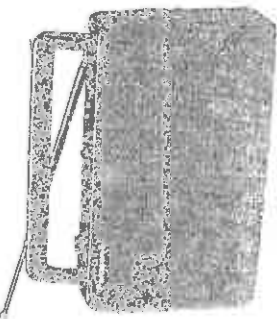


Service Manual

Radio
RF-3550

FM-LW-MW-SW Portable Receiver



Colour

(K) : Black

Areas

Colour	Area	Colour
(E)	Europe	(K)
(EB)	Britain	(K)
(EJ)	Italy	(K)

Specifications

Frequency Range:

- FM 87.5 - 108.0 MHz
- LW 170.5 - 285 MHz
- MW 530 - 1610 kHz
- SW 5.9 - 19.3 MHz

Intermediate Frequency:

- FM 10.7 MHz
- AM (LW, MW, SW) 455 kHz

Sensitivity:

- FM 0.1 mV (500 mW PEP, A-weighted)
- (15 dB S/N, 30%)
- LW 79 mV (100 mW PEP, A-weighted)
- MW 50 mV (100 mW PEP, A-weighted)
- SW 3.3 mV (100 mW PEP, A-weighted)

Power Requirement:

- AC
- (EB) 240 V, 50 Hz
- (EJ) 200 V, 50 Hz
- 5 V (PC RTM, R14, LW-2 battery)
- 5 V (SC 007)
- 10 cm PM cylindrical speaker, 2.7 Ω
- 1.0 W (RMS, 100 Hz)
- EARPHONE: 0.35 Ω - 0 Ω
- 344 (M) x 142 (H) x 92 (D) mm
- 305 g (without batteries)

B. LIDDELL
TRADING AS O.S.L.
WATERLOOVILLE
HANTS

Notes:

1. Weight and dimensions approximate.
2. Design and specifications are subject to change without notice.

WARNING

This service information is intended for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions which are non-technical in nature. In the event of potential dangers in attempting to service a product, products powered by electrically should be repaired only by experienced professional technicians. Any attempt to service or repair the product or product, or product, without this service information by anyone else could result in serious injury or death.

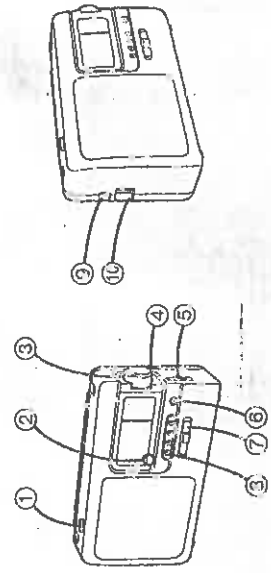
Parasonic

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Contents

Location of Controls	Page
Operator Check and Replacement Parts List	2
Schematic Diagram	3-5
Printed Circuit Board and Wiring Connection Diagram	6
	7

Location of Controls



Listening to the Radio

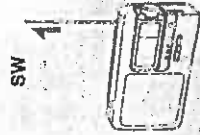
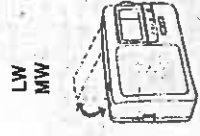
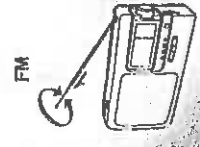
Follow steps 1 - 4.
When tuning into a station, the tuning indicator will illuminate.
To turn off the unit, press OPERATION.

Antennae

FM:
Pull out the telescopic antennas and adjust its length and angle for optimum reception.

LW/MW:
The built-in ferrite core antenna will provide excellent LW/MW reception in most areas. Turn the unit in the direction which gives the best results since the ferrite core antenna is directional.

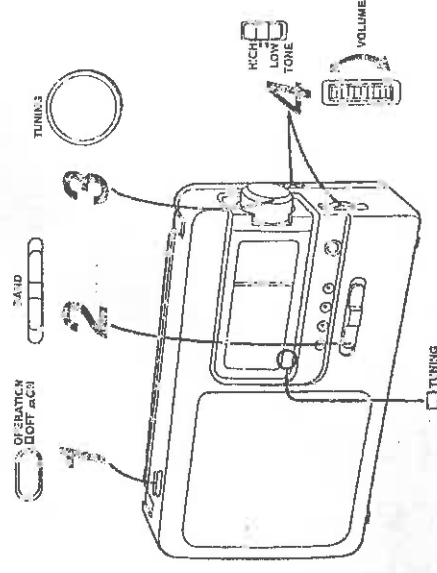
SW:
Extend the telescopic antenna fully, keep it vertical.



