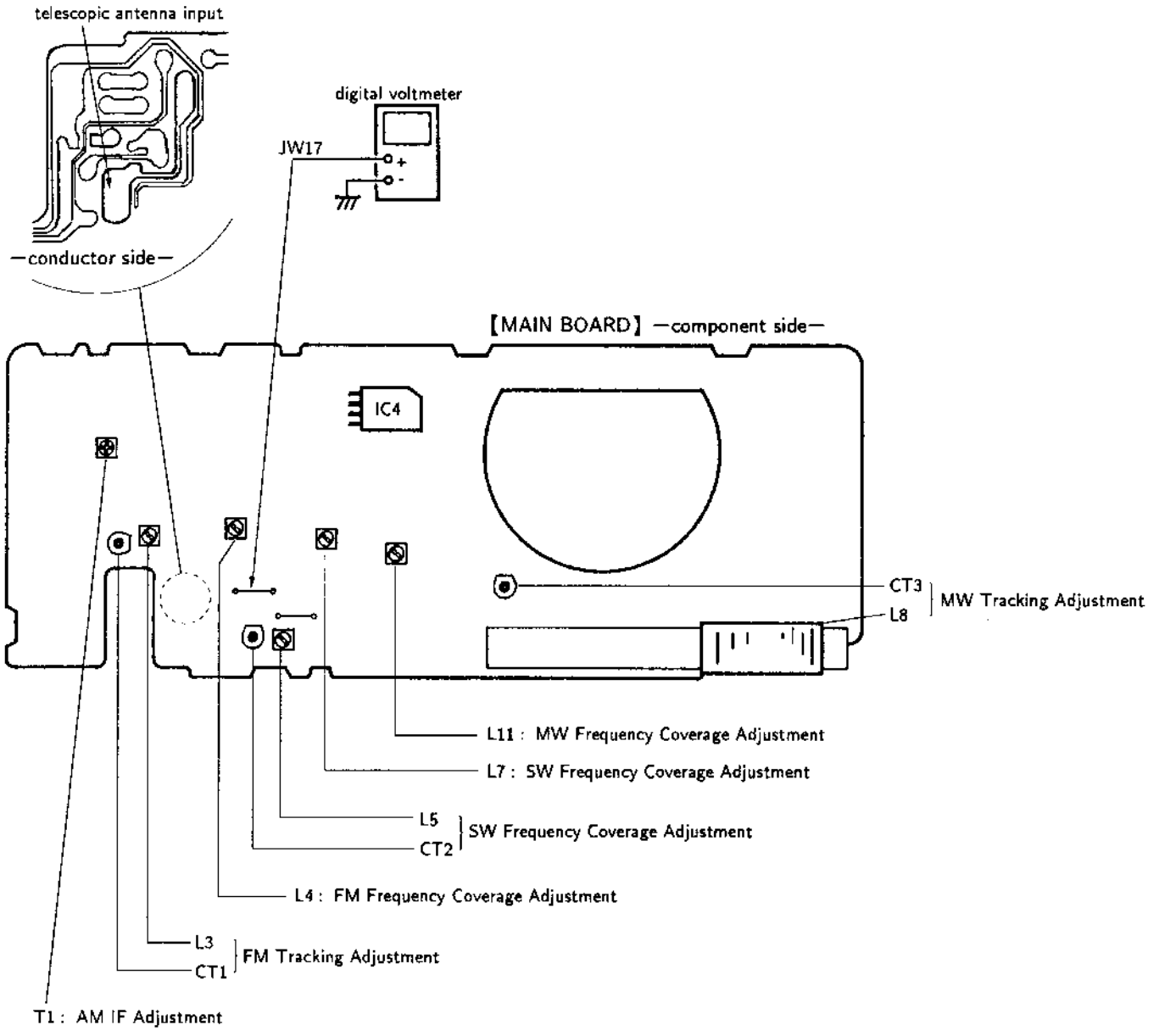
SW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM.	
L5	5800 kHz
CT2	6400 kHz

FM FREQUENCY COVERAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L4	108 MHz	8±0.1V

