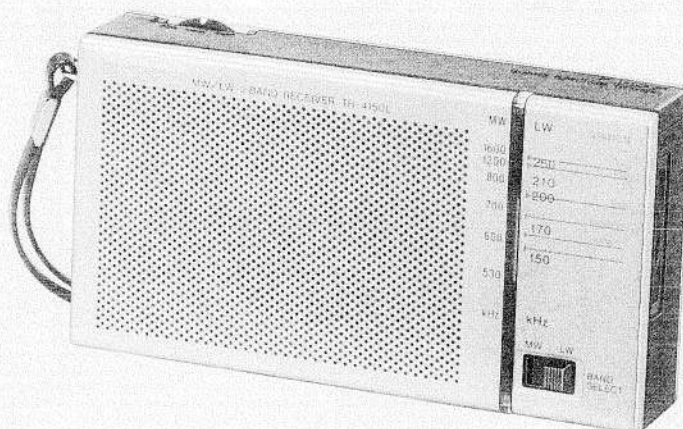


TR-4150L

*AEP Model
UK Model*



MW/LW 2-BAND RADIO

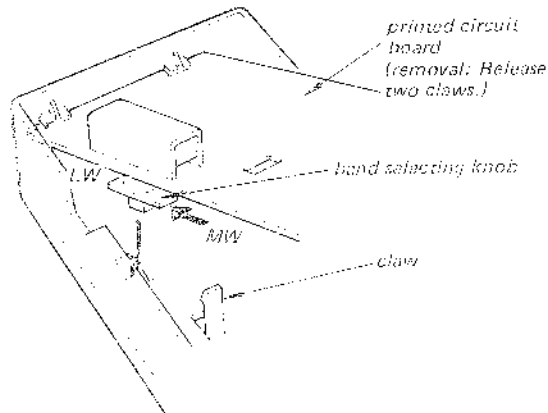
SPECIFICATIONS

- Power Requirement:** 3 V dc, two batteries
IEC designation R6 (size AA)
- Frequency Range:** MW: 530–1,605 kHz (566–187 m)
LW: 150–255 kHz (2,000–1,176 m)
- Antenna:** Built-in ferrite-rod antenna
- Speaker:** Approx. 5.7 cm (2 $\frac{1}{4}$ inches) dia.
- Power Output:** 90 mW (at 10% harmonic distortion)
- Output:** Earphone jack (minijack)
- Dimensions:** Approx. 147 (w) x 76 (h) x 35 (d) mm
5 $\frac{3}{4}$ (w) x 3 (h) x 1 $\frac{3}{8}$ (d) inches
including projecting parts and controls
- Weight:** Approx. 280 g (10 oz)
including batteries

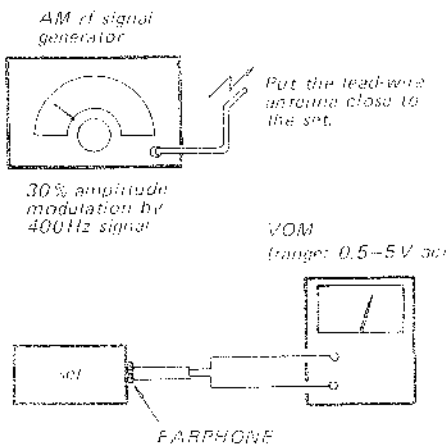
SONY
SERVICE MANUAL

CAUTION OF PRINTED CIRCUIT BOARD INSTALLATION

When installing the printed circuit board, set the band selecting switch to the LW position.
 (If the band selecting switch is in MW position, the knob may be spoiled.)



1. ELECTRICAL ADJUSTMENT

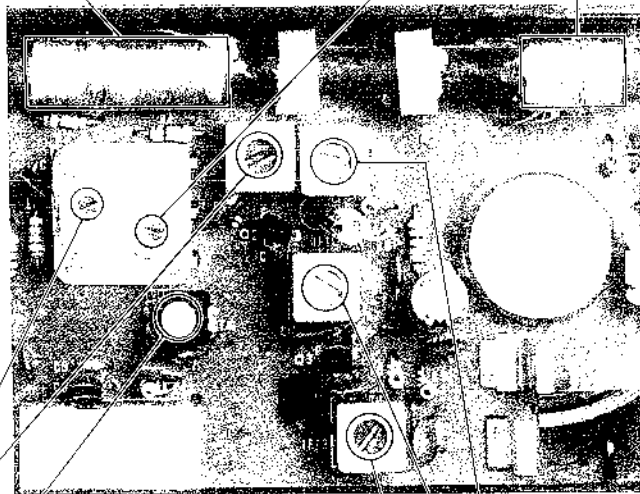


Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

LW TRACKING ADJUSTMENT	
Adjust for maximum reading on VOM.	
1.2	200 kHz

MW TRACKING ADJUSTMENT	
Adjust for maximum reading on VOM.	
1.680 kHz	620 kHz
CT1-1	L1