Measurements and Adjustments	Page
Replacement Parts List	3-8
Packaging	11-12
Cabinet Parts Location	13

- ① Operation switch (OPERATION)
- ② Tuning indicator (TUNING)
- ③ Tuning control (TUNING)
- ④ Tone selector (TONE)
- ⑤ Volume control (VOLUME)
- ⑥ Volume indicator (VOLUME)
- ⑦ Band selector (BAND)
- ⑧ Band indicators (FM, LW, MW, SW)
- ⑨ Earphone jack (EARPHONE) (Ø 3.3, 3 - 8 Ω)
- ⑩ AC socket (AC IN)

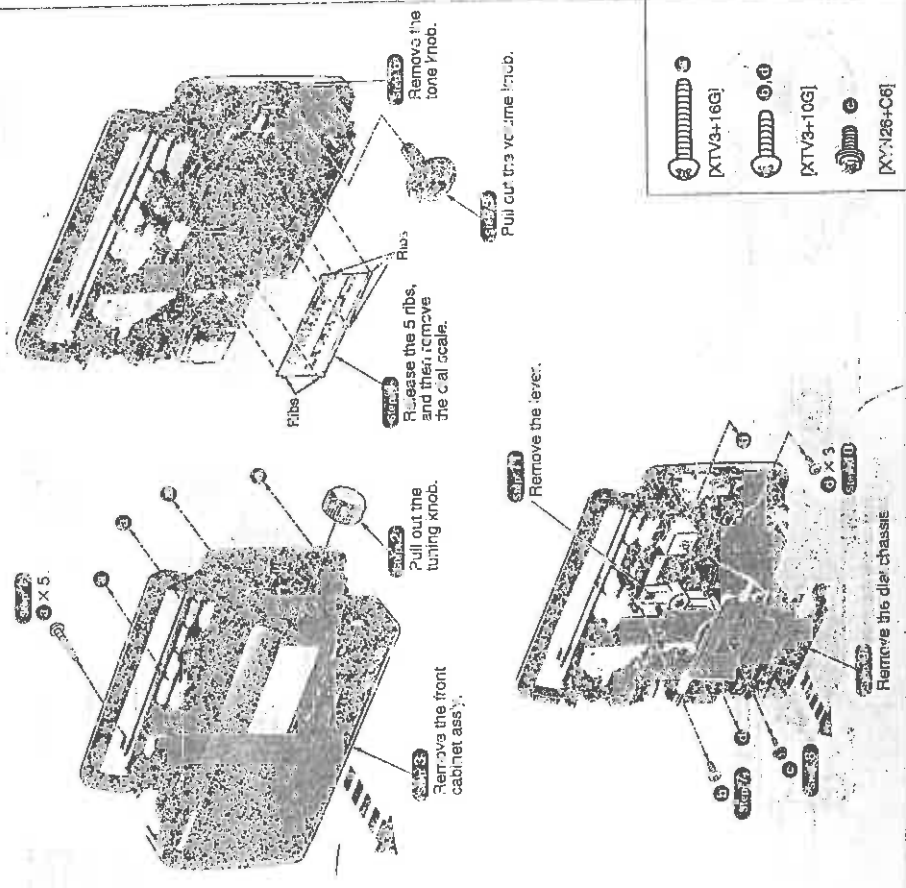
How to use the earphone (not included)
Reduce the volume level. Connect the earphone to the earphone jack (9).
• Avoid listening for prolonged periods of time to prevent hearing damage.
• Speaker is automatically cut off when the earphone is connected.