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

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM.	
L3	87.5 MHz
CT1	108 MHz

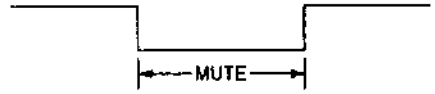
Adjustment Location



SECTION 3
DIAGRAMS

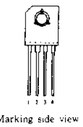
3-1. IC PIN DESCRIPTION

● IC101 μPD1724GB-598-1A7

Pin No.	Pin Name	Signal Name	I/O	Description
1-10	LCD10-LCD1	LCD10-LCD1	O	LCD drive (⑨, ⑩ pin : not in use.)
11	NC	—	—	Not in use.
12 - 14	COM3-COM1	COM3-COM1	O	LCD common
15	VSS3	—	—	Pin for doubler circuit capacitor connection to develop LCD drive voltage.
16	CAP1	—		
17	CAP2	—		
18	VSS2	—		
19	VDP	$\overline{\text{MUTE}}$	O	Audio signal mute. Active : Low. LOW when MUTE ON. 
20	CGP	BEEP	O	Activates buzzer.
21	NC	—	—	Not in use.
22	VDD	—	—	3V power supply input terminal.
23	VCOH	TV LOCAL IN	I	Not in use.
24	VCOM	FM LOCAL IN	I	FM VCO input.
25	VCOL	AM LOCAL IN	I	AM VCO input.
26	VSS1	VSS (GND)	—	GND
27	EO1	PD OUT	O	PLL error output pin.
28	EO2	—	—	Not in use.
29	CE	CE	I	Detects power supply line status. Power supply line OFF : Low Power supply line ON : High
30	XO	X OUT	O	Crystal oscillator connection pin.
31	XI	X IN	I	
32	VSS4	—	—	Pin for regulator circuit capacitor connection to attain stable drive voltage of the oscillator.
33	PA3	—	I	Not in use.
34	PA2	—	O	Not in use.
35	PA1	—	O	Not in use.
36	PA0	AM/ $\overline{\text{FM · TV}}$	I/O	BATTERY CHECK input and BAND selection output. FM : Low MW/SW : High
37	PB3	—	—	Not in use.
38	PB2	RADIO POWER ON/ $\overline{\text{OFF}}$	O	RADIO POWER ON/ $\overline{\text{OFF}}$ output.
39	PB1	SW · TV/ $\overline{\text{MW · FM}}$	O	BAND selection signal output.
40	PB0	INIT	O	Connected the resistor 5.6kΩ.
41 - 44	PC3-PC0	KEY SCAN 2-1	O	Conducts Key Scan (㊶ pin : Not in use)
45 - 48	K3-K0	KEY RET 2-0	I	Key Return input (㊺ pin : Not in use)
49, 50	NC	—	—	GND
51 - 56	LCD16-LCD11	LCD16-LCD11	O	LCD drive

