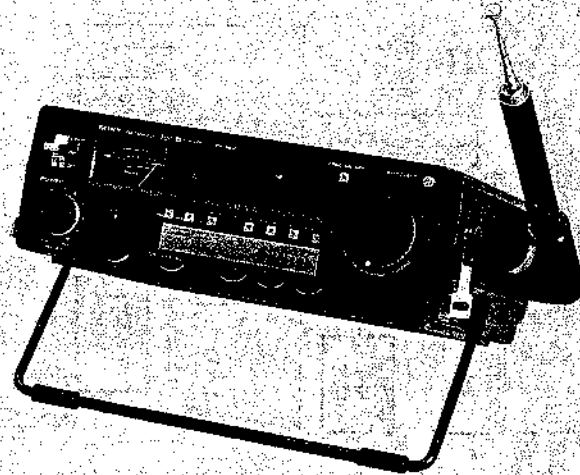


ICF-8650

*US Model
AEP Model
E Model*



**FM/MW/AIR
3 BAND RECEIVER**

SPECIFICATIONS

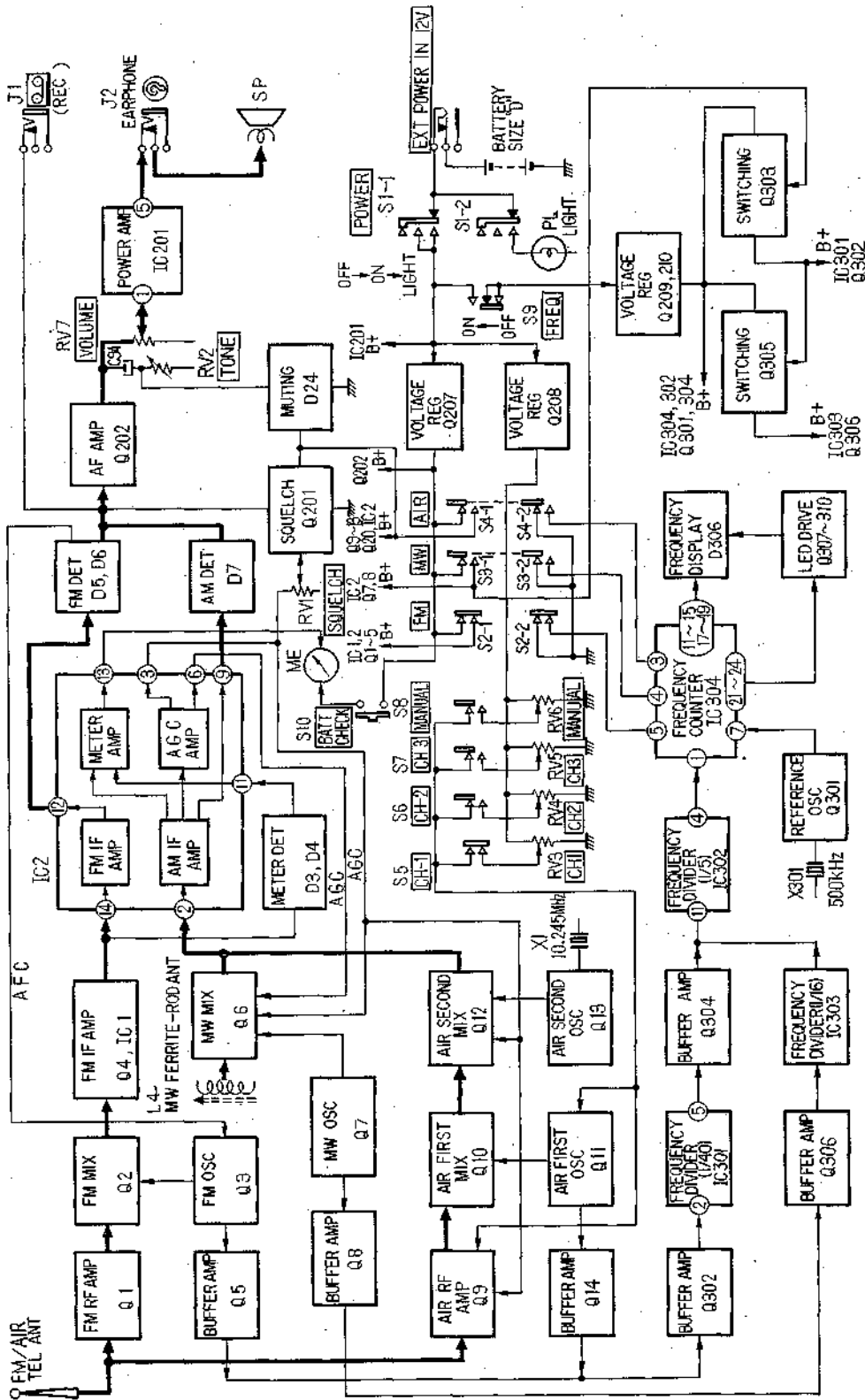
- Antennas:** AIR/FM: Telescopic antenna, external antenna terminals
MW: Built-in ferrite-rod antenna
- Frequency Range:** AIR 118 – 136 MHz
FM 76 – 108 MHz
MW 530 – 1,605 kHz
- Speaker:** Approx. 9.2cm (3½ inches) dia.
- Power Output:** 1,000 mW (at 10% harmonic distortion)
- Outputs:** Recording (minijack)
Earphone (minijack)
- Power Requirements:** 12 V dc, eight batteries size D (IEC designation R20)
120 V ac, 60 Hz with optional Sony AC Power Adaptor AC-12 (US model)
110, 127, 220, or 240 V ac, 50 Hz with optional Sony AC Power Adapter AC-122 (AEP model)
110, 120, 220 or 240 V ac, 50/60 Hz with optional Sony AC Power Adapter AC-122 (E model)
12 V car battery with optional Sony Car Battery Cord DCC-9
- Power Consumption:** 8.7 W ac with Sony AC Power Adaptor AC-12 (US model)
- Dimensions:** Approx. 255(w) x 215(h) x 82(d) mm
10¹/₈ (w) x 8½ (h) x 3¼ (d) inches including projecting parts and controls not including Telescopic Antenna
- Weight:** 3.2 kg, 7 lb 1 oz, including batteries