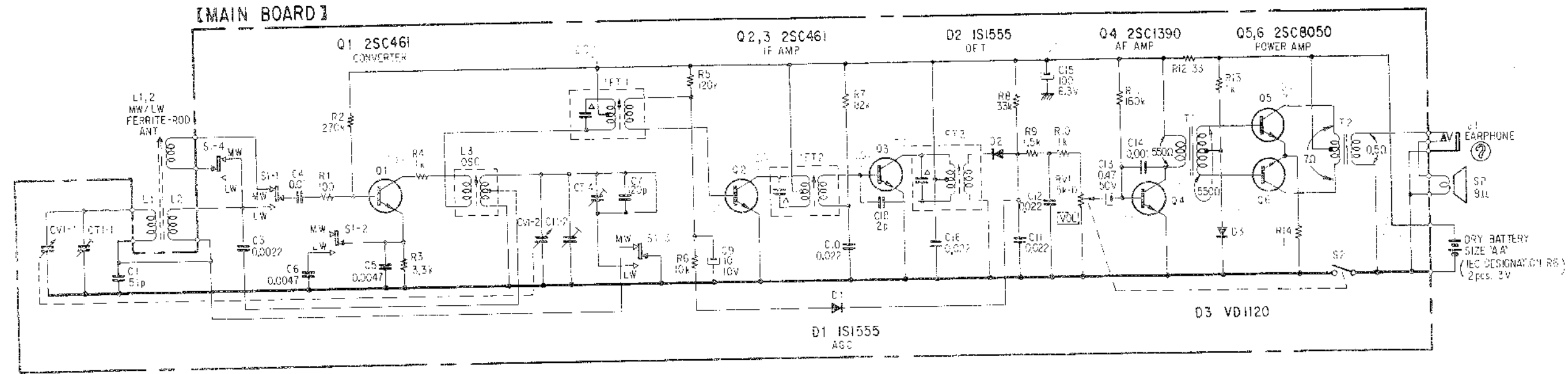
MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for maximum reading on VOM.	
1.680 kHz	CT1-2
520 kHz	L3



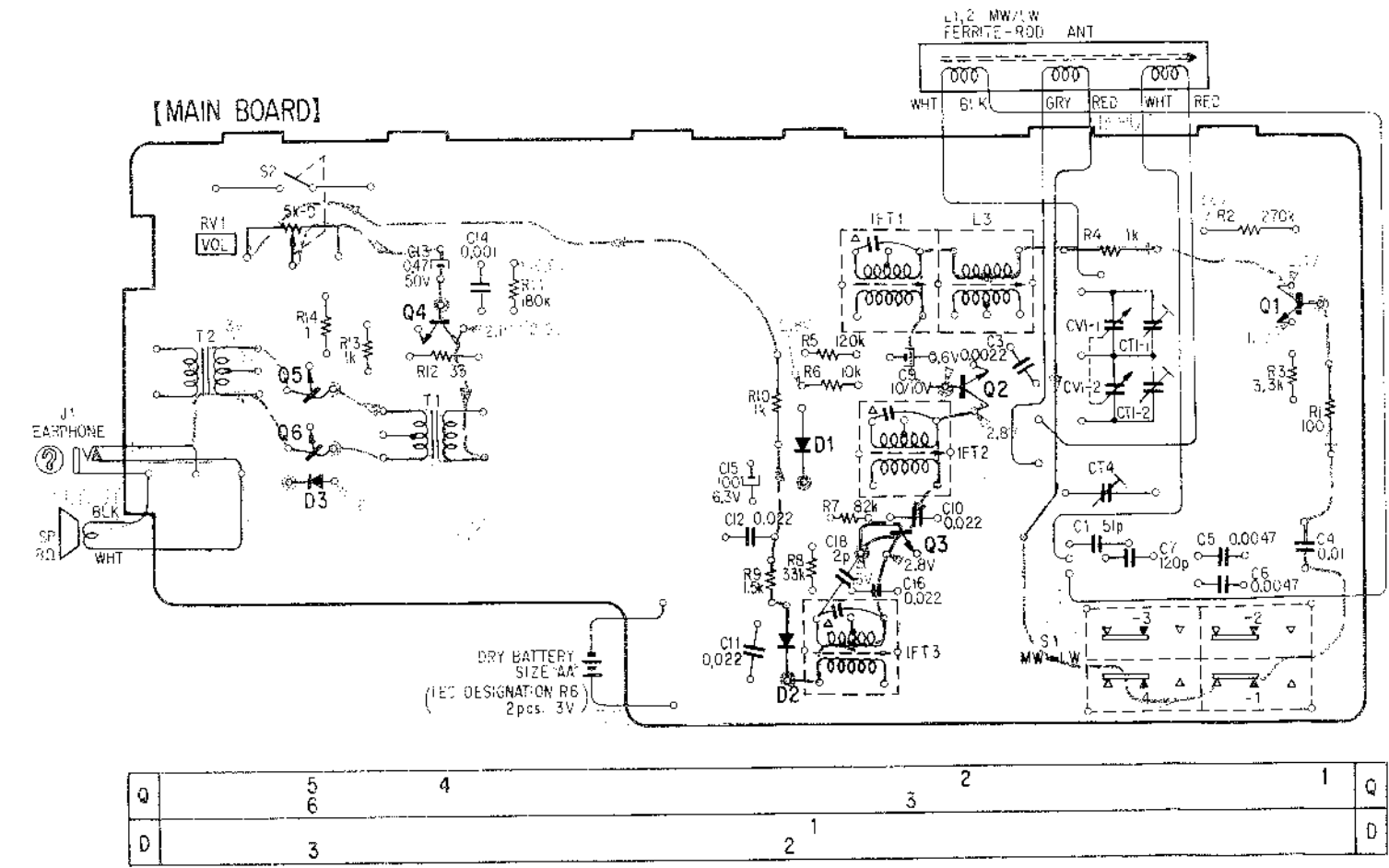
C14	260 kHz
Adjust for a maximum reading on VOM.	
LW FREQUENCY COVERAGE ADJUSTMENT	