3-2. SEMICONDUCTOR LEAD LAYOUTS

LA5003



Marking side view

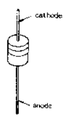
2SC3576

S-8052ANB-NE-S

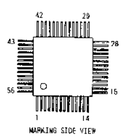
IT32
IT33

S-81230AG-RB

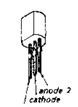
MTZJ-11B
1SS119
1SS168



μPD1724GB-598-1A7



SVC342L-V

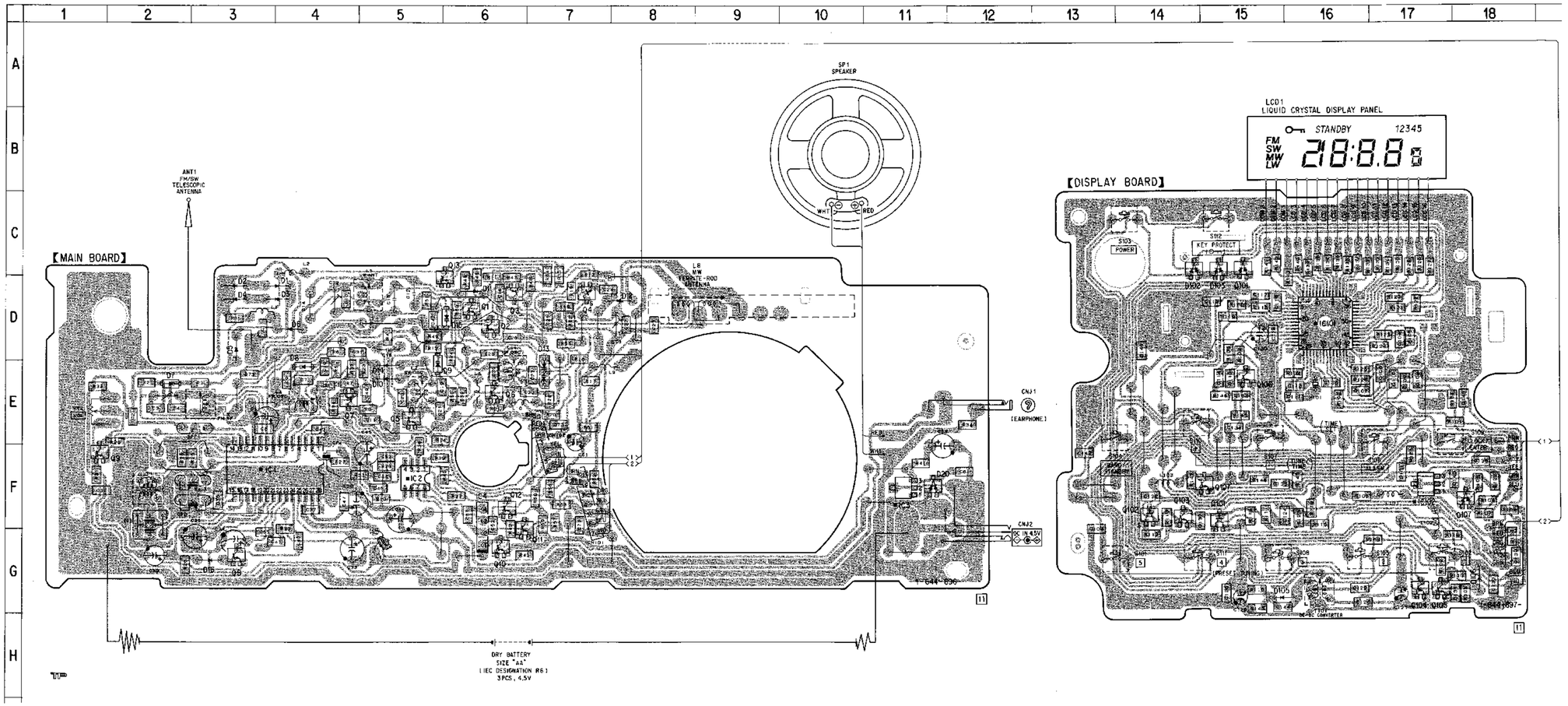


2SC1009A

• Semiconductor Location

Ref. No.	Location
D1	D-4
D2	D-3
D3	D-4
D4	D-3
D5	D-3
D6	D-4
D7	E-2
D8	E-4
D9	E-5
D10	E-5
D11	D-6
D12	D-8
D13	E-7
D14	E-5
D15	D-6
D16	G-3
D20	F-11
D101	C-15
D102	C-14
D103	C-15
D105	G-15
D106	G-18
D107	F-18
IC1	F-3
IC2	F-5
IC3	F-11
IC4	F-6
IC101	D-16
IC102	F-17
Q1	D-6
Q2	D-6
Q3	D-6
Q4	D-7
Q5	E-5
Q6	E-6
Q7	E-4
Q8	G-3
Q9	F-1
Q10	G-6
Q11	F-6
Q12	F-6
Q13	D-6
Q101	F-15
Q102	F-14
Q103	F-14
Q104	G-17
Q105	G-17
Q106	E-15
Q107	F-15

3-3. PRINTED WIRING BOARDS

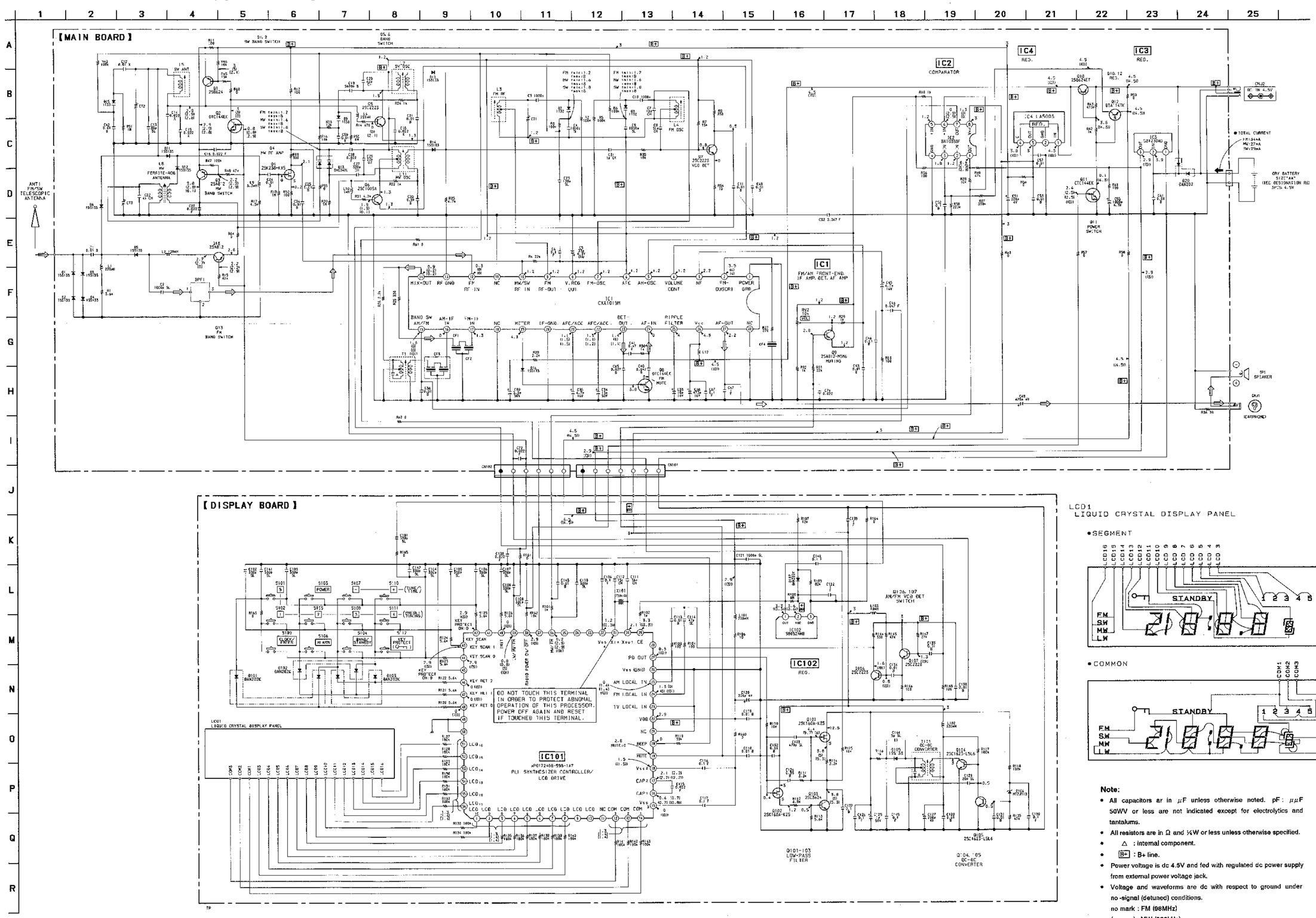


Note:

- ○—— : parts extracted from the component side.
- ●—— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ▒▒ : Pattern on the side which is seen.