SONY®
SERVICE MANUAL

1233

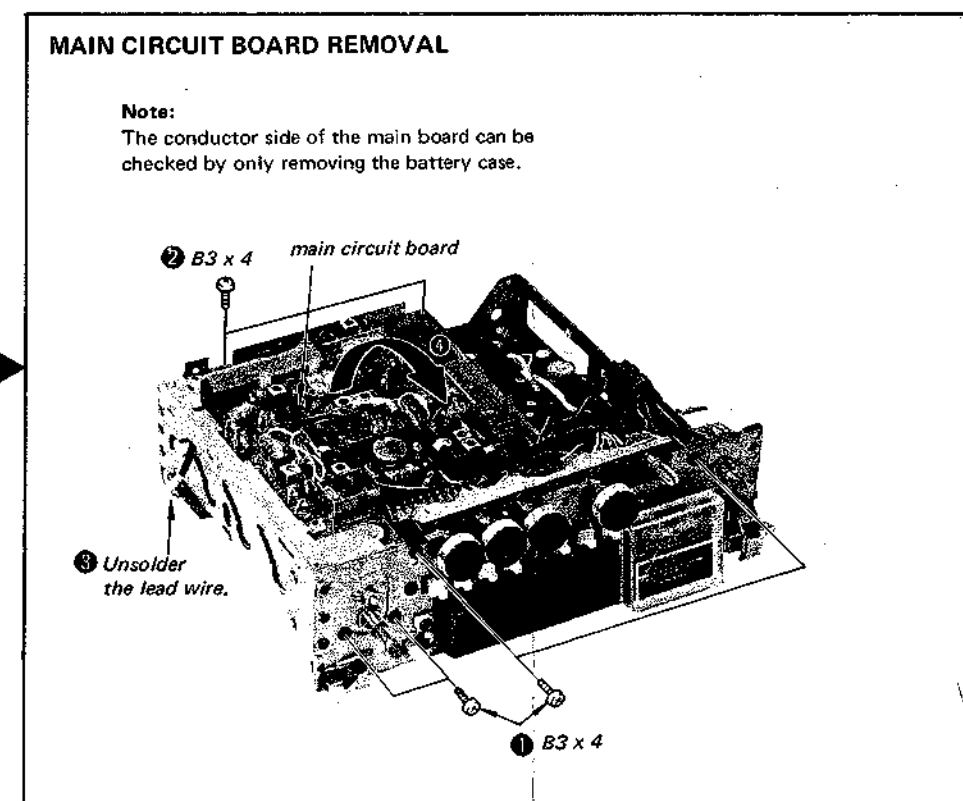
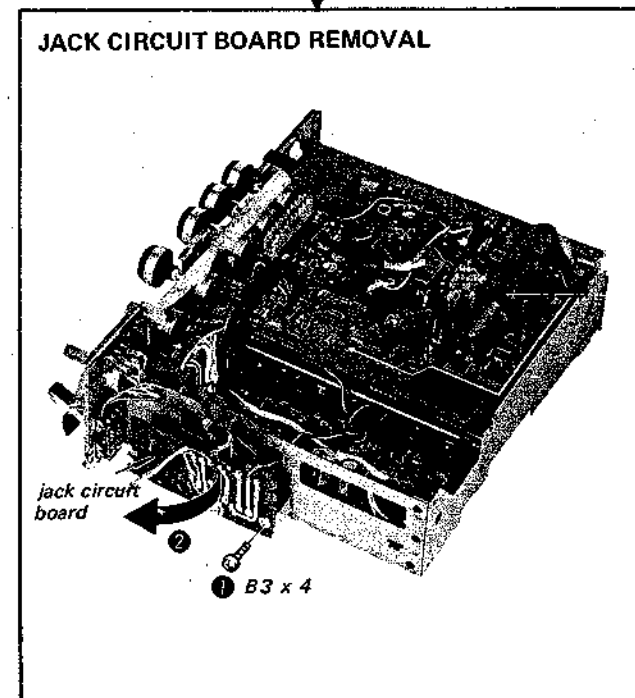
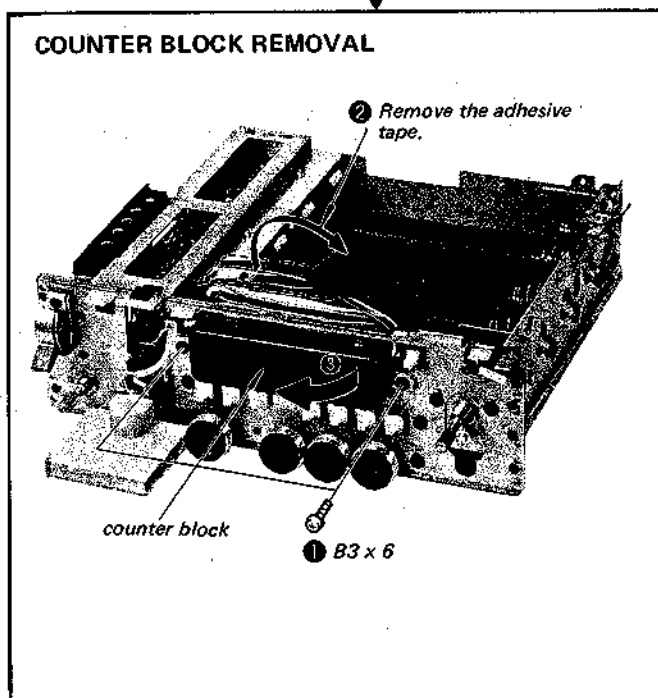
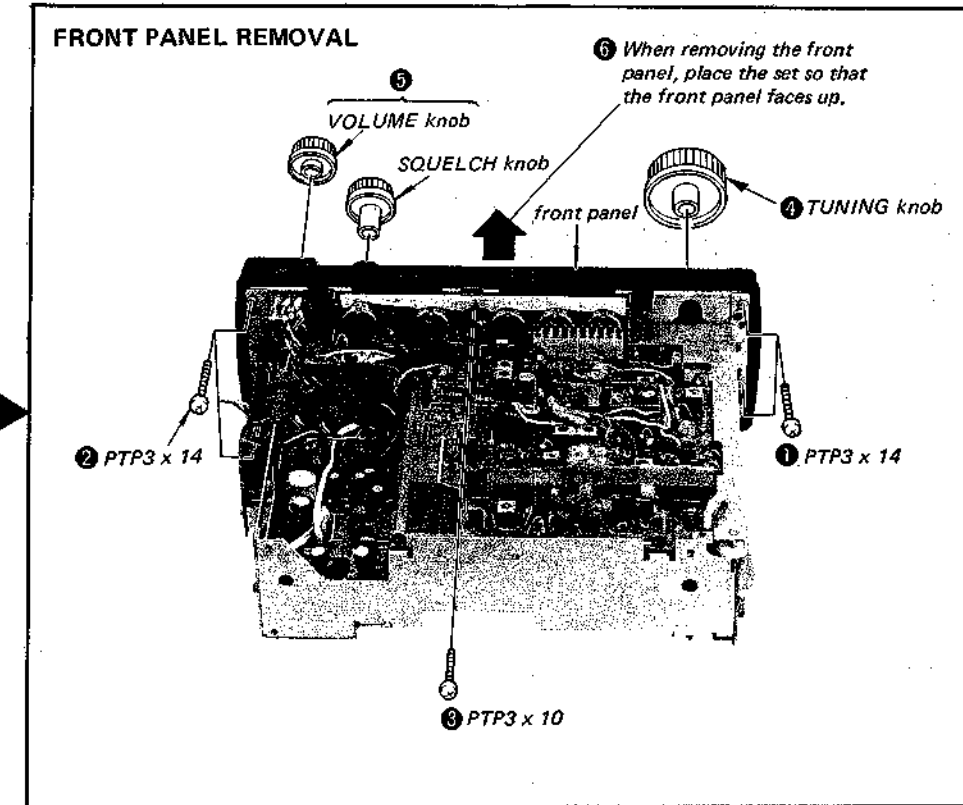
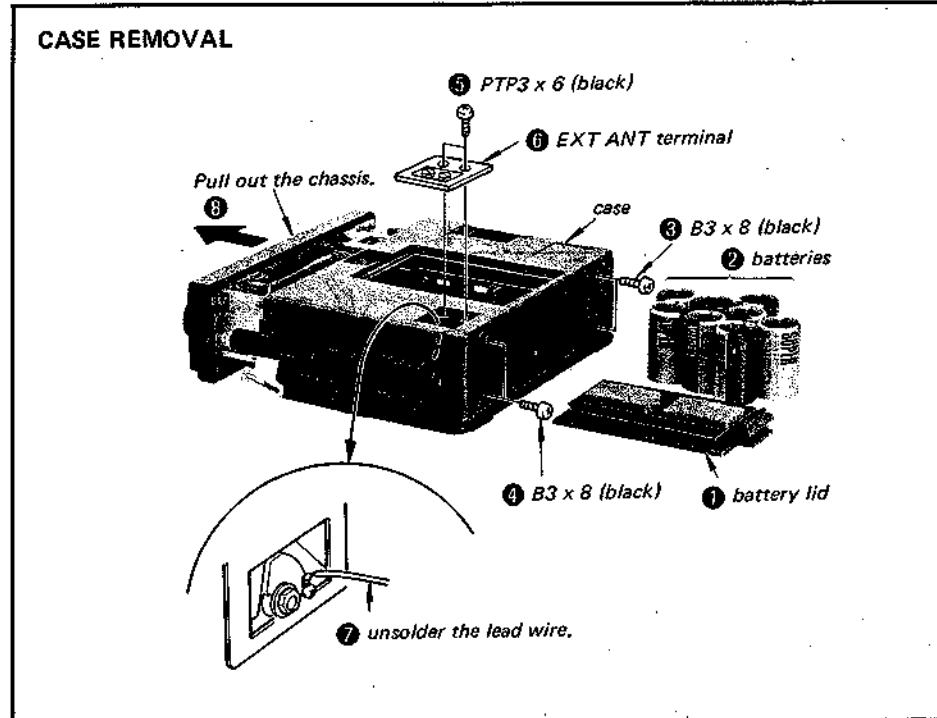
SECTION 1
OUTLINE

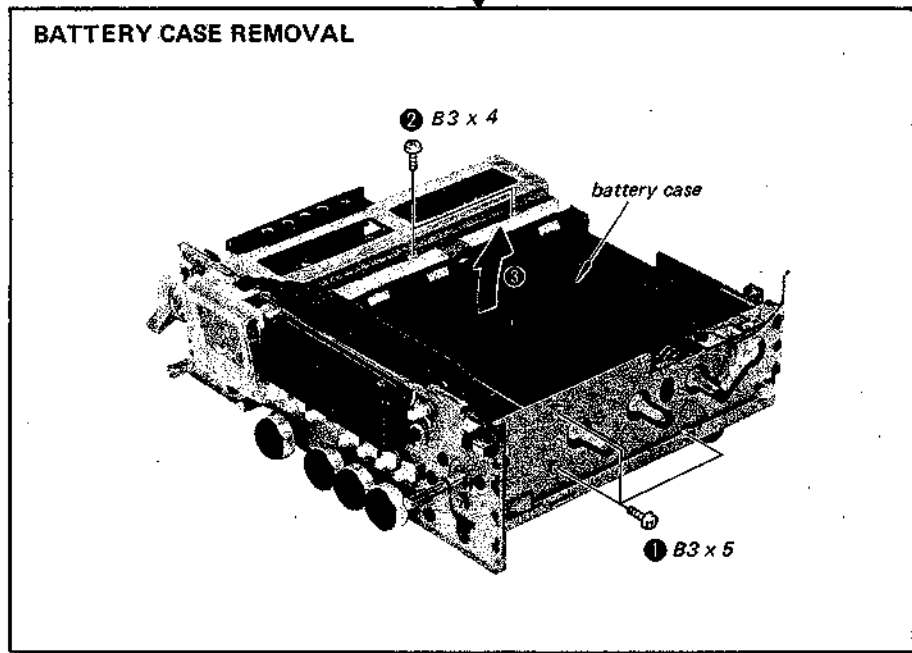
1-1. BLOCK DIAGRAM



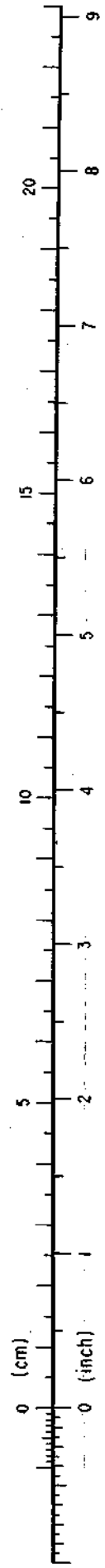
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

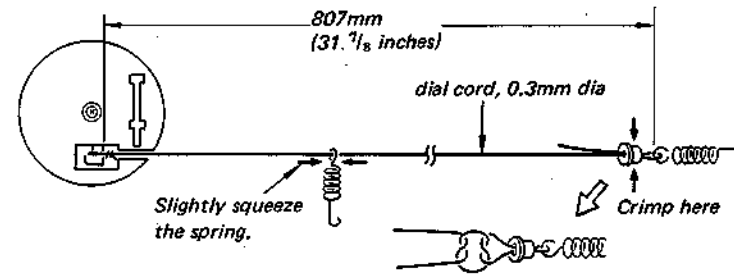




DIAL CORD STRINGING
• See page 6.

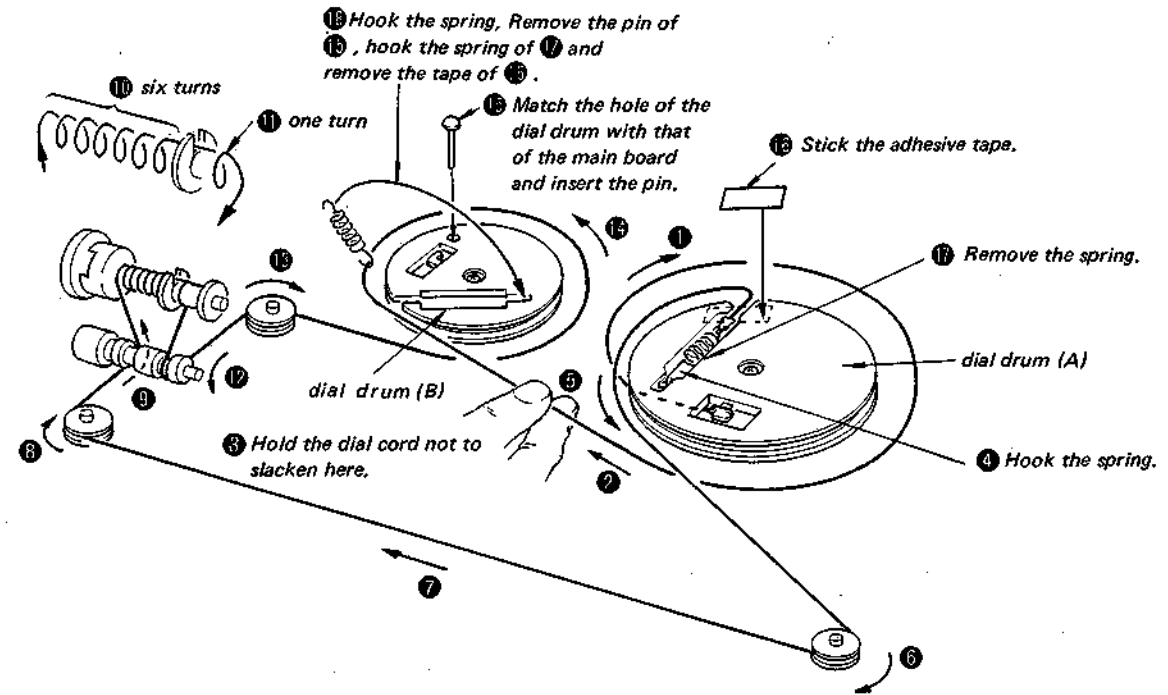


DIAL CORD STRINGING
1) Dial Cord Preparation



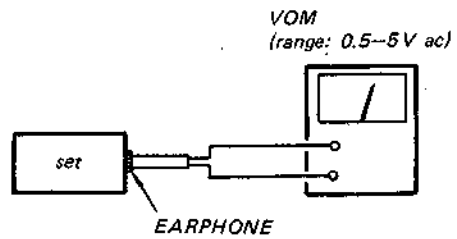
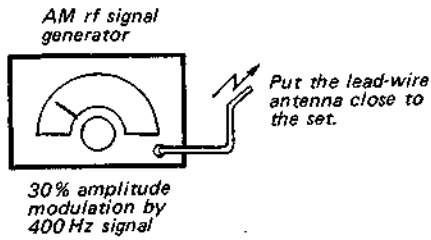
2) Stringing

Turn the dial drum (A) fully counterclockwise and position the dial drum (B) as shown below.