IFT1, 2, 3	468 kHz
Adjust for maximum reading on VOM.	
MW TUNING ALIGNMENT	

2-1. SCHEMATIC DIAGRAM



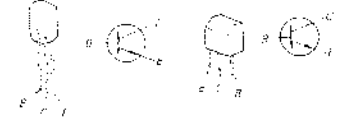
2-2. MOUNTING DIAGRAM
- Conductor Side -



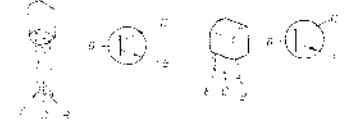
Replacement Semiconductors

For replacement, use semiconductors except in ().

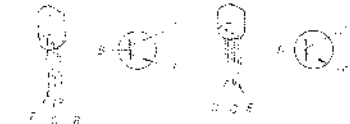
Q1-3: 2SC710 (2SC461)



Q4: 2SC1364 (2SC1390)



Q5, 6: 2SC2001 (2SC8050)



D1, 2: IS1555



D3: VD1120



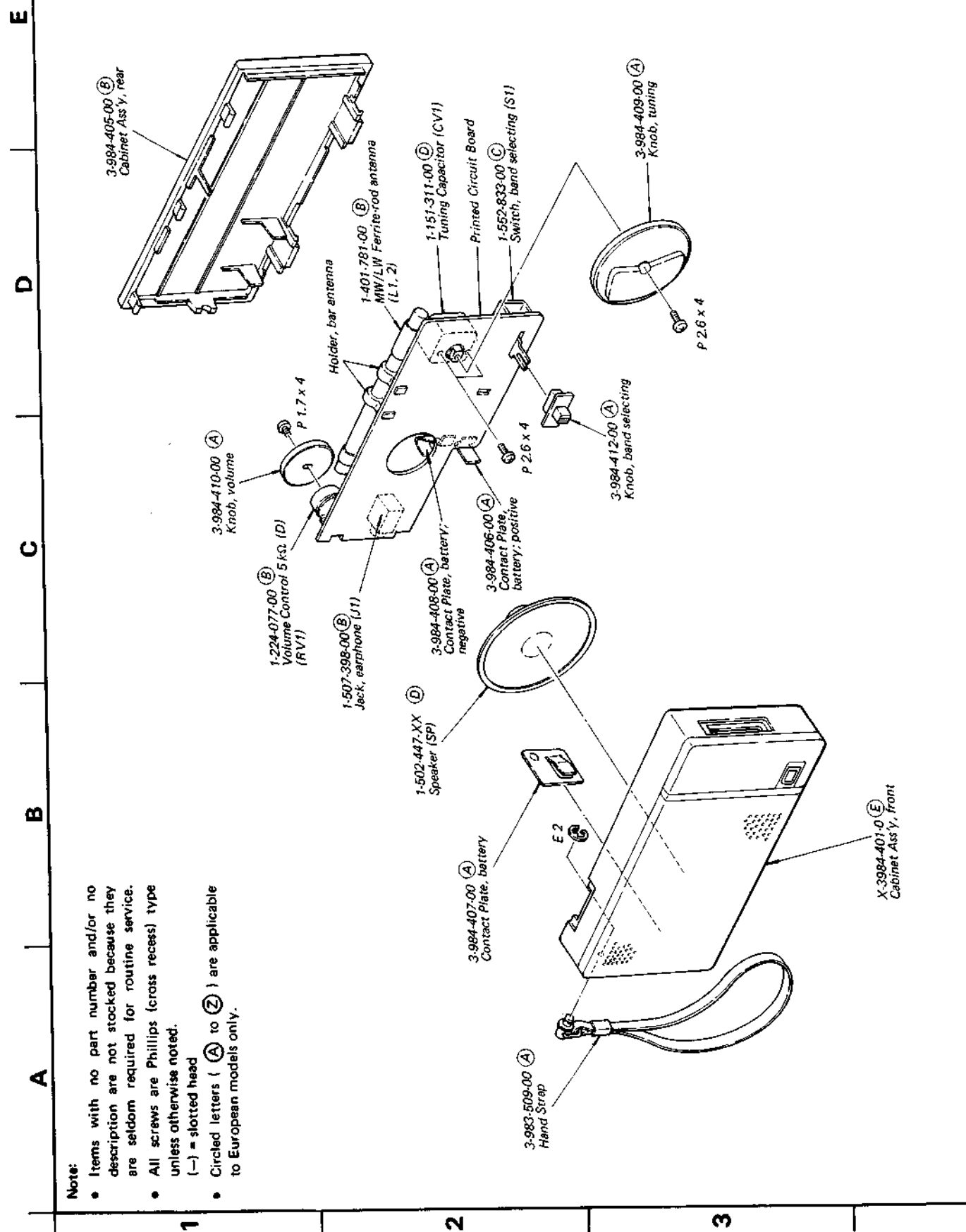
[Note for schematic diagram]