3-4. SCHEMATIC DIAGRAM

• Refer to page 12 for IC Block Diagrams.



LCD1
LIQUID CRYSTAL DISPLAY PANEL

• SEGMENT

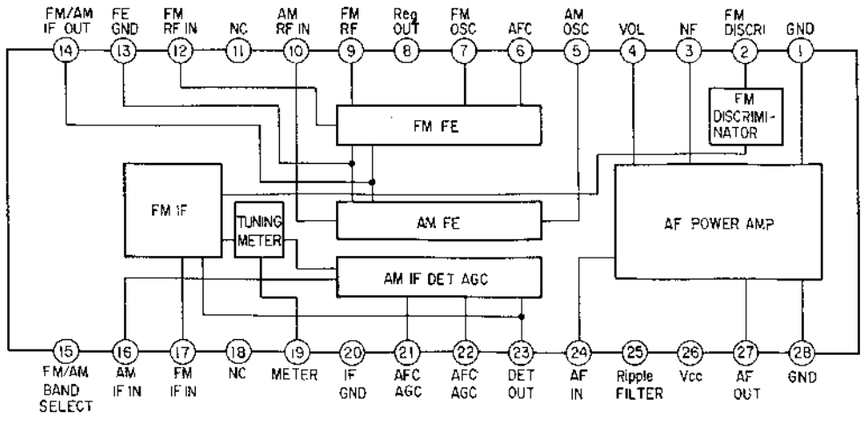
• COMMON

Note:

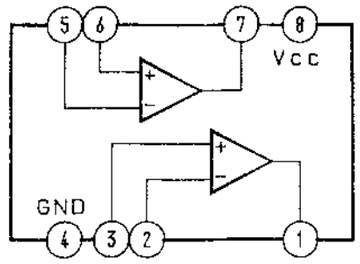
- All capacitors ar in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ line.
- Power voltage is dc 4.5V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM (98MHz)
  ( ) : MW (999kHz)
  [ ] : SW (6.2MHz)
  (( )) : POWER OFF mode
- Voltages are taken with a VOM. (Input impedance 10MΩ) Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