Operation Check and Main Component Replacement Procedures

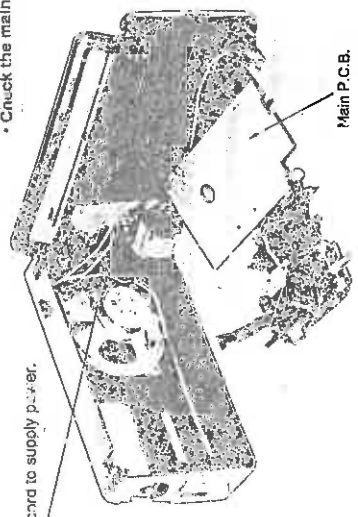
1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Illustrated screws are equivalent to actual size.
4. Refer the parts No. on the page of "Main Component Replacement Procedures", if necessary.

1. Checking for the main P.C.B.



- ① [Part symbol] [XTV3+16G]
- ② [Part symbol] [XTV3+10G]
- ③ [Part symbol] [XV126+C6]

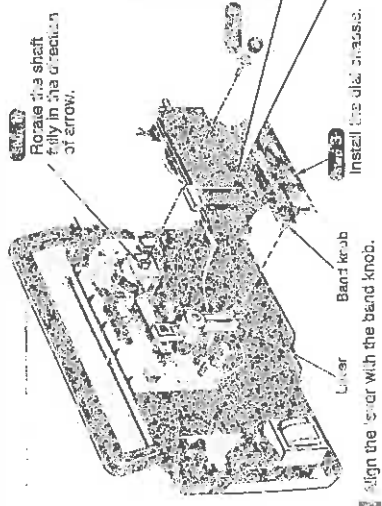
• Chuck the main P.C.B. as shown below.



Main P.C.B.

Connect AC power cord to supply power.

Installation of dial chassis (Point "0" Adjustment)

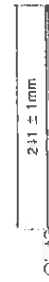


Raise the shaft fully in the direction of arrow.

NOTE: Align the lever with the band knob.

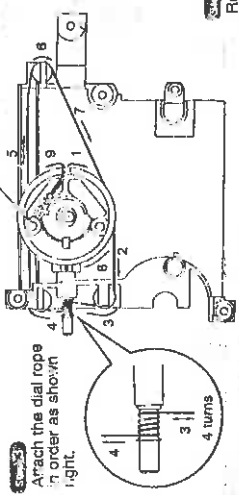
Installation of dial rope

Tight the dial rope with spring, and then fix it with adhesive agent.



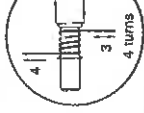
2.11 ± 1mm

Adhesive agent



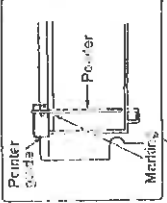
Attach the dial rope in order as shown right.

Attach the spring to the hole of dial drum.

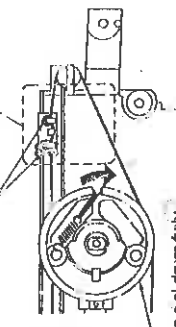


Rotate the dial drum fully in the direction of arrow.

Align the pointer with the marking, and then fix it with the pointer guide.

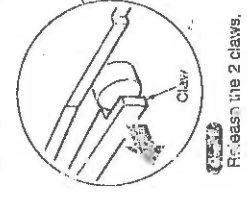


Insert the dial rope, and then apply the adhesive agent.

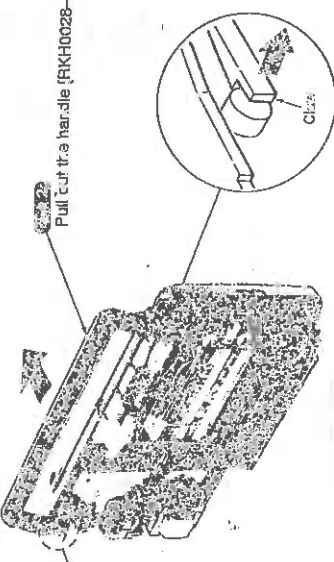


2. Replacement for the handle

Follow the item 1 () on page 3.



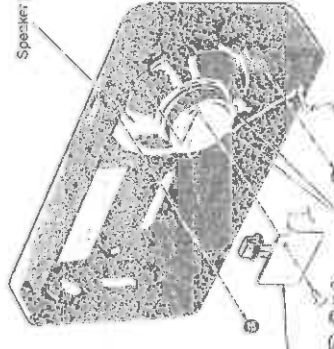
Release the 2 claws.