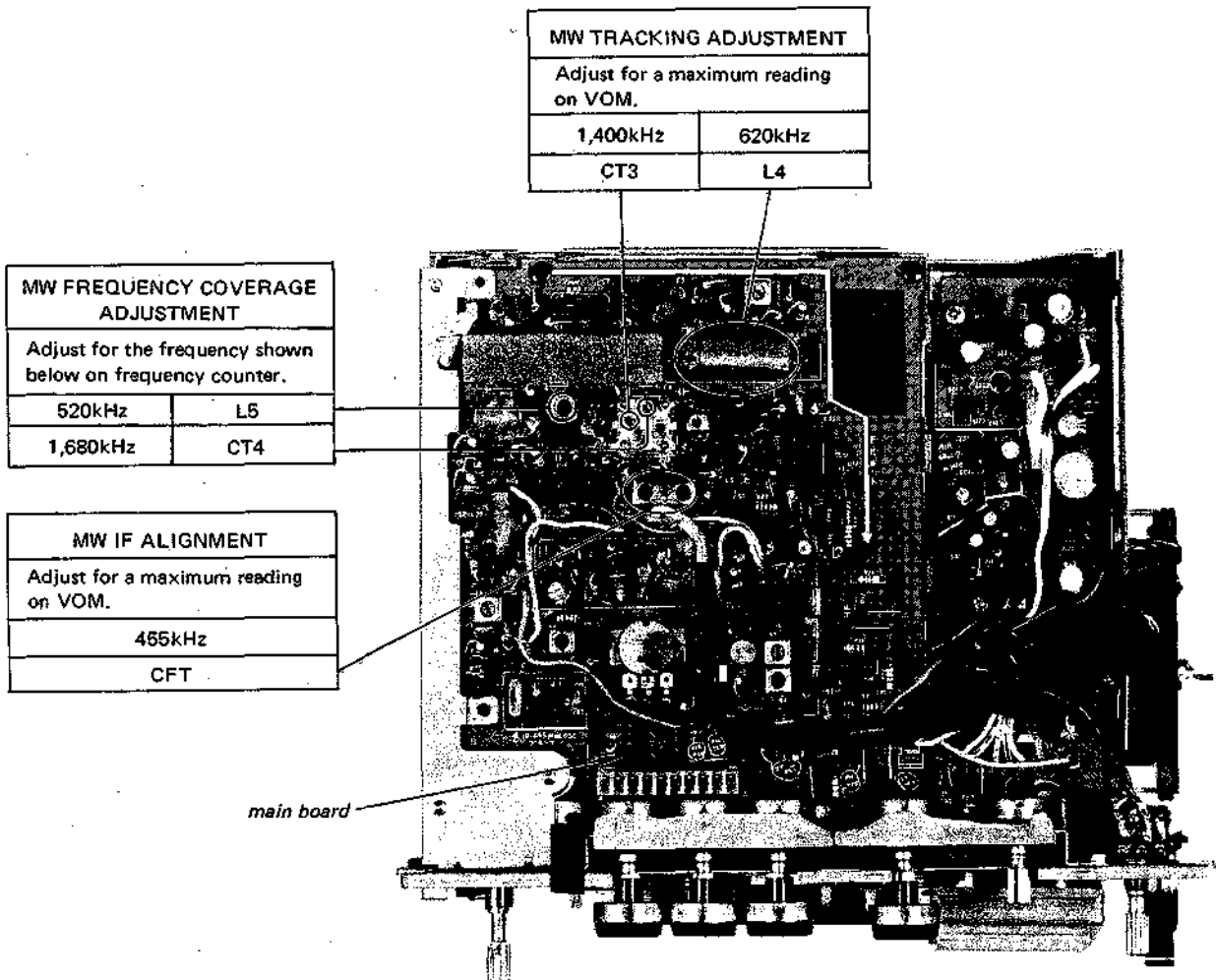


SECTION 3 ADJUSTMENTS

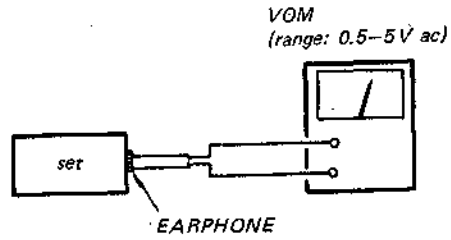
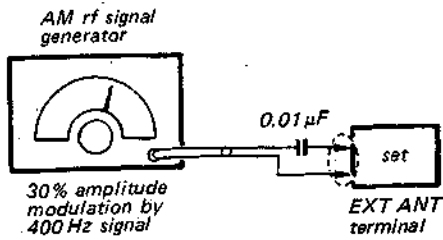
• **AM SECTION**



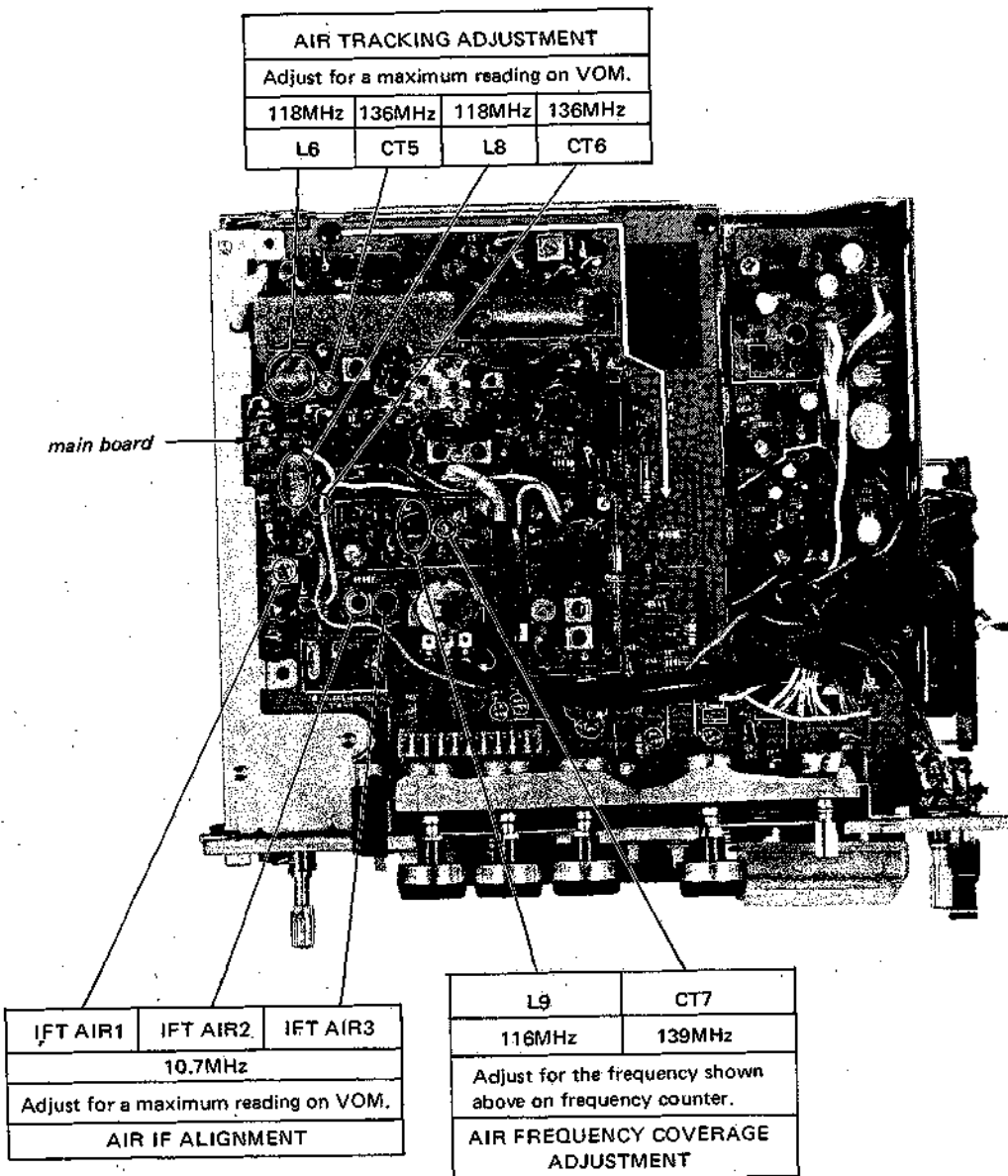
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.