• IC BLOCK DIAGRAMS

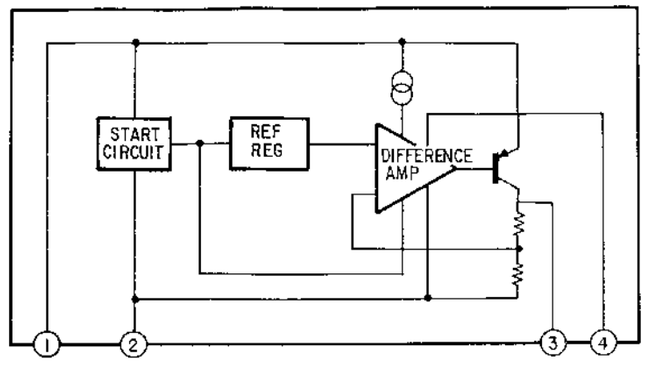
IC1 CXA1019M



IC2 BA10393F



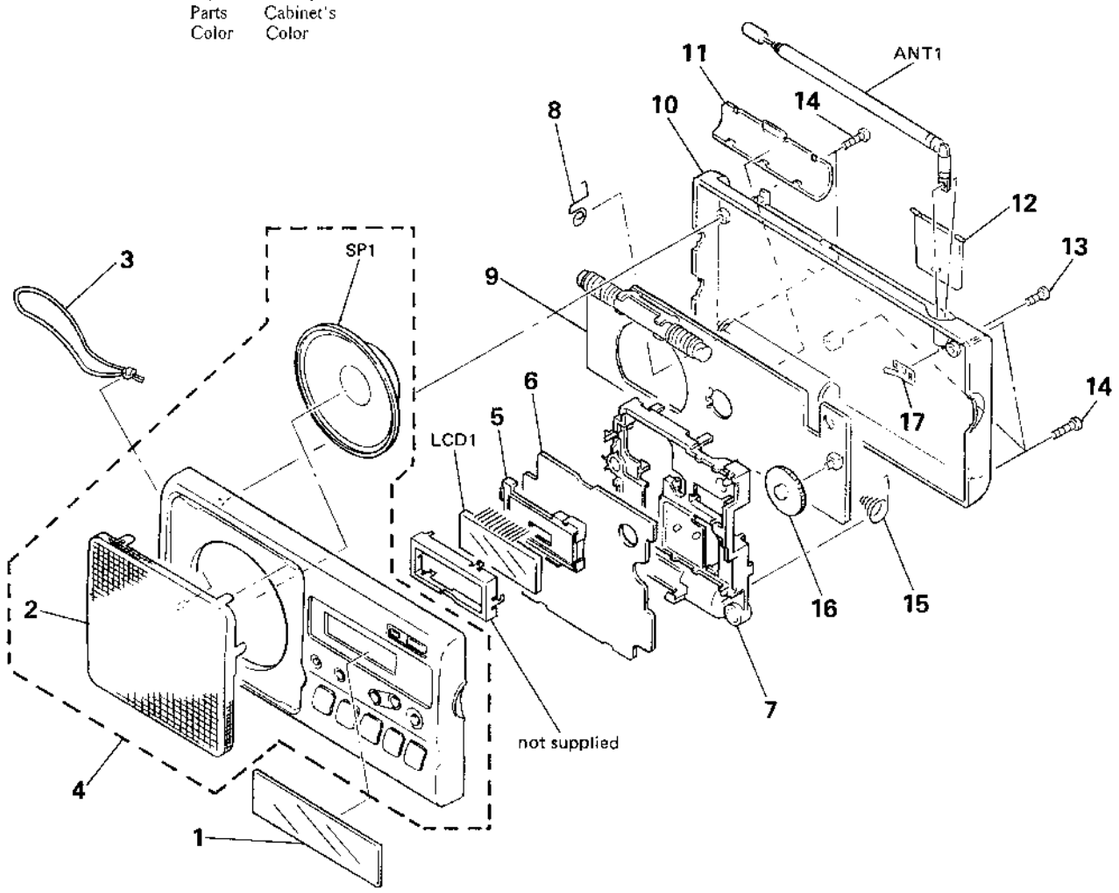
IC4 LA5003



SECTION 4
EXPLODED VIEW

NOTE:

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



Ref. No.	Part No.	Description	Remark
1	3-381-818-01	WINDOW···(BLACK)	
1	3-381-818-11	WINDOW···(WHITE)	
2	3-380-340-01	NET, SPEAKER···(BLACK)	
2	3-380-340-11	NET, SPEAKER···(WHITE)	
3	3-902-226-01	STRAP, HAND	
4	X-3365-466-1	CABINET (FRONT) ASSY···(BLACK)	
4	X-3365-467-1	CABINET (FRONT) ASSY···(WHITE)	
5	3-380-336-01	HOLDER (LCD)	
* 6	A-3679-425-A	DISPLAY BOARD, COMPLETE	
* 7	3-380-329-01	CHASSIS	
8	3-380-341-01	SPRING (+), BATTERY COIL	
* 9	A-3679-426-A	MAIN BOARD, COMPLETE	
10	3-380-328-01	CABINET (REAR)···(BLACK)	
10	3-380-328-11	CABINET (REAR)···(WHITE)	
11	3-899-907-21	LID, BATTERY CASE···(BLACK)	
11	3-899-907-31	LID, BATTERY CASE···(WHITE)	
12	3-380-335-01	STAND···(BLACK)	
12	3-380-335-11	STAND···(WHITE)	
13	3-370-475-01	SCREW (NYLOCK +B 3X6)	
14	7-685-650-79	SCREW +P 3X16 TYPE2 NON-SLIT	
15	3-380-343-01	SPRING (-), BATTERY COIL	
16	3-380-333-01	KNOB (VOL)···(BLACK)	
16	3-380-333-11	KNOB (VOL)···(WHITE)	
17	3-380-339-01	PLATE (ANT), CONTACT	
ANT1	1-501-362-11	ANTENNA, TELESCOPIC	
LCD1	1-809-735-11	DISPLAY PANEL, LIQUID CRYSTAL	
SP1	1-544-756-11	SPEAKER (7CM)	

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.
- -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 . . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. . uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