Pull out the handle (RKH0028-K).

3. Replacement for the speaker

Follow the item 1 () on page 3.

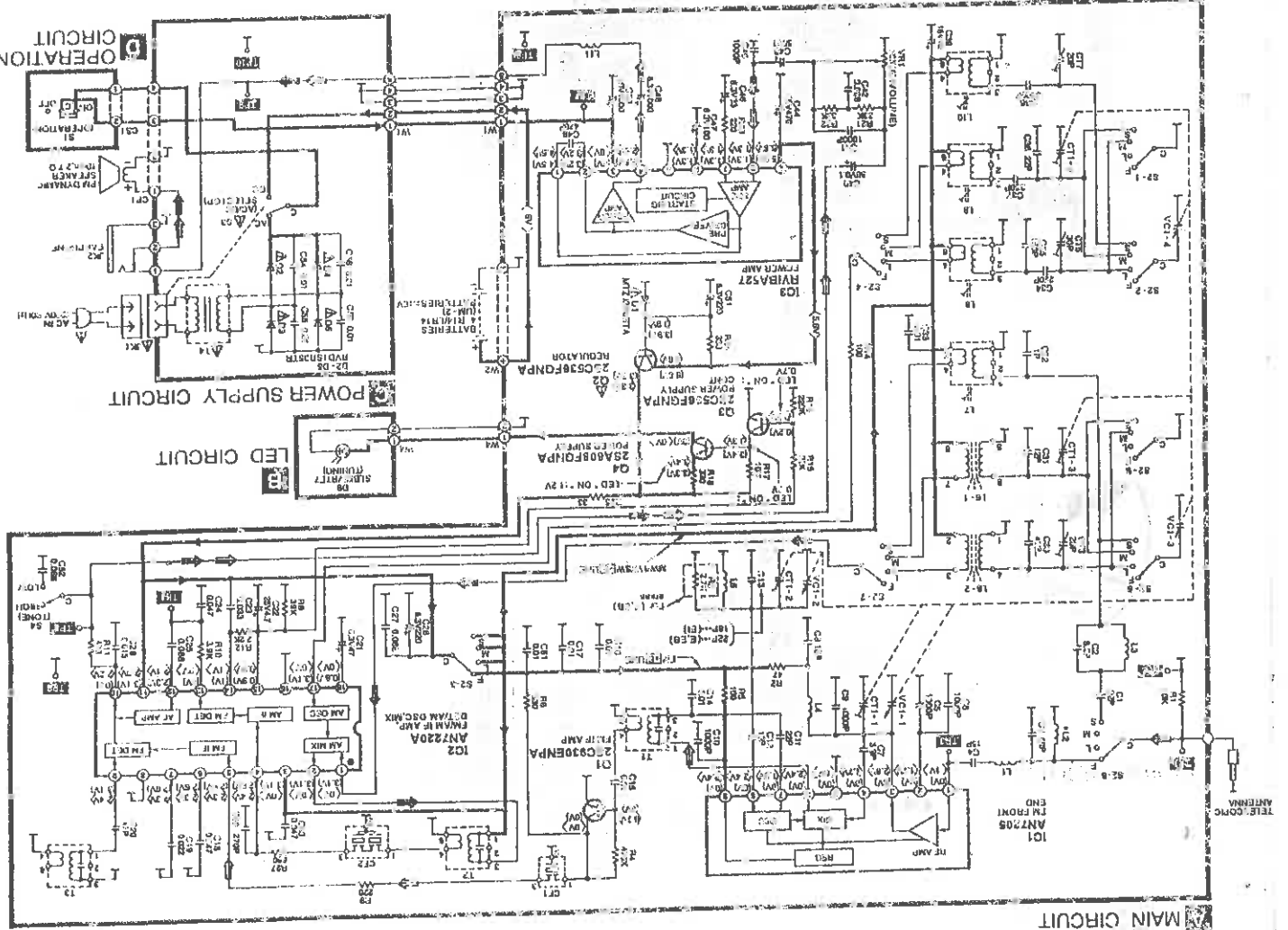


Speaker [EAS10P241JA3]

Remove the operation P.C.B.