- All capacitors are in μF unless otherwise noted. $\mu F = \mu F$. 50WV or less are not indicated except for electrolytics.
- Internal components.
- Panel designation.
- All resistors are in ohms and $k\Omega$, $M\Omega$: 1000 Ω ; $M\Omega$: 1000 $k\Omega$.

[Note for mounting diagram]

- Indicates side identified with part number.
- DC resistance measurements are with coils connected on the circuit board, and are approximate.

3 EXPLODED VIEW



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head
- Circled letters (A) to (Z) are applicable to European models only.

4. ELECTRICAL PARTS LIST

Ref. No. Part No. Description

SEMICONDUCTORS

Transistors

- ⇒ Q1-3 8-729-671-13 (B) 2SC710
- ⇒ Q4 8-729-663-47 (B) 2SC1364
- ⇒ Q5, 6 8-729-100-13 (B) 2SC2001

Diodes

- D1, 2 8-719-815-55 (A) 1S1555
- D3 8-719-112-01 (A) VD1120

COILS & TRANSFORMERS

- IFT1, 2 1-404-060-00 (B) IFT
- IFT3 1-404-061-00 (B) IFT
- L1, 2 1-401-781-00 (B) Ant, ferrite-rod; MW/LW
- L3 1-405-736-00 (B) OSC coil
- T1 1-423-194-00 (C) Transformer, input
- T2 1-427-357-XX (C) Transformer, output

CAPACITORS

All capacitors are in μF and ceramic unless otherwise noted. 50 WV or less are not indicated except for electrolytics. p: μF, elect: electrolytic

- C1 1-101-882-00 (A) 51 p
- C3 1-108-563-00 (A) 0.0022 mylar
- C4 1-101-923-00 (A) 0.01
- C5, 6 1-108-571-00 (A) 0.0047 mylar
- C7 1-107-087-00 (A) 120 p silvered mica
- C9 1-121-651-00 (A) 10 16 V elect
- C10-12 1-101-924-00 (A) 0.022
- C13 1-121-726-00 (A) 0.47 50 V elect
- C14 1-101-455-00 (A) 0.001
- C15 1-121-413-00 (A) 100 6.3 V elect
- C16 1-101-924-00 (A) 0.022
- CT4 1-141-138-XX (C) Trimmer
- CV1 1-151-311-00 (D) Tuning

⇒ Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

Note: Circled letters (A) to (Z) are applicable to European models only.

Ref. No. Part No. Description

RESISTORS

Common 1/4W carbon resistors are omitted. Check schematic diagram for their values.

- RV1 1-224-077-00 (B) Variable, 5 kΩ-D; VOL (including S2)

MISCELLANEOUS

- J1 1-507-398-00 (B) Jack, earphone
- S1 1-552-833-00 (C) Switch, band selecting
- S2 Switch, power (included in RV1)
- SP 1-502-447-XX (D) Speaker

ACCESSORIES & PACKING MATERIALS

Part No.	Description
3-701-621-00	(A) Bag, plastic
3-984-415-00	(A) Carton (including instruction manual)
3-984-416-11	(A) Manual, instruction; German & French (AEP model)

Sony Corporation

9-950-450-01

© 1978

78L0564-1
Printed in Japan