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

Ref. No.	Part No.	Description			Remark
*	A-3679-425-A	DISPLAY BOARD, COMPLETE			
		**********			
	3-380-336-01	HOLDER (LCD)			
		< CAPACITOR >			
C101	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C102	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C103	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C104	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C105	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C106	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C107	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C108	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C109	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C110	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C111	1-163-106-00	CERAMIC CHIP 36PF	5%	50V	
C112	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C113	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C114	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	
C115	1-163-033-00	CERAMIC CHIP 0.022uF		50V	
C116	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
C117	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
C118	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C119	1-163-059-00	CERAMIC CHIP 0.01uF	10%	50V	
C120	1-124-576-11	ELECT 220uF	20%	4V	
C121	1-163-141-00	CERAMIC CHIP 0.001uF	5%	50V	
C122	1-164-346-11	CERAMIC CHIP 1uF		16V	
C123	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	
C124	1-164-006-11	CERAMIC CHIP 0.33uF	10%	16V	
C125	1-126-160-11	ELECT 1uF	20%	50V	
C126	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
C127	1-124-434-00	ELECT 220uF	20%	4V	
C128	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C129	1-163-100-00	CERAMIC CHIP 20PF	5%	50V	
C130	1-163-077-00	CERAMIC CHIP 0.1uF	10%	25V	
C131	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C132	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C133	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C134	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C135	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C136	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
C137	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
C138	1-163-033-00	CERAMIC CHIP 0.022uF		50V	
C139	1-164-346-11	CERAMIC CHIP 1uF		16V	
C140	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
C141	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C142	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C143	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C144	1-163-088-00	CERAMIC CHIP 5PF		50V	
C145	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
		< DIODE >			
D101	8-719-400-18	DIODE MA152WK			
D102	8-719-400-18	DIODE MA152WK			
D103	8-719-400-18	DIODE MA152WK			
D105	8-719-911-19	DIODE 1SS119			
D106	8-719-921-80	DIODE MTZJ-11B			
D107	8-719-400-18	DIODE MA152WK			
		< IC >			
IC101	8-759-084-66	IC uPD1724GB-598-1A7			
IC102	8-759-945-21	IC S-8052ANB-NE-S			
		< COIL >			
L101	1-410-336-11	INDUCTOR 220uH			
L102	1-410-336-11	INDUCTOR 220uH			
L103	1-410-509-11	INDUCTOR 10uH			
		< LIQUID CRYSTAL DISPLAY >			
LCD1	1-809-735-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< TRANSISTOR >			
Q101	8-729-117-83	TRANSISTOR 2SK160A-K25			
Q102	8-729-117-83	TRANSISTOR 2SK160A-K25			
Q103	8-729-107-42	TRANSISTOR 2SC3624-L17			
Q104	8-729-100-66	TRANSISTOR 2SC1623			
Q105	8-729-100-66	TRANSISTOR 2SC1623			
Q106	8-729-102-07	TRANSISTOR 2SC2223-F13			
Q107	8-729-102-07	TRANSISTOR 2SC2223-F13			

DISPLAY **MAIN**

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R101	1-216-049-00	METAL CHIP	1K	5%	1/10W
R102	1-216-049-00	METAL CHIP	1K	5%	1/10W
R103	1-216-025-00	METAL CHIP	100	5%	1/10W
R104	1-216-025-00	METAL CHIP	100	5%	1/10W
R105	1-216-089-00	METAL CHIP	47K	5%	1/10W
R106	1-216-001-00	METAL CHIP	10	5%	1/10W
R107	1-216-075-00	METAL CHIP	12K	5%	1/10W
R108	1-216-121-00	METAL CHIP	1M	5%	1/10W
R109	1-216-095-00	METAL CHIP	82K	5%	1/10W
R110	1-216-073-00	METAL CHIP	10K	5%	1/10W
R111	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R112	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R113	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R114	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R115	1-216-073-00	METAL CHIP	10K	5%	1/10W
R116	1-216-049-00	METAL CHIP	1K	5%	1/10W
R117	1-216-097-00	METAL CHIP	100K	5%	1/10W
R118	1-216-097-00	METAL CHIP	100K	5%	1/10W
R119	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R120	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R121	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R122	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R123	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R124	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R125	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R126	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R127	1-216-103-00	METAL CHIP	180K	5%	1/10W
R128	1-216-103-00	METAL CHIP	180K	5%	1/10W
R129	1-216-103-00	METAL CHIP	180K	5%	1/10W
R130	1-216-103-00	METAL CHIP	180K	5%	1/10W
R131	1-216-103-00	METAL CHIP	180K	5%	1/10W
R132	1-216-103-00	METAL CHIP	180K	5%	1/10W
R133	1-216-103-00	METAL CHIP	180K	5%	1/10W
R134	1-216-103-00	METAL CHIP	180K	5%	1/10W
R135	1-216-103-00	METAL CHIP	180K	5%	1/10W
R136	1-216-103-00	METAL CHIP	180K	5%	1/10W
R137	1-216-103-00	METAL CHIP	180K	5%	1/10W
R138	1-216-103-00	METAL CHIP	180K	5%	1/10W
R139	1-216-103-00	METAL CHIP	180K	5%	1/10W
R140	1-216-103-00	METAL CHIP	180K	5%	1/10W
R141	1-216-103-00	METAL CHIP	180K	5%	1/10W
R142	1-216-103-00	METAL CHIP	180K	5%	1/10W
R143	1-216-103-00	METAL CHIP	180K	5%	1/10W
R144	1-216-037-00	METAL CHIP	330	5%	1/10W
R145	1-216-089-00	METAL CHIP	47K	5%	1/10W
R146	1-216-025-00	METAL CHIP	100	5%	1/10W
R147	1-216-083-00	METAL CHIP	27K	5%	1/10W
R148	1-216-025-00	METAL CHIP	100	5%	1/10W
R160	1-216-295-00	METAL CHIP	0	5%	1/10W
R161	1-216-295-00	METAL CHIP	0	5%	1/10W
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W
R163	1-216-295-00	METAL CHIP	0	5%	1/10W
R164	1-216-295-00	METAL CHIP	0	5%	1/10W
R165	1-216-295-00	METAL CHIP	0	5%	1/10W
		< SWITCH >			
S101	1-571-760-11	SWITCH, KEY BOARD (5 (PRESET TUNING))			
S102	1-571-760-11	SWITCH, KEY BOARD (1 (PRESET TUNING))			
S103	1-571-760-12	SWITCH, KEY BOARD (POWER)			
S104	1-571-760-11	SWITCH, KEY BOARD (BAND/STANDBY)			
S105	1-571-760-11	SWITCH, KEY BOARD (2 (PRESET TUNING))			
S106	1-571-760-11	SWITCH, KEY BOARD (ALARM)			
S107	1-571-760-11	SWITCH, KEY BOARD (- (TUNING/TIME))			
S108	1-571-760-11	SWITCH, KEY BOARD (3 (PRESET TUNING))			
S109	1-571-760-11	SWITCH, KEY BOARD (CLOCK/ENTER)			
S110	1-571-760-11	SWITCH, KEY BOARD (+ (TUNE/TIME))			
S111	1-571-760-11	SWITCH, KEY BOARD (4 (PRESET TUNING))			
S112	1-572-596-21	SWITCH, KEY BOARD (KEY PROTECT)			
		< TRANSFORMER >			
T101	1-449-138-11	TRANSFORMER, DC-DC CONVERTER			
		< VIBRATOR >			
X101	1-567-769-11	VIBRATOR, CRYSTAL			
**********					
*	A-3679-426-A	MAIN BOARD, COMPLETE			
		**********			
		< FILTER >			
BPF1	1-236-711-21	FILTER, BAND PASS			
		< CAPACITOR >			
C1	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C2	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C3	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C4	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C5	1-131-374-00	TANTALUM	33uF	10%	16V
C6	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C7	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C8	1-163-104-00	CERAMIC CHIP	3DPF	5%	50V
C9	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C10	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V