Undo the pointer terminals.

Schematic Diagram



MAIN CIRCUIT

Notes:

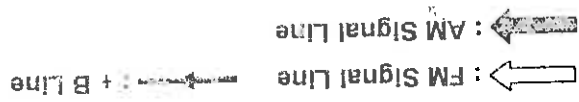
- S1 : Operation on/off switch to "ON" position.
- S2-1-S2-8 : Band select switch to "FM" position.
(F., FM, L., LW, M., MW, S., SW)
- S3 : AC/DC select switch to "DC" position.
- S4 : Tone select switch to "HIGH" position.
- VR1 : Volume control VR.

• Battery current:
Vol. min.: 36 mA (FM)
270 mA (AM)
Vol. max.: 246 mA (FM)
31 mA (AM)
Measurement instruction
AM (M/W/LW/SW) : 74 dB/m, 30% Mod.
FM : 60 dB, 30% Mod.

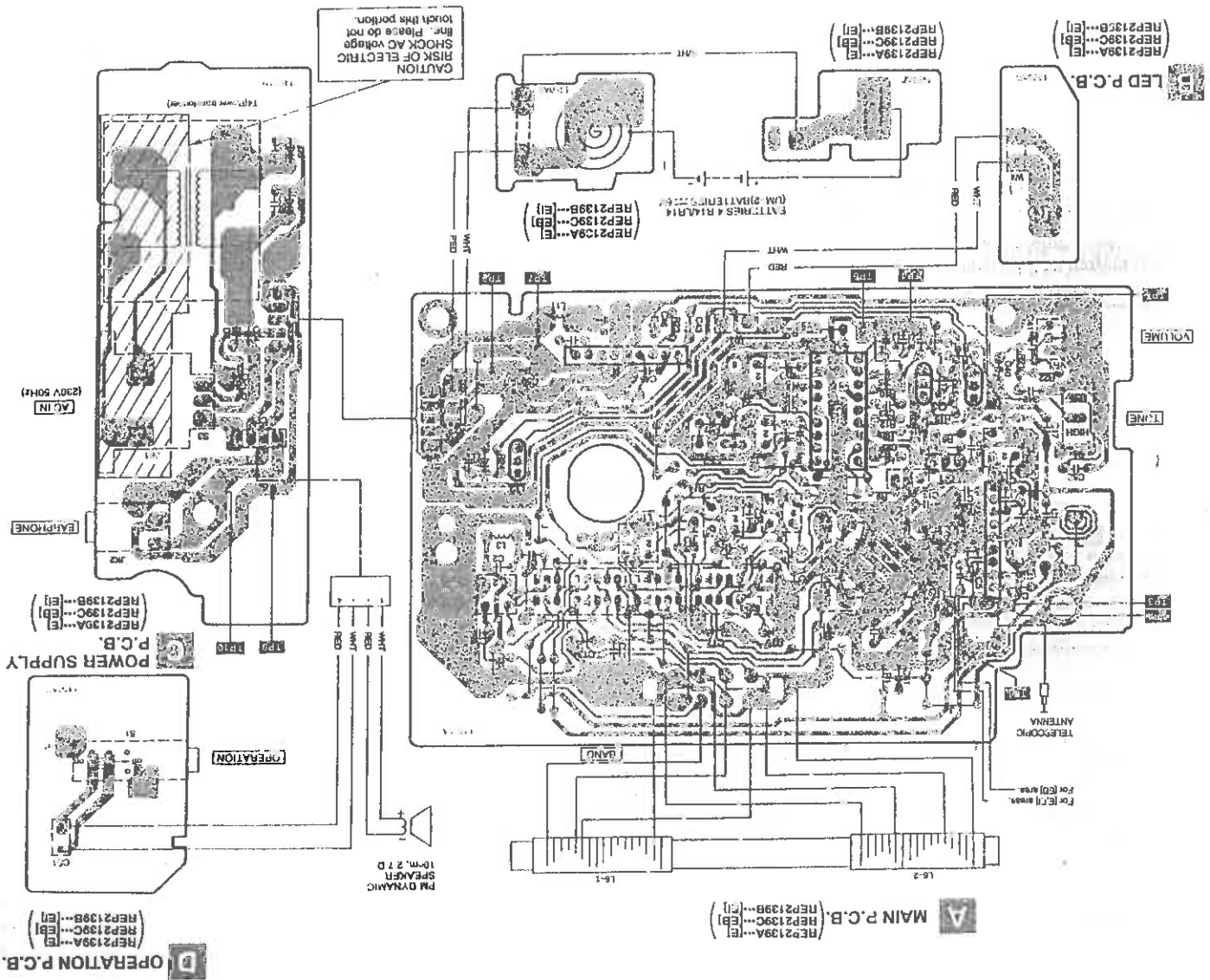
• DC voltage measurements are taken with electronics voltmeter.
The negative terminal of the battery provides negative meter connection point.
() AM (M/W/LW/SW) > > FM

