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US Model



## FM/SW/MW 5BAND RECEIVER

### SPECIFICATIONS

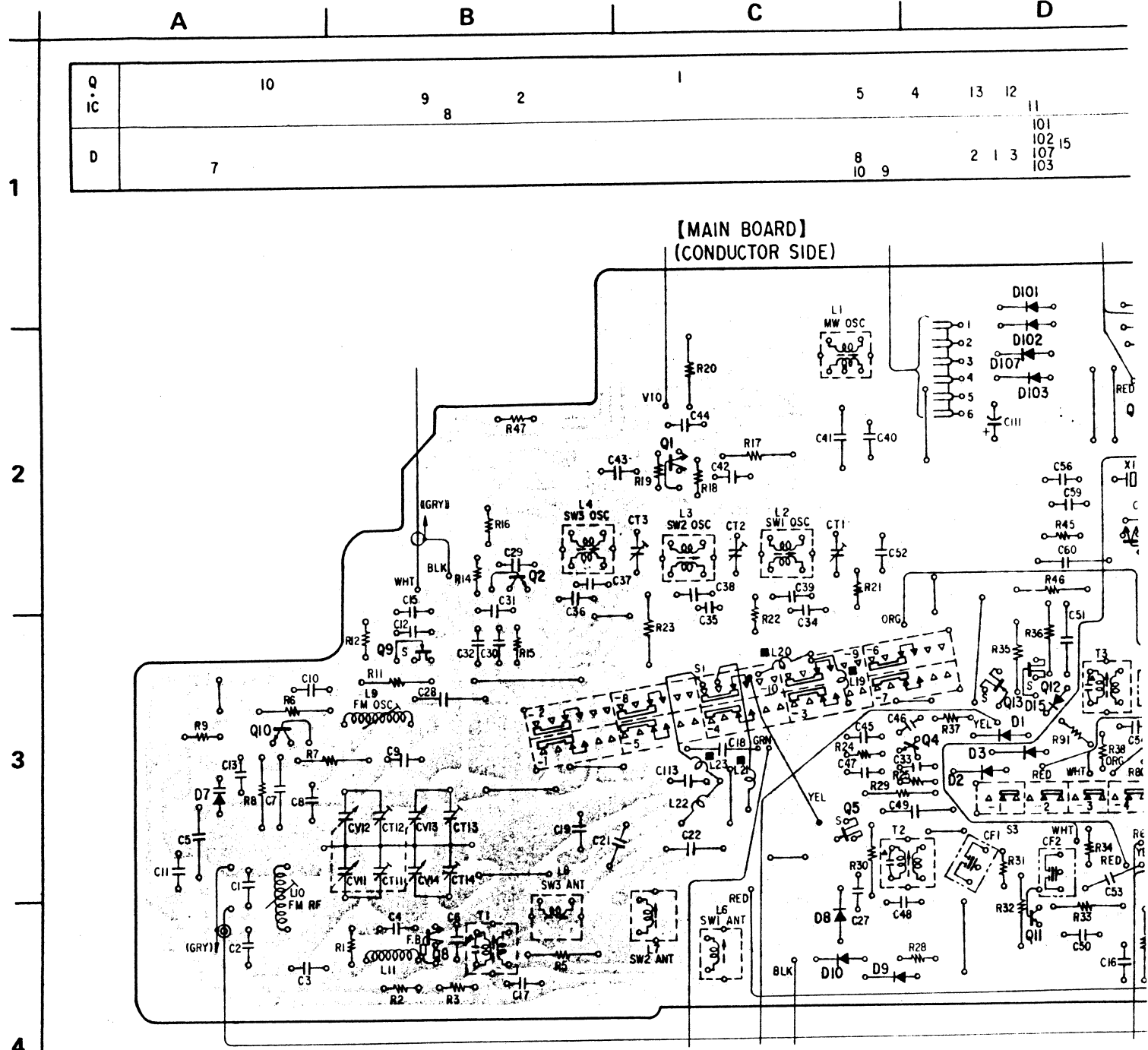
Frequency range	FM 87.5-108 MHz SW <sub>1</sub> 3.9-10 MHz (77-30 m) SW <sub>2</sub> 11.7-20 MHz (25.6-15 m) SW <sub>3</sub> 20-28 MHz (15-10.7 m) MW 530-1,605 kHz (566-187 m)	Power requirements	9V dc, six batteries IEC designation R14 (size C) 120V ac, 60Hz with supplied Sony AC-160W ac power adaptor 12V car battery with optional Sony DCC-120 car battery cord
Antennas	SW/FM: Telescopic antenna SW/MW: External antenna terminal MW: Built-in ferrite bar antenna	Battery life	Approx. 24 hours using Eveready No. 1235 Heavy Duty batteries
Speaker	Approx. 10 cm (4 inches) dia.	Dimensions	Approx. 289 × 168.5 × 102 mm (w/h/d) (11½ × 6¾ × 4¼ inches)
Power output	1,100 mW (at 10% harmonic distortion)	Weight	incl. projecting parts and controls Approx. 1.85 kg (4 lb 1¼ oz)
Outputs	Earphone jack (minijack) for 8-ohm earphone or load impedance 10 kilohms or higher Recording output jack (minijack) output level 1 mV (-60 dB) output impedance 1 kilohm		incl. batteries