• AIR SECTION



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

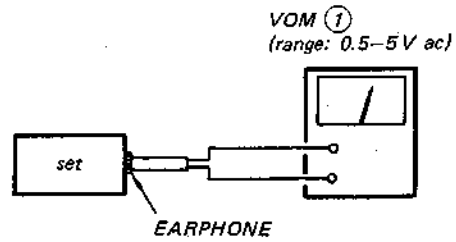
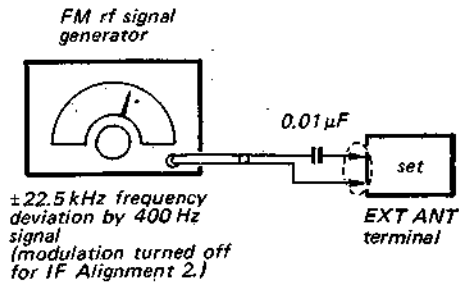


AIR TRACKING ADJUSTMENT			
Adjust for a maximum reading on VOM.			
118MHz	136MHz	118MHz	136MHz
L6	CT5	L8	CT6

IFT AIR1	IFT AIR2	IFT AIR3
10.7MHz		
Adjust for a maximum reading on VOM.		
AIR IF ALIGNMENT		

L9	CT7
116MHz	139MHz
Adjust for the frequency shown above on frequency counter.	
AIR FREQUENCY COVERAGE ADJUSTMENT	

• FM SECTION

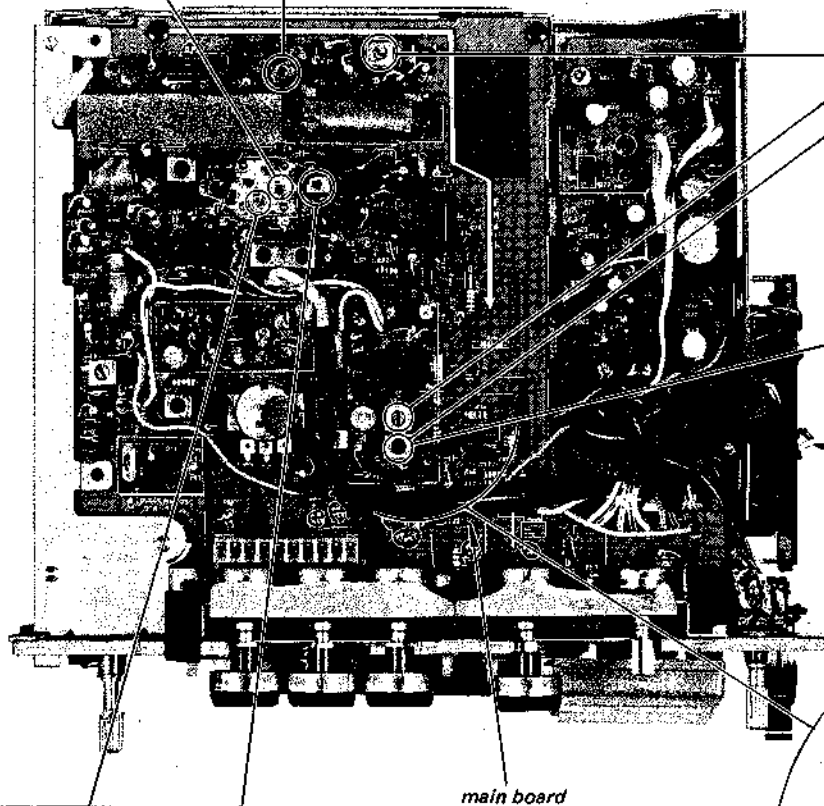


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

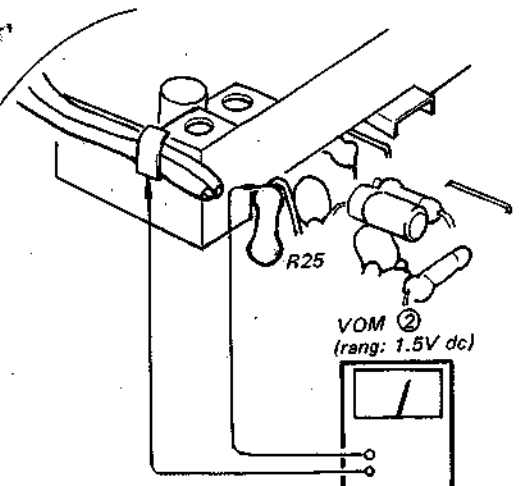
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM ①.	
109MHz	75MHz
CT1	L2

FM IF ALIGNMENT 1	
Adjust for a maximum reading on VOM ①.	
IFT F1	10.7MHz with modulation
IFT F2	
IFT F3	

FM IF ALIGNMENT 2	
Adjust for 0V dc reading on VOM ②.	
10.7MHz with no modulation	
IFT F3	



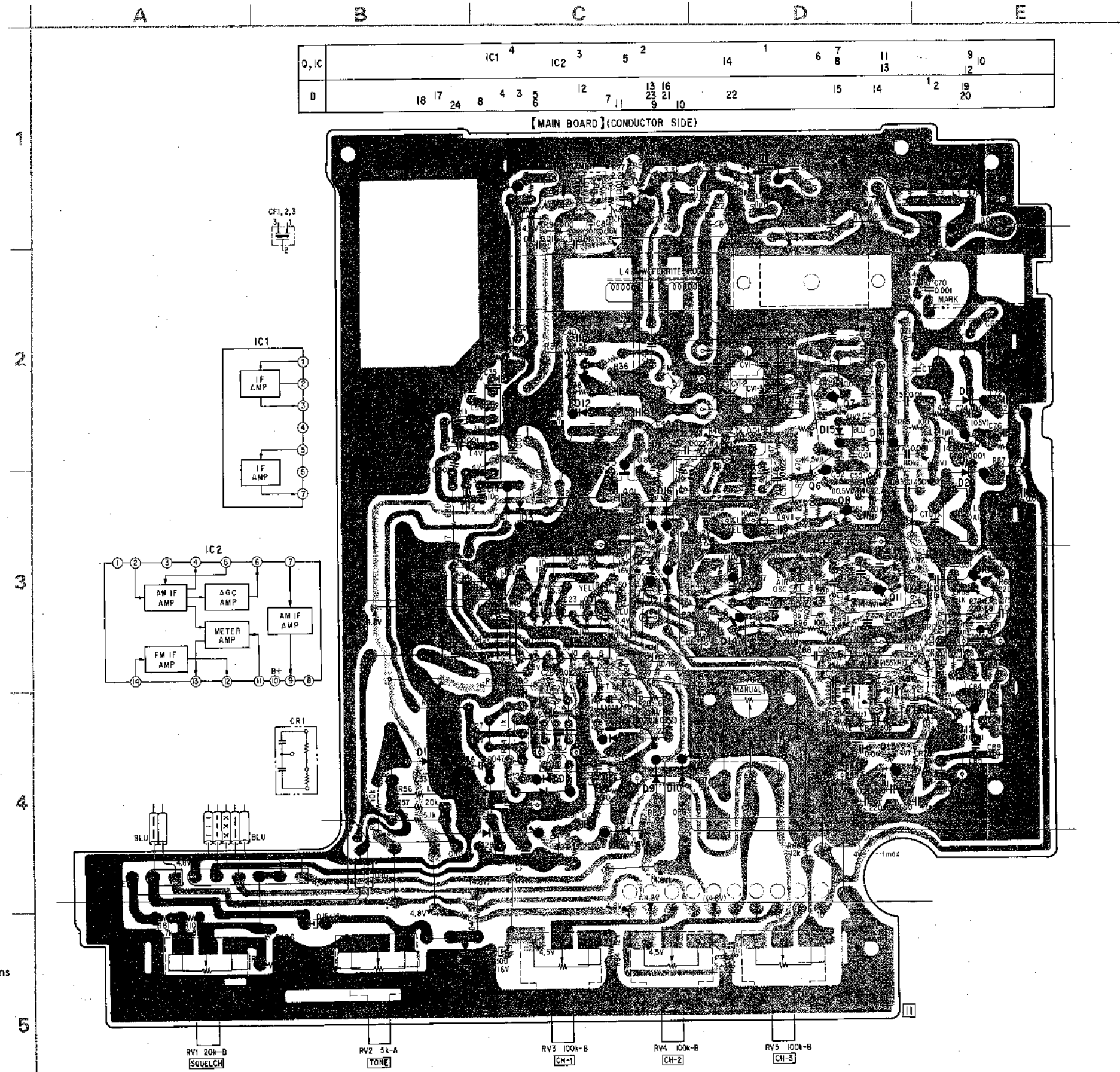
CT2	L3
109MHz	75MHz
Adjust for the frequency shown above on frequency counter.	
FM FREQUENCY COVERAGE ADJUSTMENT	



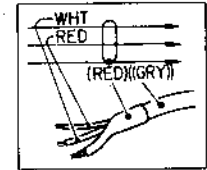
SECTION 4
DIAGRAMS


4-1. MOUNTING DIAGRAM

- Conductor Side -

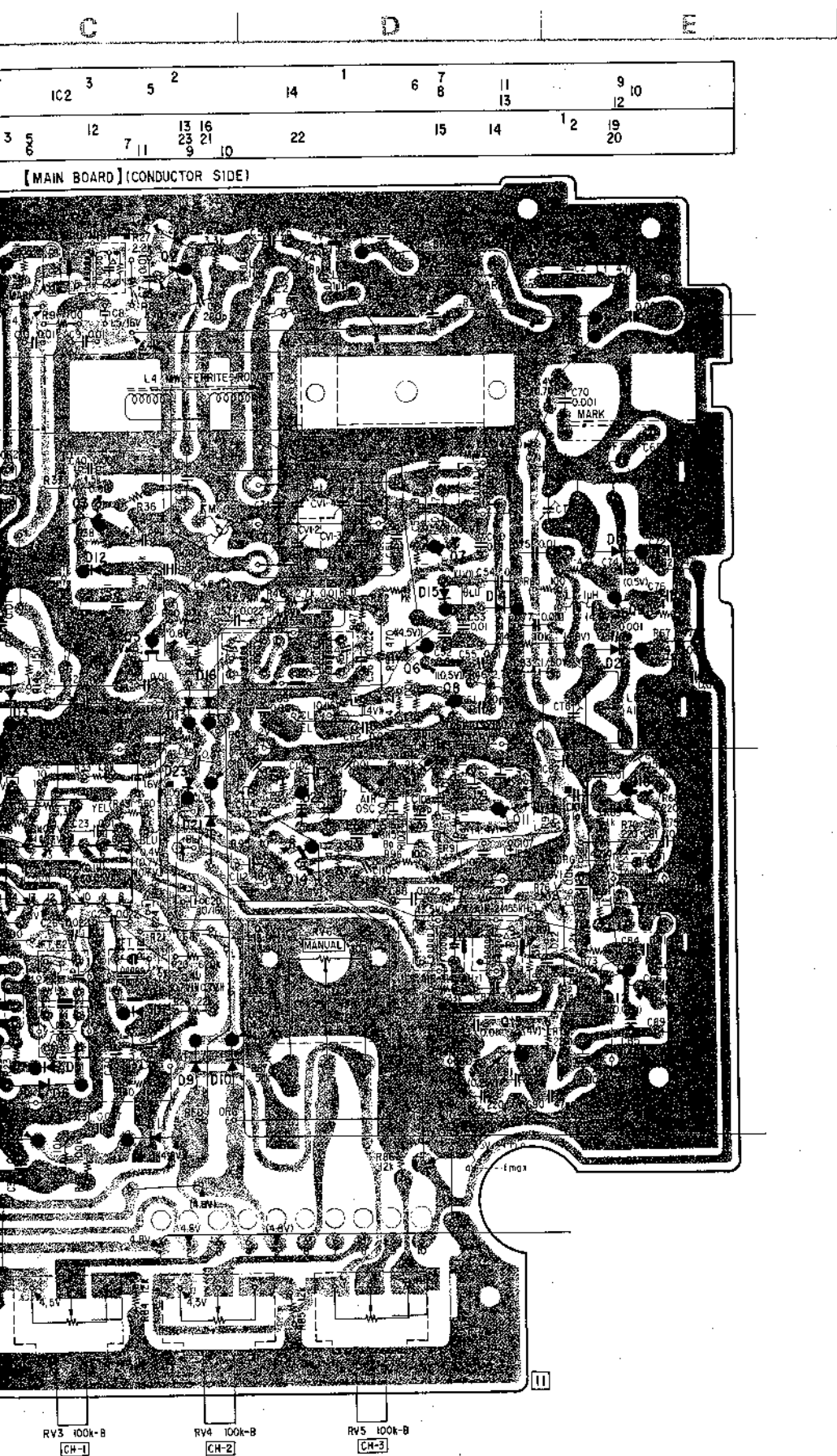


Note:
• Color code of sleeving over the end of the jacket.