• Important safety notice
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

• This schematic diagram may be modified at any time with the development of new technology.



Printed Circuit Board and Wiring Connection Diagram



* This circuit board diagram may be modified at any time with the development of new technology.

AN7220A 10 18 9	MTJ3R9B7A Anode Ca Cathode	RVD1SR35TR Anode A Cathode Ca	SLB5VTR7E Anode A Cathode Ca
BA527 9	AN7205 9	AN7205 9	BA527 9
2SA608FGNPA 2SC536FGNPA 2SC930ENPA			

Measurements and Adjustments

ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set power source voltage to 0 V DC.
- Set operation switch to ON.
- Set band select switch to FM, LW, MW or SW.

AM ALIGNMENT

(The parts other than the ones listed below are aligned at the factory before they are supplied. Therefore, alignment of these parts is unnecessary when used for replacement.)

SIGNAL GENERATOR or SWEEP GENERATOR		INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)		ADJUSTMENT (Refer to Fig. 1)		REMARKS
CONNECTIONS	FREQUENCY	RADIO DIAL SETTING	FREQUENCY			
Fashion a loop of several turns of wire and route it as a signal into the loop ant. of receiver.	459 KHZ	Point of non-interference (on/about 600 KHz)	Earphone Jack (80)	T2 (AM IFT)	Adjust for maximum output.	
AM-IF ALIGNMENT						
LW-RF ALIGNMENT						
"	(E)(EB): 136 KHz (E): 137 = 5 KHz	Tuning capacitor fully closed.	"	L8 (LW OSC Coil)	"	"
"	(E)(EB): 297 KHz (E): 297 = 5 KHz	Tuning capacitor fully open.	"	CT5 (LW OSC Trimmer)	"	"
"	145 KHz	Tune to signal	"	(*) L8-2 (LW ANT Coil)	Adjust for maximum output along the ferrite core.	"
"	235 KHz	Tune to signal.	"	CT3 (LW ANT Trimmer)	Adjust for maximum output. Repeat steps (2)-(5).	"

(*) For antenna coil with wax after completing alignment.

MW-RF ALIGNMENT

"	(E)(EB): 511 KHz (E): 514 = 3 KHz	Tuning capacitor fully closed.	"	L9 (MW OSC Coil)	Adjust for maximum output.
"	(E)(EB): 1620 KHz (E): 1639 = 5 KHz	Tuning capacitor fully open.	"	CT1-4 (MW OSC Trimmer)	Adjust for maximum output.
"	550 KHz	Tune to signal	"	(*) L8-1 (MW ANT Coil)	Adjust for maximum output along the ferrite core.
"	1100 KHz	Tune to signal	"	CT1-5 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (6)-(7).

(*) For antenna coil with wax after completing alignment.

SW-RF ALIGNMENT

"	5.75 MHz	Tuning capacitor fully closed.	"	L10 (SW OSC Coil)	Adjust for maximum output.
"	18.8 Hz	Tuning capacitor fully open.	"	CT7 (SW OSC Trimmer)	Adjust for maximum output.
"	5.9 MHz	Tune to signal	"	L7 (SW ANT Coil)	Adjust for maximum output. Repeat steps (10)-(12).