Ref. No.	Part No.	Description			Remark
C11	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C12	1-161-051-00	CERAMIC	0.01uF	10%	50V
C13	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C14	1-161-055-00	CERAMIC	0.022uF	10%	50V
C15	1-161-055-00	CERAMIC	0.022uF	10%	50V
C16	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C18	1-161-055-00	CERAMIC	0.022uF	10%	50V
C19	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C20	1-163-112-00	CERAMIC CHIP	62PF	5%	50V
C21	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C22	1-163-087-00	CERAMIC CHIP	4PF		50V
C23	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C24	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C25	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C26	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C27	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C28	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C29	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C30	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C31	1-163-217-11	CERAMIC CHIP	1PF	0.25PF	50V
C32	1-163-075-00	CERAMIC CHIP	0.047uF		50V
C33	1-126-157-11	ELECT	10uF	20%	16V
C34	1-126-157-11	ELECT	10uF	20%	16V
C35	1-126-163-11	ELECT	4.7uF	20%	50V
C36	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C37	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C38	1-126-935-11	ELECT	470uF	20%	16V
C39	1-126-162-11	ELECT	3.3uF	20%	50V
C40	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C41	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C42	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C43	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C44	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C45	1-126-163-11	ELECT	4.7uF	20%	50V
C46	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C47	1-162-638-11	CERAMIC CHIP	1uF		16V
C48	1-104-483-91	ELECT	470uF	20%	4V
C49	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C51	1-124-434-00	ELECT	220uF	20%	4V
C52	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C53	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C55	1-124-471-00	ELECT	1000uF	20%	6.3V
C57	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C59	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C61	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C65	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V
C71	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C72	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C73	1-163-117-00	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description	Remark
		< FILTER >	
CF1	1-579-265-81	FILTER, CERAMIC	
CF2	1-579-265-81	FILTER, CERAMIC	
CF3	1-567-777-11	FILTER, CERAMIC	
CF4	1-579-265-81	FILTER, CERAMIC	
		< CONNECTOR >	
* CN101	1-506-989-11	PIN, CONNECTOR (PC BOARD) 7P	
* CN102	1-506-988-11	PIN, CONNECTOR (PC BOARD) 6P	
		< JACK >	
CNJ1	1-563-836-21	JACK (EARPHONE)	
CNJ2	1-695-153-11	JACK, EXTERNAL POWER (DC IN 4.5V)	
		< TRIMMER >	
CT1	1-141-304-21	CAP, TRIMMER 10PF	
CT2	1-141-304-21	CAP, TRIMMER 10PF	
CT3	1-141-304-21	CAP, TRIMMER 10PF	
		< DIODE >	
D1	8-719-911-19	DIODE 1SS119	
D2	8-719-911-19	DIODE 1SS119	
D3	8-719-911-19	DIODE 1SS119	
D4	8-719-911-19	DIODE 1SS119	
D5	8-719-903-27	DIODE 1SS168	
D6	8-719-903-27	DIODE 1SS168	
D7	8-719-949-46	DIODE 1T32	
D8	8-719-949-46	DIODE 1T32	
D9	8-713-300-57	DIODE 1T33	
D10	8-719-911-19	DIODE 1SS119	
D11	8-719-903-27	DIODE 1SS168	
D12	8-719-903-27	DIODE 1SS168	
D13	8-719-980-71	DIODE SVC342L-V	
D14	8-719-911-19	DIODE 1SS119	
D15	8-713-300-57	DIODE 1T33	
D16	8-719-911-19	DIODE 1SS119	
D20	8-719-400-18	DIODE MA152WK	
		< IC >	
IC1	8-759-605-77	IC CXA1019M-T1	
IC2	8-759-982-73	IC BA10393F	
IC3	8-759-939-41	IC S-81230AG-RB	
IC4	8-759-800-27	IC LA5003	
		< COIL >	
L1	1-410-336-11	INDUCTOR 220uH	
L2	1-410-521-11	INDUCTOR 100uH	
L3	1-460-339-11	COIL (WITH CORE) (FM-RF)	