•  : B + pattern

• Readings are taken under no-signal (detuned) conditions with a VOM (20 kΩ/V).
() : AIR
(()) : MW
no mark: FM

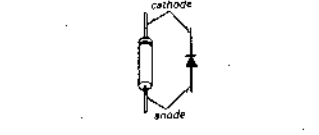


Replacement Semiconductors

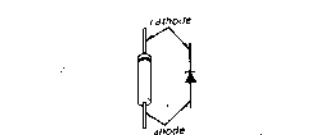
For replacement use semiconductors except in ().

<p>Q1: 2SK42-2 (2SK42)</p>	<p>Q210 Q307-310 } 2SC1364</p>
<p>Q2, 3 Q6-8 } 2SC930 (2SC930C) Q11-13 Q304, 306 } Q9, 10 } 2SC668 (2SC668C) Q302</p>	<p>Q303, 305 : 2SA1027R (2SA677)</p>
<p>Q4: 2SC710-14 (2SC710)</p>	<p>IC1: CX161A (CX161)</p>
<p>Q5, 14: 2SK23A-824 (2SK23A)</p>	<p>IC2: CX162</p>
<p>Q201, 202: 2SC1364 (2SC1633)</p>	<p>IC201: μ PC575C (μ PC575C2)</p>
<p>Q207, 208 } 2SC1364 (2SC1634) Q301</p>	<p>IC301: μ PB551C</p>
<p>Q209: 2SA861 (2SA772)</p>	<p>IC302: SN74LS290N IC303: SN74LS293N</p>
	<p>IC304: M54825P</p>

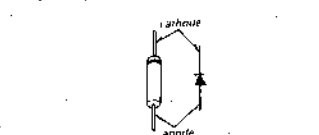
- D1-4
- D8-11
- D14-18 } 1S1555
- D21, 24
- D203
- D5, 6, 13: 1T261
- D7, 23: 1T261 (1T23)
- D205: RD4.7E (RD4.7E-B)



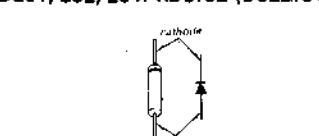
D12: 1S2139C (SD115)



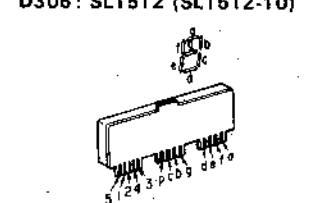
D19, 20, 22: 1S2139C (1S2139B)



D201, 202, 204: RD5.6E (D5Z2.6U)

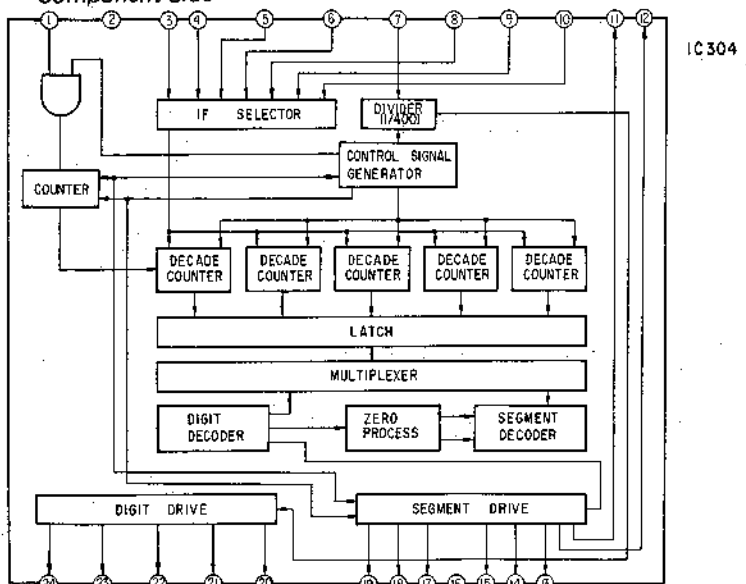


D306: SL1512 (SL1512-10)

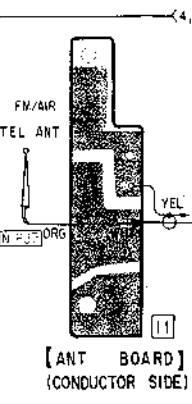
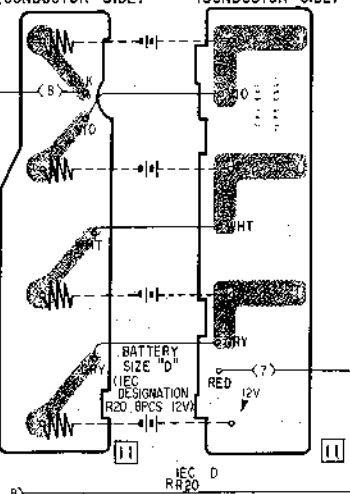


4-2. MOUNTING DIAGRAM

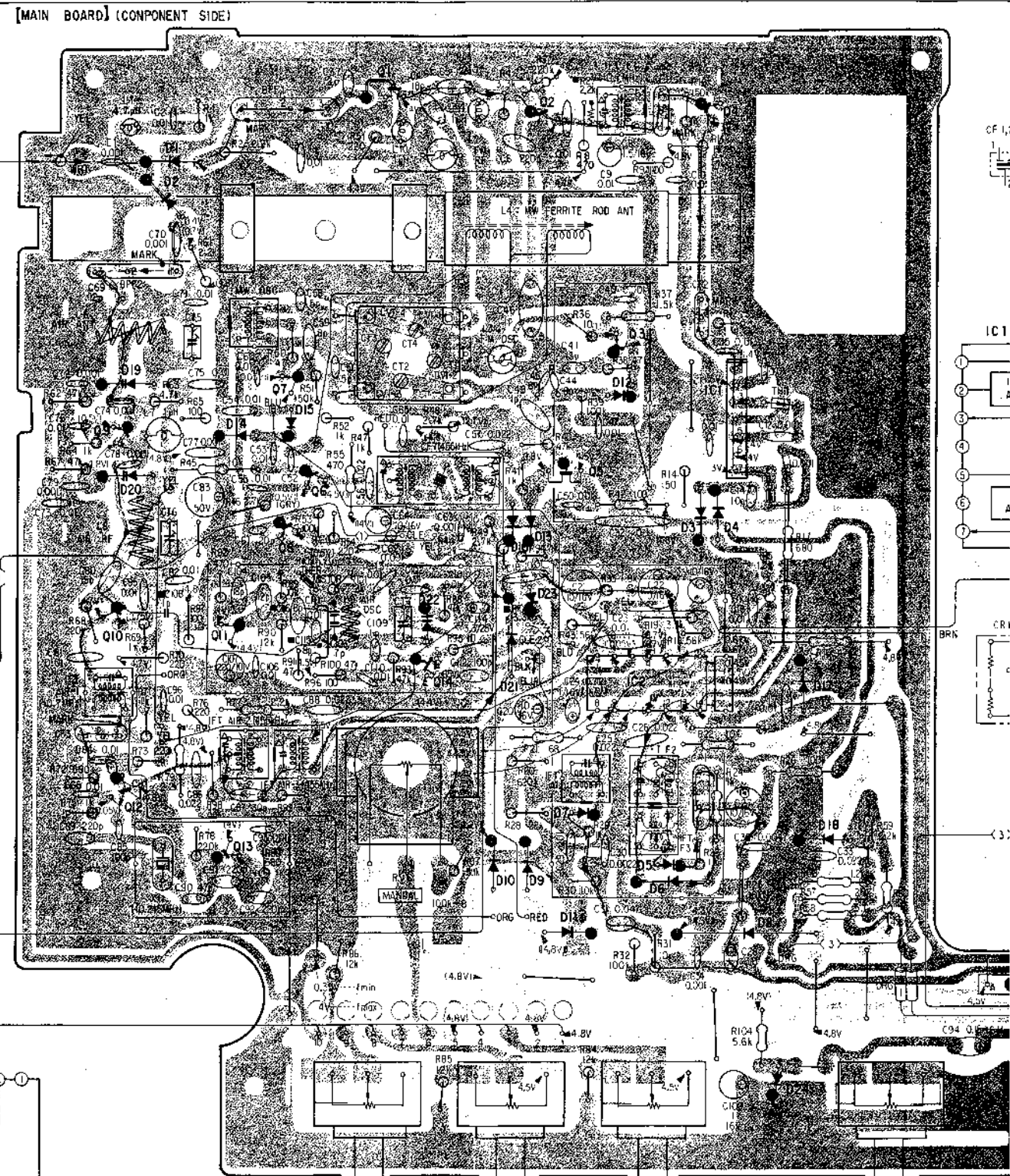
- Component Side -



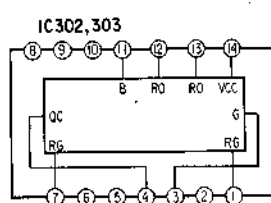
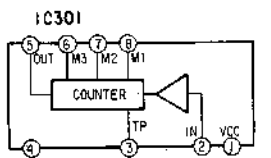
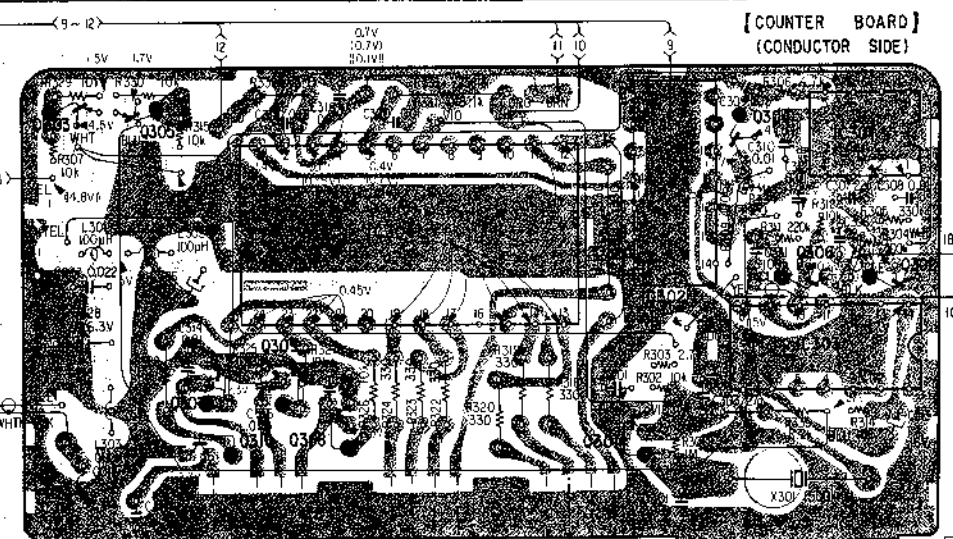
[BATTERY ⊖ BOARD] [BATTERY ⊕ BOARD]
(CONDUCTOR SIDE) (CONDUCTOR SIDE)