FM ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)		ADJUSTMENT (Refer to Fig. 1)		REMARKS
CONNECTIONS	FREQUENCY	RADIO DIAL SETTING	FREQUENCY			
FM-IF ALIGNMENT						
Connect to test point: (13) through ceramic capacitor (100 pF). (negative side to test point: (12).)	10.7 MHz	Point of non-interference (on/about 90 MHz)	Connect vnt. amp. scope to test point (15). Negative side to test point: (12).	T1 (FM 1st IFT)	Waveform is shown in Fig. 3.	
"	"	"	"	T3 (FM 2nd IFT)	Waveform is shown in Fig. 4.	
FM-RF ALIGNMENT						
Connect to test point: (17) through FM dummy antenna. (negative side to test point: (12).)	(E)(EB): 95.2 MHz (E): 87.25 MHz = 50 KHz	Tuning capacitor fully closed.	Earphone Jack (80)	L5 (FM OSC Coil)	Adjust for maximum output.	
"	(E)(EB): 109.2 MHz (E): 109.3 MHz = 75 KHz	Tuning capacitor fully open.	"	CT1-2 (FM OSC Trimmer)	"	
"	91.0 MHz	Tune to signal	"	L4 (FM ANT Coil)	"	
"	103.0 MHz	Tune to signal	"	CT1-1 (FM ANT Trimmer)	Adjust for maximum output. Repeat steps (15)-(18).	

ALIGNMENT POINTS

• Please refer to Printed Circuit Board Diagram for test point locations.

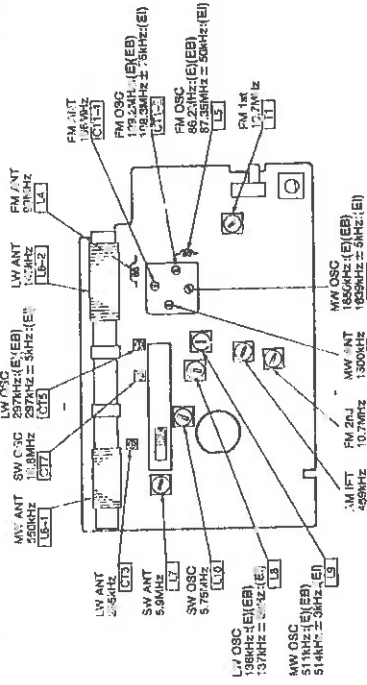


Fig. 1

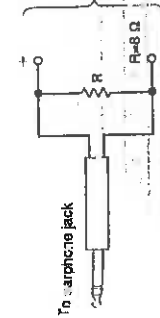


Fig. 2



Fig. 3



Fig. 4

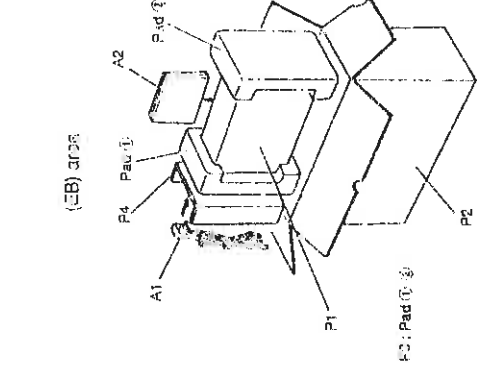
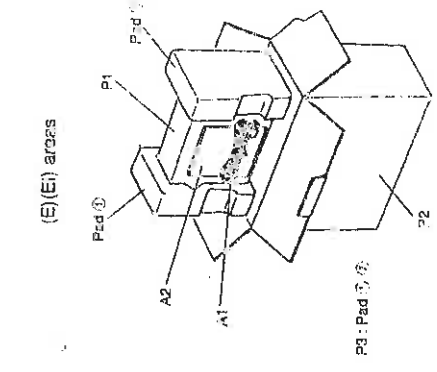
Replacement Parts List