**SONY**<sup>®</sup>  
**SERVICE MANUAL**

1-1. MOUNTING DIAGRAM

SECTION 1  
DIAGRAMS



[MAIN BOARD]  
(CONDUCTOR SIDE)

S1, 3  
S1 - BAND - S3  
BAND SELECT FM - MW SELECT  
SW3 → SW2 → SW1 → MW MW ← FM

● Replacement Semiconductors

2SA1027R



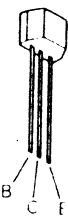
2SC710-13  
2SC710-14



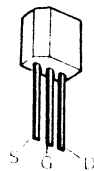
2SC1363



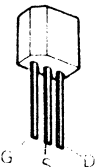
2SC2839E  
2SC536SP

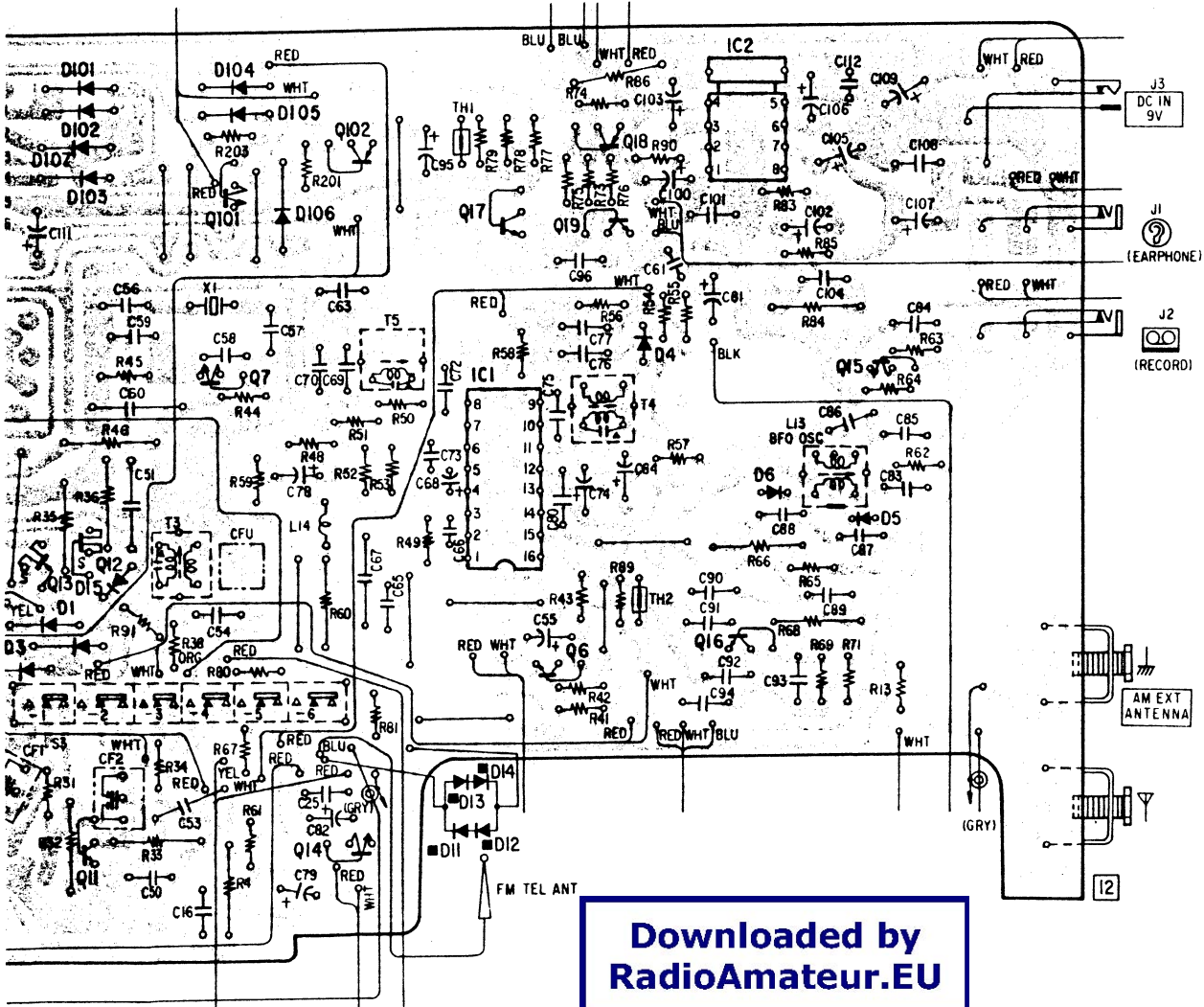
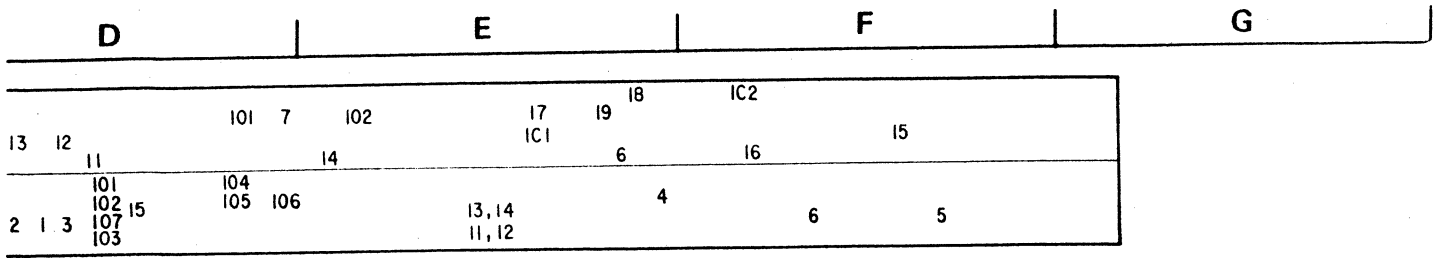