MAIN

Ref.No.	Part No.	Description	Remark
L4	1-459-837-11	COIL (WITH CORE)	
L5	1-402-397-11	COIL (ANT)	
L6	1-410-336-11	INDUCTOR 220uH	
L7	1-406-306-11	COIL (OSCILLATION)	
L8	1-402-632-11	ANTENNA, FERRITE-ROD (MW)	
L9	1-410-065-11	INDUCTOR 3.3mH	
L10	1-414-167-11	INDUCTOR 1mH	
L11	1-406-269-11	COIL (OSC)	
L12	1-410-294-11	INDUCTOR, MICRO	
		< TRANSISTOR >	
Q1	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q2	8-729-901-01	TRANSISTOR DTC144EK	
Q3	8-729-216-22	TRANSISTOR 2SA1162	
Q4	8-729-123-85	TRANSISTOR 2SK238-K15	
Q5	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q6	8-729-101-25	TRANSISTOR 2SC1009A	
Q7	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q8	8-729-901-01	TRANSISTOR DTC144EK	
Q9	8-729-216-22	TRANSISTOR 2SA1162	
Q10	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q11	8-729-901-01	TRANSISTOR DTC144EK	
Q12	8-729-900-51	TRANSISTOR DTA114TK	
Q13	8-729-216-22	TRANSISTOR 2SA1162	
		< RESISTOR >	
R1	1-216-062-00	METAL CHIP 3.6K 5% 1/10W	
R2	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R3	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R4	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R5	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R6	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R7	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R8	1-216-037-00	METAL CHIP 330 5% 1/10W	
R10	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R11	1-216-025-00	METAL CHIP 100 5% 1/10W	
R12	1-216-025-00	METAL CHIP 100 5% 1/10W	
R13	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R14	1-216-041-00	METAL CHIP 470 5% 1/10W	
R15	1-216-238-00	METAL GLAZE 47K 5% 1/8W	
R16	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R17	1-216-064-00	METAL CHIP 4.3K 5% 1/10W	
R18	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R19	1-216-039-00	METAL CHIP 390 5% 1/10W	
R20	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R21	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R22	1-216-049-00	METAL CHIP 1K 5% 1/10W	

Ref.No.	Part No.	Description	Remark
R23	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R24	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R25	1-216-037-00	METAL CHIP 330 5% 1/10W	
R26	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R27	1-216-035-00	METAL CHIP 270 5% 1/10W	
R28	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R29	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R30	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R31	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R32	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R33	1-216-025-00	METAL CHIP 100 5% 1/10W	
R34	1-216-015-00	METAL CHIP 39 5% 1/10W	
R35	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R36	1-216-025-00	METAL CHIP 100 5% 1/10W	
R37	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R38	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R39	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R40	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R41	1-216-025-00	METAL CHIP 100 5% 1/10W	
R42	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R43	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R45	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R46	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R47	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R48	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R49	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R50	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R51	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R52	1-216-025-00	METAL CHIP 100 5% 1/10W	
R54	1-216-001-00	METAL CHIP 10 5% 1/10W	
R55	1-216-295-00	METAL CHIP 0 5% 1/10W	
R56	1-216-295-00	METAL CHIP 0 5% 1/10W	
R57	1-216-295-00	METAL CHIP 0 5% 1/10W	
R58	1-216-296-00	METAL CHIP 0 5% 1/8W	
R59	1-216-296-00	METAL CHIP 0 5% 1/8W	
R60	1-216-295-00	METAL CHIP 0 5% 1/10W	
R61	1-216-296-00	METAL CHIP 0 5% 1/8W	
R62	1-216-295-00	METAL CHIP 0 5% 1/10W	
R63	1-216-296-00	METAL CHIP 0 5% 1/8W	
R64	1-216-296-00	METAL CHIP 0 5% 1/8W	
		< VARIABLE RESISTOR >	
RV2	1-238-650-11	RES, VAR, CARBON 10K (VOL)	
		< TRANSFORMER >	
T1	1-404-789-11	TRANSFORMER, IF	

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
ANT1	1-501-362-11	ANTENNA, TELESCOPIC	
SP1	1-544-756-11	SPEAKER (7CM)	

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ACCESSORIES & PACKING MATERIALS

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	1-501-499-21	COUPLER, ANTENNA (Models for Netherlands and Scandinavia)	
*	3-381-312-01	INDIVIDUAL CARTON	
	3-755-441-41	MANUAL, INSTRUCTION (ENGLISH/FRENCH/SPANISH/PORTUGUESE)	
	3-755-441-51	MANUAL, INSTRUCTION (GERMAN/DUTCH/SWEDISH)	

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