Notes: * Abbreviations are given in the column of the part number.
 * Components are listed by their manufacturer's name as the source of the part.
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 * The name used for components in the Part No. column is the name of the manufacturer.
 * Parts which are listed in the Part No. column are those which are used in the circuit.
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Part No.	Part Name & Description	Quantity	Part No.	Part Name & Description	Quantity
IC3	INTEGRATED CIRCUIT (S)	1	IC3	IC3	1
IC4	IC4	1	IC4	IC4	1
IC5	IC5	1	IC5	IC5	1
IC6	IC6	1	IC6	IC6	1
IC7	IC7	1	IC7	IC7	1
IC8	IC8	1	IC8	IC8	1
IC9	IC9	1	IC9	IC9	1
IC10	IC10	1	IC10	IC10	1
IC11	IC11	1	IC11	IC11	1
IC12	IC12	1	IC12	IC12	1
IC13	IC13	1	IC13	IC13	1
IC14	IC14	1	IC14	IC14	1
IC15	IC15	1	IC15	IC15	1
IC16	IC16	1	IC16	IC16	1
IC17	IC17	1	IC17	IC17	1
IC18	IC18	1	IC18	IC18	1
IC19	IC19	1	IC19	IC19	1
IC20	IC20	1	IC20	IC20	1
IC21	IC21	1	IC21	IC21	1
IC22	IC22	1	IC22	IC22	1
IC23	IC23	1	IC23	IC23	1
IC24	IC24	1	IC24	IC24	1
IC25	IC25	1	IC25	IC25	1
IC26	IC26	1	IC26	IC26	1
IC27	IC27	1	IC27	IC27	1
IC28	IC28	1	IC28	IC28	1
IC29	IC29	1	IC29	IC29	1
IC30	IC30	1	IC30	IC30	1
IC31	IC31	1	IC31	IC31	1
IC32	IC32	1	IC32	IC32	1
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IC96	IC96	1	IC96	IC96	1
IC97	IC97	1	IC97	IC97	1
IC98	IC98	1	IC98	IC98	1
IC99	IC99	1	IC99	IC99	1
IC100	IC100	1	IC100	IC100	1

Part No.	Part Name & Description	Quantity
CABINET PARTS		
1	WIRELESS PAK FRONT CABINET ASSY	(E)
2	FRONT PANEL	(E)
3	REAR CABINET	(E)
4	REAR CABINET LIFT BOX ASSY	(E)
5	REAR CABINET LIFT BOX	(E)
6	REAR CABINET LIFT BOX ASSY	(E)
7	REAR CABINET LIFT BOX	(E)
8	REAR CABINET LIFT BOX	(E)
9	REAR CABINET LIFT BOX	(E)
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64	REAR CABINET LIFT BOX	(E)
65	REAR CABINET LIFT BOX	(E)
66	REAR CABINET LIFT BOX	(E)
67	REAR CABINET LIFT BOX	(E)
68	REAR CABINET LIFT BOX	(E)
69	REAR CABINET LIFT BOX	(E)
70	REAR CABINET LIFT BOX	(E)
71	REAR CABINET LIFT BOX	(E)
72	REAR CABINET LIFT BOX	(E)
73	REAR CABINET LIFT BOX	(E)
74	REAR CABINET LIFT BOX	(E)
75	REAR CABINET LIFT BOX	(E)
76	REAR CABINET LIFT BOX	(E)
77	REAR CABINET LIFT BOX	(E)
78	REAR CABINET LIFT BOX	(E)
79	REAR CABINET LIFT BOX	(E)
80	REAR CABINET LIFT BOX	(E)
81	REAR CABINET LIFT BOX	(E)
82	REAR CABINET LIFT BOX	(E)
83	REAR CABINET LIFT BOX	(E)
84	REAR CABINET LIFT BOX	(E)
85	REAR CABINET LIFT BOX	(E)
86	REAR CABINET LIFT BOX	(E)
87	REAR CABINET LIFT BOX	(E)
88	REAR CABINET LIFT BOX	(E)
89	REAR CABINET LIFT BOX	(E)
90	REAR CABINET LIFT BOX	(E)
91	REAR CABINET LIFT BOX	(E)
92	REAR CABINET LIFT BOX	(E)
93	REAR CABINET LIFT BOX	(E)
94	REAR CABINET LIFT BOX	(E)
95	REAR CABINET LIFT BOX	(E)
96	REAR CABINET LIFT BOX	(E)
97	REAR CABINET LIFT BOX	(E)
98	REAR CABINET LIFT BOX	(E)
99	REAR CABINET LIFT BOX	(E)
100	REAR CABINET LIFT BOX	(E)

Packaging



Cabinet Parts Location