2SK161

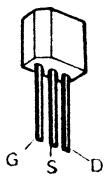


2SK241Y  
2SK284

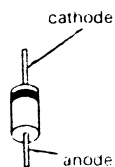




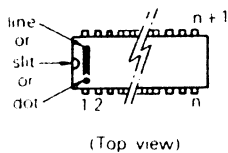
2SK241Y  
2SK284



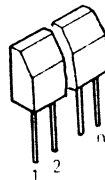
1S1555  
1S2139C  
1T261



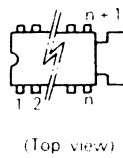
KB-4419C



M54460L



μPC-1213C



**Note:**

- — parts extracted from the component side.
- — parts extracted from the conductor side.
- — part mounted on the conductor side.

2. MOUNTING DIAGRAM  
A

B

C

D

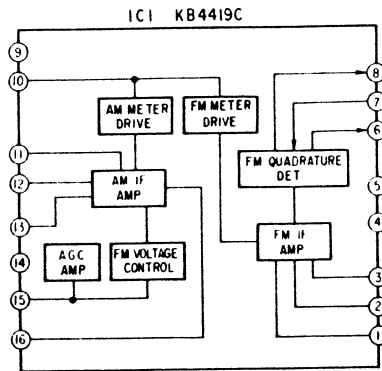
1

2

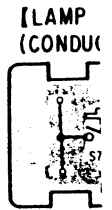
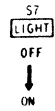
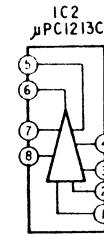
3