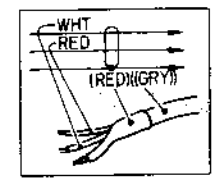
Q, IC	10	9	11	7	6	1	2	5	3	4
	12		13	8		14			IC2	IC1
D	19	20	2	14	15	22	16	13	12	5
							10	21	7	3,4
										8
										17
										24
										18



IC 303 305 307 309 IC304 IC302 304 306 IC301 IC303 302

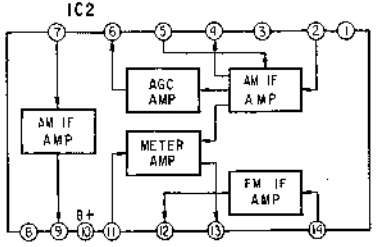
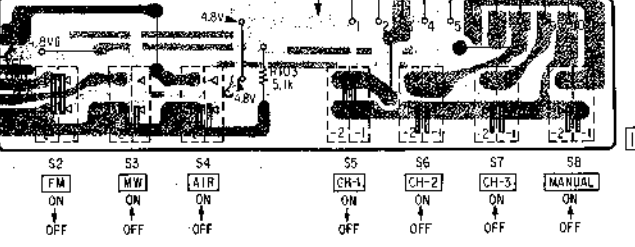


Note:
• Color code of sleeving over the end of the jacket.
• Signal Path



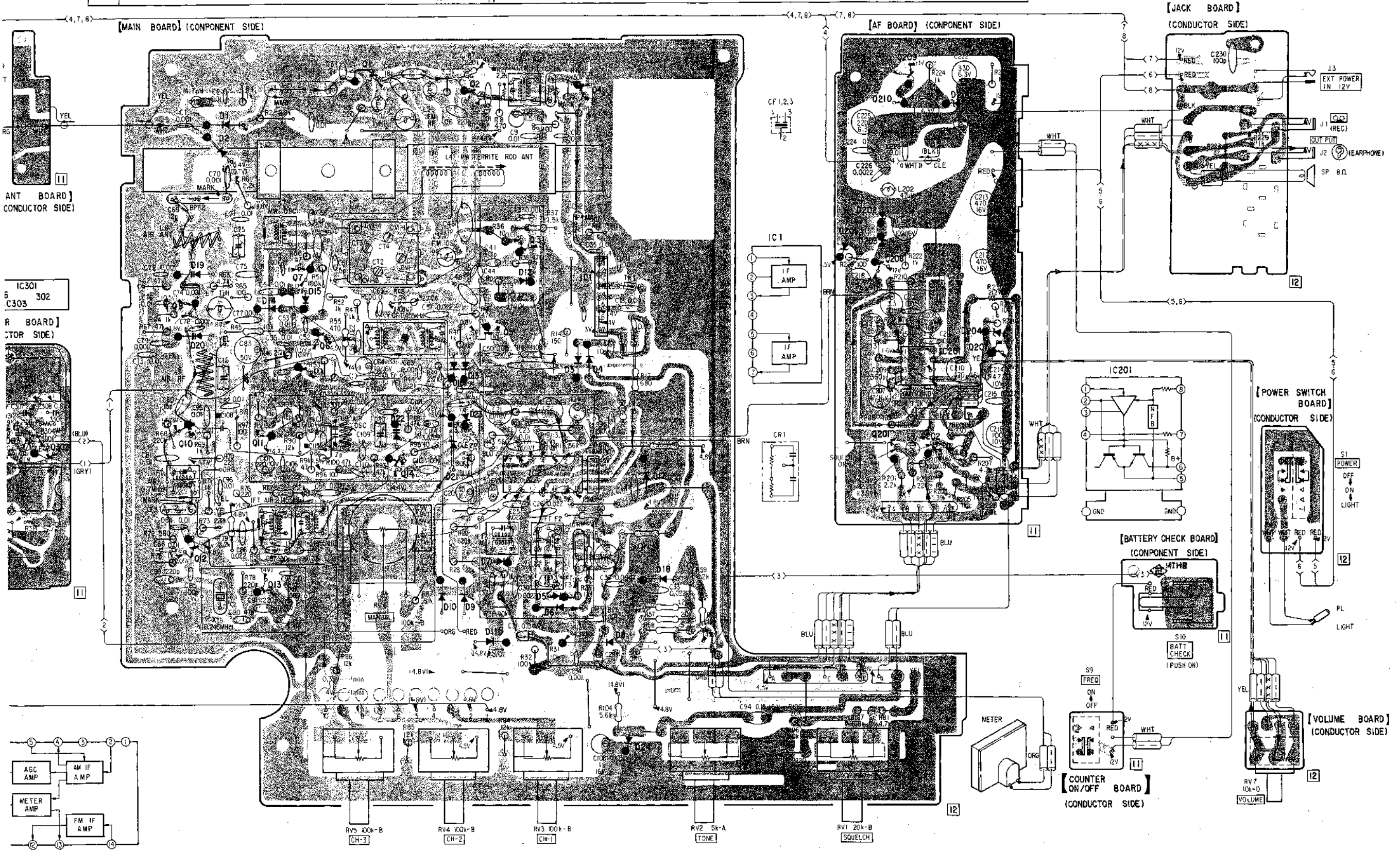
• Readings are taken under no-signal (detuned) conditions with a VOM (20 kΩ/V).
() : AIR
(()) : MW
no mark : FM

[SWITCH BOARD] (CONDUCTOR SIDE)

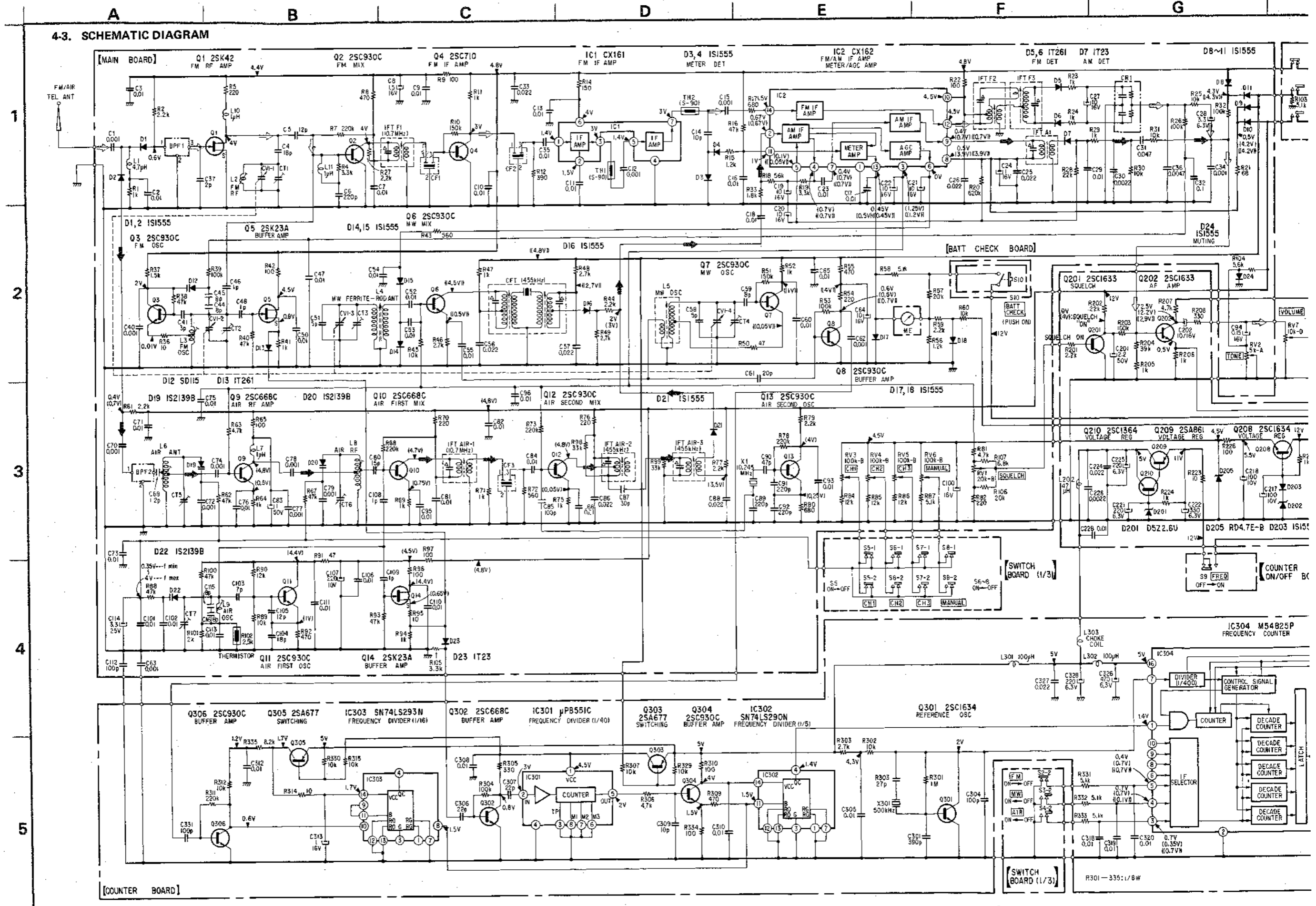


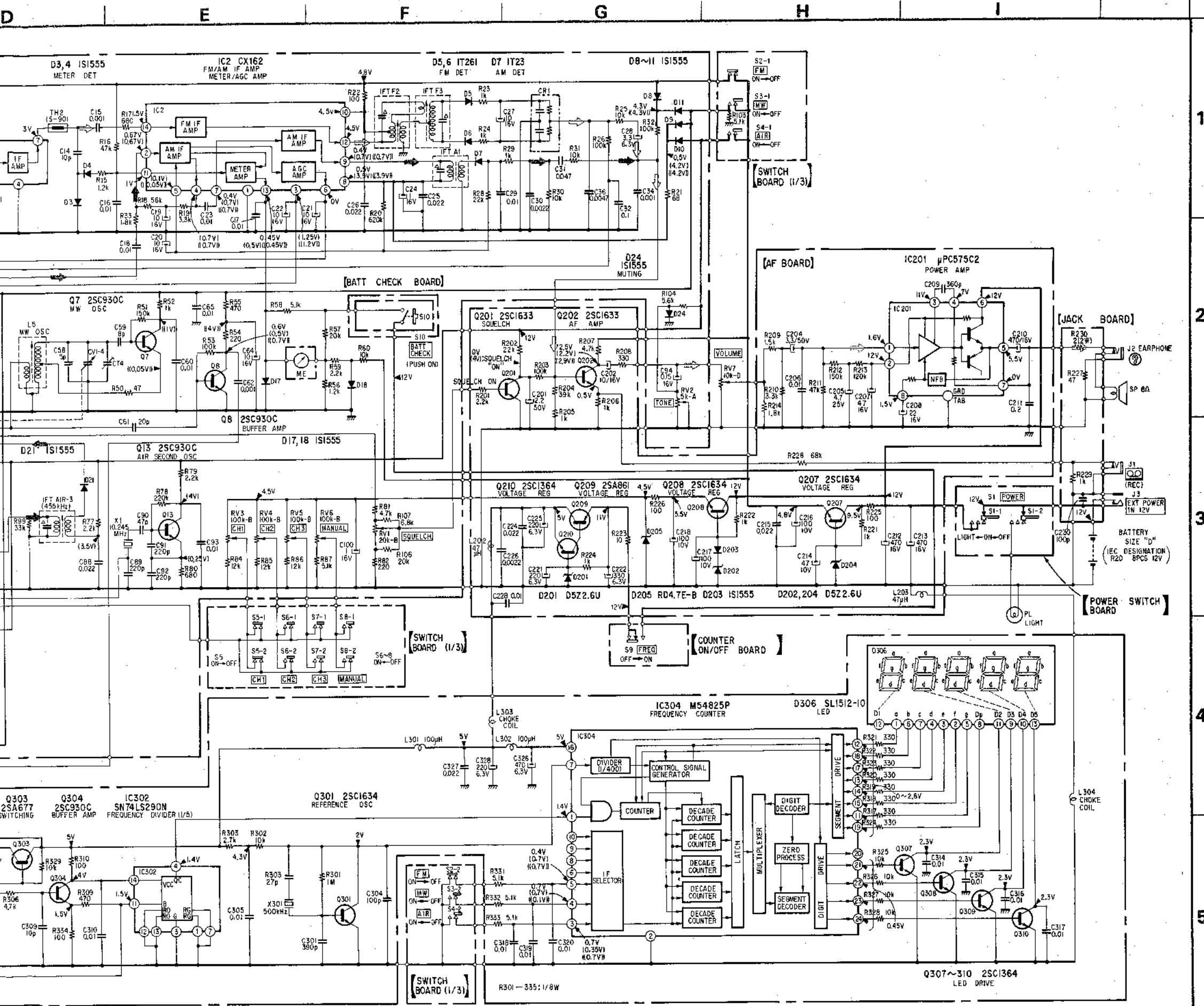
ICF-8650 ICF-8650

Q, IC	10	9	11	7	6	1	2	5	3	4	208	209	207
	12	13	8	14	14	14	16	13	12	5	201	202	204
D	19	2	14	15	22	10	21	9	7	11	205	202	203
	20	2	14	15	22	10	21	9	7	11	205	202	203



4-3. SCHEMATIC DIAGRAM



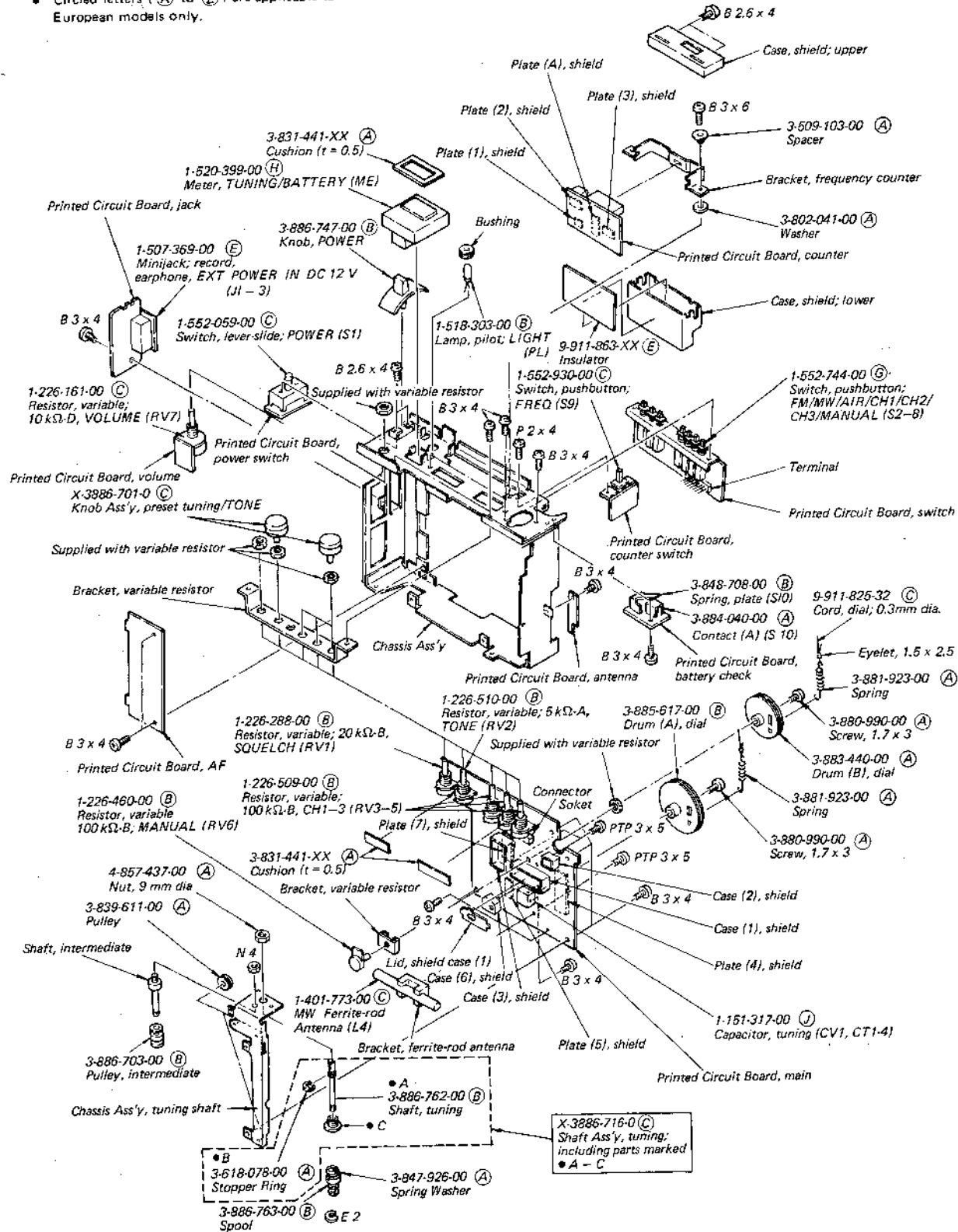


- All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\text{F}$ 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{2}\text{W}$ unless otherwise noted. $\text{k}\Omega : 1000 \Omega : \text{M}\Omega : 1000 \text{k}\Omega$
- Δ : internal component.
- --- : B + bus.
- \square : panel designation.
- Readings are taken under no-signal (detuned) conditions with a VOM (20 $\text{k}\Omega/\text{V}$)
- () : AIR
- ({) : MW
- no mark : FM
- Voltage variations may be noted due to normal production tolerances.
- Signal path
 - \rightarrow : FM signal
 - \rightarrow : AIR signal
- Switch

Ref. No.	Switch	Position
S1	POWER	OFF
S2	FM	ON
S3	MW	OFF
S4	AIR	OFF
S5	CH1	OFF
S6	CH2	OFF
S7	CH3	OFF
S8	MANUAL	OFF
S9	FREQ	OFF
S10	BATT CHECK	OFF

SECTION 6
ELECTRICAL PARTS LIST

- 5-2. 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.



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

Ref. No. Part No. Description

SEMICONDUCTORS

Transistors

⇒Q1	8-727-312-00	(C) 2SK42-2
⇒Q2	8-729-803-04	(B) 2SC930
⇒Q3	8-729-803-04	(B) 2SC930
⇒Q4	8-729-671-14	(B) 2SC710-14
⇒Q5	8-772-382-04	(E) 2SK23A-824
⇒Q6-8	8-729-803-04	(B) 2SC930
⇒Q9, 10	8-729-806-84	(B) 2SC668
⇒Q11-13	8-729-803-04	(B) 2SC930
⇒Q14	8-722-382-04	(E) 2SK23A-824
⇒Q201, 202	8-729-663-47	(C) 2SC1364
⇒Q207, 208		(C) 2SC1364
⇒Q209	8-763-213-00	(C) 2SA861
Q210	8-729-663-47	(C) 2SC1364
⇒Q301	8-729-663-47	(C) 2SC1364
⇒Q302	8-729-806-84	(B) 2SC668
⇒Q303	8-729-612-77	(B) 2SA1027R
⇒Q304	8-729-803-04	(B) 2SC930
⇒Q305	8-729-612-77	(B) 2SA1027R
⇒Q306	8-729-803-04	(B) 2SC930
Q307-310	8-729-663-47	(C) 2SC1364

ICs

⇒IC1	8-759-601-61	(E) CX161A
IC2	8-751-620-00	(H) CX162
⇒IC201	8-759-157-52	(F) μPC575C
IC301	8-759-155-10	(J) μPB551C
IC302	8-759-902-90	(F) SN74LS290N
IC303	8-759-902-93	(F) SN74LS293N
IC304	8-759-648-25	(N) M54825P

Diodes

D1-4	8-719-815-55	(B) 1S1555
D5, 6	8-719-026-11	(A) 1T261
⇒D7	8-719-026-11	(A) 1T261
D8-11	8-719-815-55	(B) 1S1555
⇒D12	8-719-713-93	(B) 1S2139C

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

Ref. No. Part No. Description

D13	8-719-026-11	(A) 1T261
D14-18	8-719-815-55	(B) 1S1555
⇒D19, 20	8-719-713-93	(B) 1S2139C
D21	8-719-815-55	(B) 1S1555
⇒D22	8-719-713-93	(B) 1S2139C
⇒D23	8-719-026-11	(A) 1T261
D24	8-719-815-55	(B) 1S1555
⇒D201, 202	8-719-156-25	(B) RD5.6E
D203	8-719-815-55	(B) 1S1555
⇒D204	8-719-156-25	(B) RD5.6E
⇒D205	8-719-147-77	(B) RD4.7E
⇒D306	8-719-905-12	(L) SL1512

COILS

L1	1-407-186-XX	(B) 4.7μH, microinductor
L2	1-405-798-00	(B) FM Rf
L3	1-405-846-00	(B) FM Osc
L4	1-401-773-00	(C) MW Ferrite-rod Ant
L5	1-405-655-00	(B) MW Osc
L6	1-420-935-00	(B) AIR Ant
L7	1-407-178-XX	(B) 1μH, microinductor
L8	1-420-936-00	(B) AIR Rf
L9	1-420-952-00	(A) AIR Osc
L10, 11	1-407-178-XX	(B) 1μH, microinductor

L202, 203	1-407-165-XX	(B) 47μH, microinductor
L301, 302	1-407-169-XX	(A) 100μH, microinductor
L303, 304	1-407-856-00	(C) Choke

TRANSFORMERS

CFT	1-404-212-00	(C) AM IFT
IFT A1	1-404-100-00	(B) AM IFT
IFT AIR 1	1-403-872-00	(B) AIR IFT
IFT AIR 2	1-403-110-15	(B) AIR IFT
IFT AIR 3	1-404-023-00	(B) AIR IFT
IFT F1	1-403-872-00	(B) FM IFT
IFT F2	1-403-959-00	(B) FM IFT
IFT F3	1-403-953-00	(B) FM IFT

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

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
CAPACITORS		
All capacitors are in μF and ceramic unless otherwise noted. 50WV or less are not indicated except for electrolytics. p : μF , elect : electrolytic		
C1	1-161-001-00	(A) 0.001 (semiconductor)
C2, 3	1-161-013-00	(A) 0.01 (semiconductor)
C4	1-102-953-00	(A) 18p
C5	1-102-949-00	(A) 12p
C6	1-102-978-00	(A) 220p
C7	1-161-013-00	(A) 0.01 (semiconductor)
C8	1-131-416-00	(B) 1.5 16V tantalum
C9-11	1-161-013-00	(A) 0.01 (semiconductor)
C12	1-161-001-00	(A) 0.001 (semiconductor)
C13	1-161-013-00	(A) 0.01 (semiconductor)
C14	1-102-947-00	(A) 10p
C15	1-161-001-00	(A) 0.001 (semiconductor)
C16-18	1-161-013-00	(A) 0.01 (semiconductor)
C19-22	1-123-316-00	(B) 10 16V elect
C23	1-161-013-00	(A) 0.01 (semiconductor)
C24	1-131-347-00	(B) 1 16V tantalum
C25, 26	1-161-017-00	(A) 0.022 (semiconductor)
C27	1-123-316-00	(B) 10 16V elect
C28	1-131-422-00	(B) 3.3 6.3V tantalum
C29	1-161-013-00	(A) 0.01 (semiconductor)
C30	1-161-006-00	(A) 0.0022 (semiconductor)
C31	1-161-013-00	(A) 0.01 (semiconductor)
C32	1-161-025-00	(B) 0.1 (semiconductor)
C33	1-161-017-00	(A) 0.022 (semiconductor)
C34	1-161-001-00	(A) 0.001 (semiconductor)
C35	1-161-013-00	(A) 0.01 (semiconductor)
C36	1-161-009-00	(A) 0.0047 (semiconductor)
C37	1-102-935-00	(A) 2p
C40	1-161-001-00	(A) 0.001 (semiconductor)
C41	1-102-936-00	(A) 3p
C44, 45	1-102-261-00	(B) 8p
C46	1-102-741-00	(A) 1p
C47	1-161-013-00	(A) 0.01 (semiconductor)
C48	1-102-741-00	(A) 1p
C50	1-161-013-00	(A) 0.01 (semiconductor)
C51	1-102-942-00	(A) 5p
C52-55	1-161-013-00	(A) 0.01 (semiconductor)
C56, 57	1-161-017-00	(A) 0.022 (semiconductor)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
C58	1-102-942-00	(A) 5p
C59	1-102-865-00	(A) 8p
C60	1-161-013-00	(A) 0.01 (semiconductor)
C61	1-102-958-00	(A) 20p
C62, 63	1-161-001-00	(A) 0.001 (semiconductor)
C64	1-123-316-00	(B) 10 16V elect
C65, 66	1-161-013-00	(A) 0.01 (semiconductor)
C69	1-102-949-00	(A) 12p
C70	1-161-001-00	(A) 0.001 (semiconductor)
C71	1-161-013-00	(A) 0.01 (semiconductor)
C72	1-161-001-00	(A) 0.001 (semiconductor)
C73	1-161-013-00	(A) 0.01 (semiconductor)
C74	1-161-001-00	(A) 0.001 (semiconductor)
C75, 76	1-161-013-00	(A) 0.01 (semiconductor)
C77-79	1-161-001-00	(A) 0.001 (semiconductor)
C80	1-102-951-00	(A) 15p
C81, 82	1-161-013-00	(A) 0.01 (semiconductor)
C83	1-123-352-00	(B) 1 50V elect
C84	1-161-013-00	(A) 0.01 (semiconductor)
C85	1-102-106-00	(A) 100p
C86	1-161-017-00	(A) 0.022 (semiconductor)
C87	1-102-962-00	(A) 30p
C88	1-161-017-00	(A) 0.022 (semiconductor)
C89	1-102-110-00	(A) 220p
C90	1-101-880-00	(A) 47p
C91, 92	1-102-110-00	(A) 220p
C93	1-161-013-00	(A) 0.01 (semiconductor)
C94	1-131-452-00	(B) 0.15 16V tantalum
C95, 96	1-161-013-00	(A) 0.01 (semiconductor)
C97	1-131-218-00	(A) 3.3 25V tantalum
C100	1-131-347-00	(B) 1 16V tantalum
C101, 102	1-161-013-00	(A) 0.01 (semiconductor)
C103	1-102-506-00	(A) 7p
C104	1-102-513-00	(A) 18p
C105	1-102-510-00	(A) 12p
C106	1-161-013-00	(A) 0.01 (semiconductor)

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

Ref. No.	Part No.	Description
C107	1-123-308-00	(A) 220 10V elect
C108, 109	1-102-934-00	(A) 1p
C110, 111	1-161-013-00	(A) 0.01 (semiconductor)
C112	1-102-106-00	(A) 100p
C113	1-161-013-00	(A) 0.01 (semiconductor)
C114	1-131-218-00	(A) 3.3 25V tantalum
C115, 116	1-102-261-00	(B) 8p
C201	1-123-353-00	(B) 2.2 50V elect
C202	1-123-316-00	(B) 10 16V elect
C204	1-123-354-00	(B) 3.3 50V elect
C205	1-123-328-00	(B) 4.7 25V elect
C206	1-161-013-00	(A) 0.01 (semiconductor)
C207	1-123-319-00	(B) 47 16V elect
C208	1-123-317-00	(B) 22 16V elect
C209	1-102-821-00	(A) 360p
C210	1-123-323-00	(B) 470 16V elect
C211	1-101-798-00	(A) 0.2 (semiconductor)
C212, 213	1-123-323-00	(B) 470 16V elect
C214	1-123-306-00	(B) 47 10V elect
C215	1-101-924-00	(A) 0.022
C216-218	1-123-307-00	(A) 100 10V elect
C221	1-123-296-00	(B) 220 6.3V elect
C222	1-123-297-00	(B) 330 6.3V elect
C224	1-101-924-00	(A) 0.022
C225	1-123-296-00	(B) 220 6.3V elect
C226	1-101-002-00	(A) 0.0022
C228	1-161-013-00	(A) 0.01 (semiconductor)
C230	1-102-106-00	(A) 100p
C301	1-102-113-00	(A) 390p
C303	1-102-961-00	(A) 27p
C304	1-102-973-00	(A) 100p
C305	1-161-013-00	(A) 0.01 (semiconductor)
C306, 307	1-102-959-00	(A) 22p
C308	1-161-013-00	(A) 0.01 (semiconductor)
C309	1-102-947-00	(A) 10p
C310, 312	1-161-013-00	(A) 0.01 (semiconductor)
C313	1-131-347-00	(B) 1 16V tantalum
C314-320	1-161-013-00	(A) 0.01 (semiconductor)
C326	1-123-298-00	(B) 470 6.3V elect

Ref. No.	Part No.	Description
C327	1-161-017-00	(A) 0.022 (semiconductor)
C328	1-123-296-00	(B) 220 6.3V elect
C331	1-102-973-00	(A) 100p
CT5-7	1-141-203-00	(B) Trimmer
CT1-4 CV1	1-151-317-00	(J) tuning

RESISTORS

All resistors are in ohms. Common 1/4W carbon resistors are omitted. Refer to the list on the last page for their part numbers.

⇒ R102	1-800-200-00	(B) Thermistor, S-3k
RV1	1-226-288-00	(B) 20k-B, variable; SQUELCH
RV2	1-226-510-00	(B) 5k-A, variable; TONE
RV3-5	1-226-509-00	(B) 100k-B; variable; CH1, CH2, CH3
RV6	1-226-460-00	(B) 100k-B, variable; MANUAL
RV7	1-226-161-00	(C) 10k-D, variable; VOLUME

SWITCHES

S1	1-552-059-00	(C) Lever-slide; POWER
S2-8	1-552-744-00	(G) Pushbutton; FM, MW, AIR, CH1, CH2, CH3, MANUAL
S9	1-552-930-00	(C) Pushbutton; FREQ
S10	(3-848-708-00 3-884-040-00)	(B) Spring, plate (A) Contact (A)) BATT CHECK

MISCELLANEOUS

BPF1	1-231-419-00	(B) Filter, band pass; FM
BPF2	1-231-577-00	(B) Filter, band pass; AIR
CF1-3	1-527-184-XX	(B) Ceramic Filter, 10.7MHz
CR1	1-231-202-00	(B) Encapsulated Component
J1-3	1-507-369-00	(E) Minijack; record, earphone, EXT POWER IN DC 12V
ME	1-520-399-00	(H) Meter, TUNING/BATTERY
PL	1-518-303-00	(B) Lamp, pilot; LIGHT
SP	1-502-880-00	(G) Speaker
TH1, 2	1-800-194-11	(A) Thermister, S-90
X1	1-527-339-00	(E) Crystal, 10.245MHz
X301	1-527-269-51	(K) Crystal, 500kHz
	1-501-218-00	(H) Telescopic Antenna

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

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

ACCESSORIES AND PACKING MATERIALS

<u>Part No.</u>	<u>Description</u>
X-3886-106-0	Ⓕ Carrying Belt Ass'y
3-701-625-00	Ⓐ Bag, plastic
3-701-629-00	Ⓐ Bag, plastic
3-881-644-00	Ⓑ Bag, plastic
3-882-772-00	Ⓒ Cushion, right
3-882-773-00	Ⓒ Cushion, left
3-882-781-00	Ⓑ Holder, battery
3-995-850-11	Ⓒ Manual, instruction (AEP, E model)
3-995-850-21	Manual, instruction (US model)

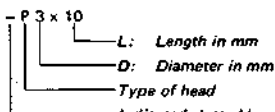
1/4 WATT CARBON RESISTORS [Ⓐ]

Note: Circled letter [Ⓐ] is applicable to European models only.

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

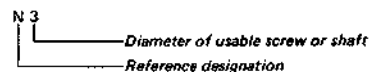
HARDWARE NOMENCLATURE

Screw:



Unless otherwise indicated, it means cross-recessed head (Phillips type).

Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	