4

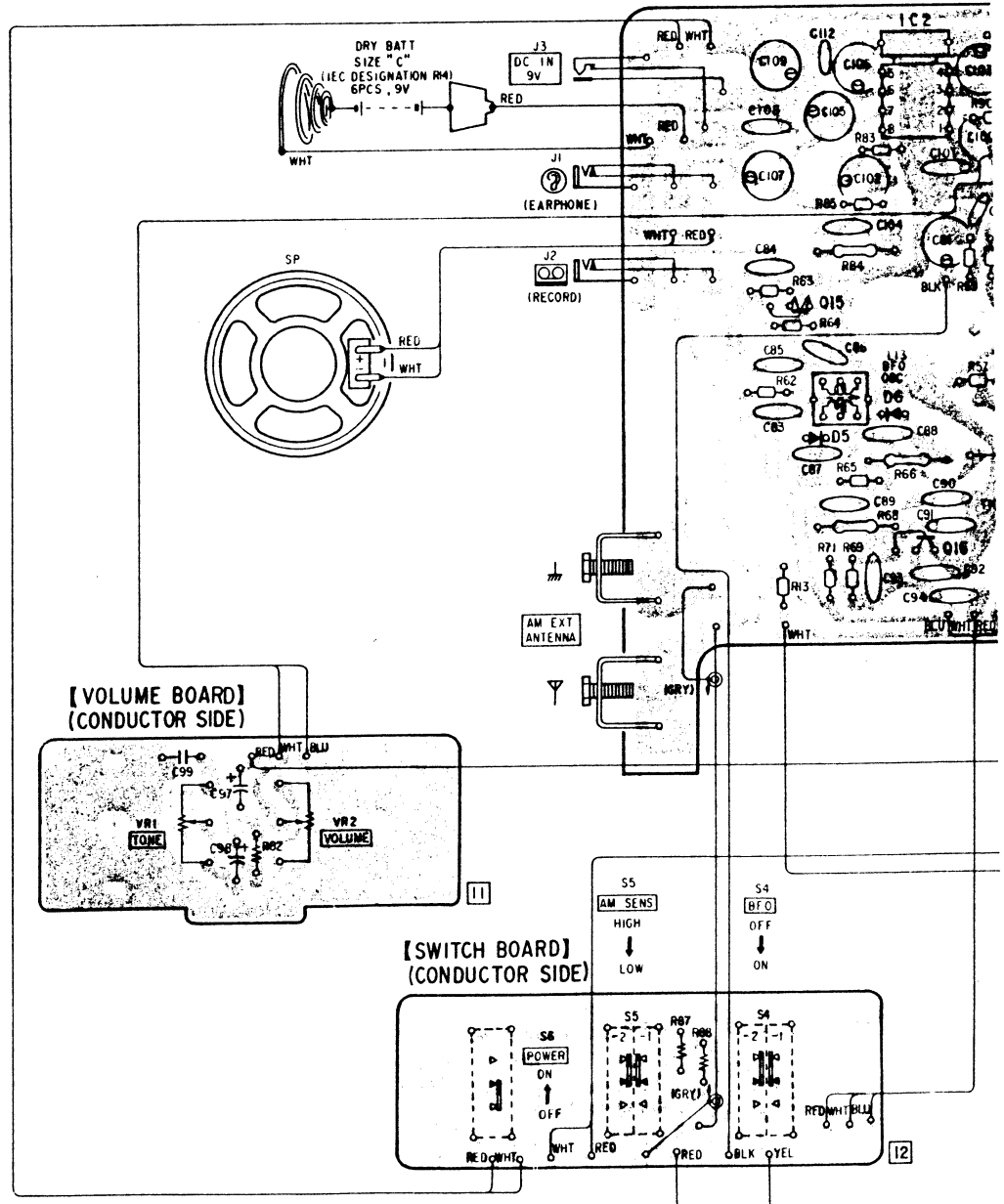
5



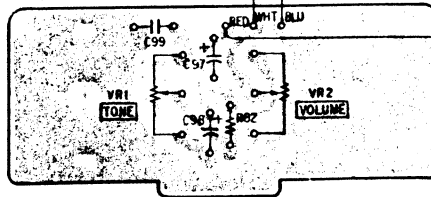
Q		IC2
IC	15	16
D	5	6



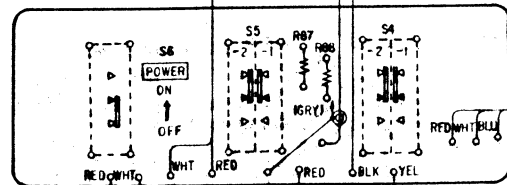
[MAIN BOARD]  
(COMPONENT SIDE)



[VOLUME BOARD]  
(CONDUCTOR SIDE)



[SWITCH BOARD]  
(CONDUCTOR SIDE)



D

E

F

G

IC2

18

17

102

101

12

13

4

5

1

IC101

2

9

15

16

19

6

14

11

4

5

8

5

6

4

12

14

106

105

15

101

102

107

1

2

9

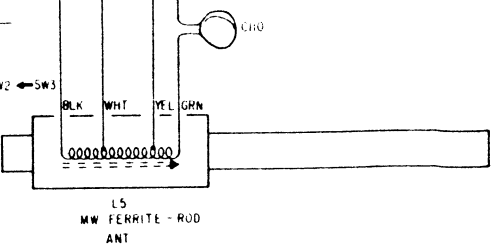
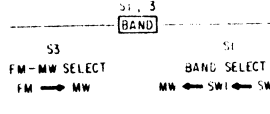
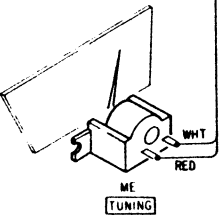
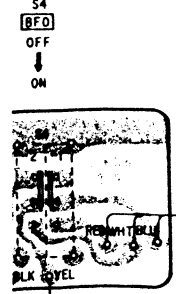
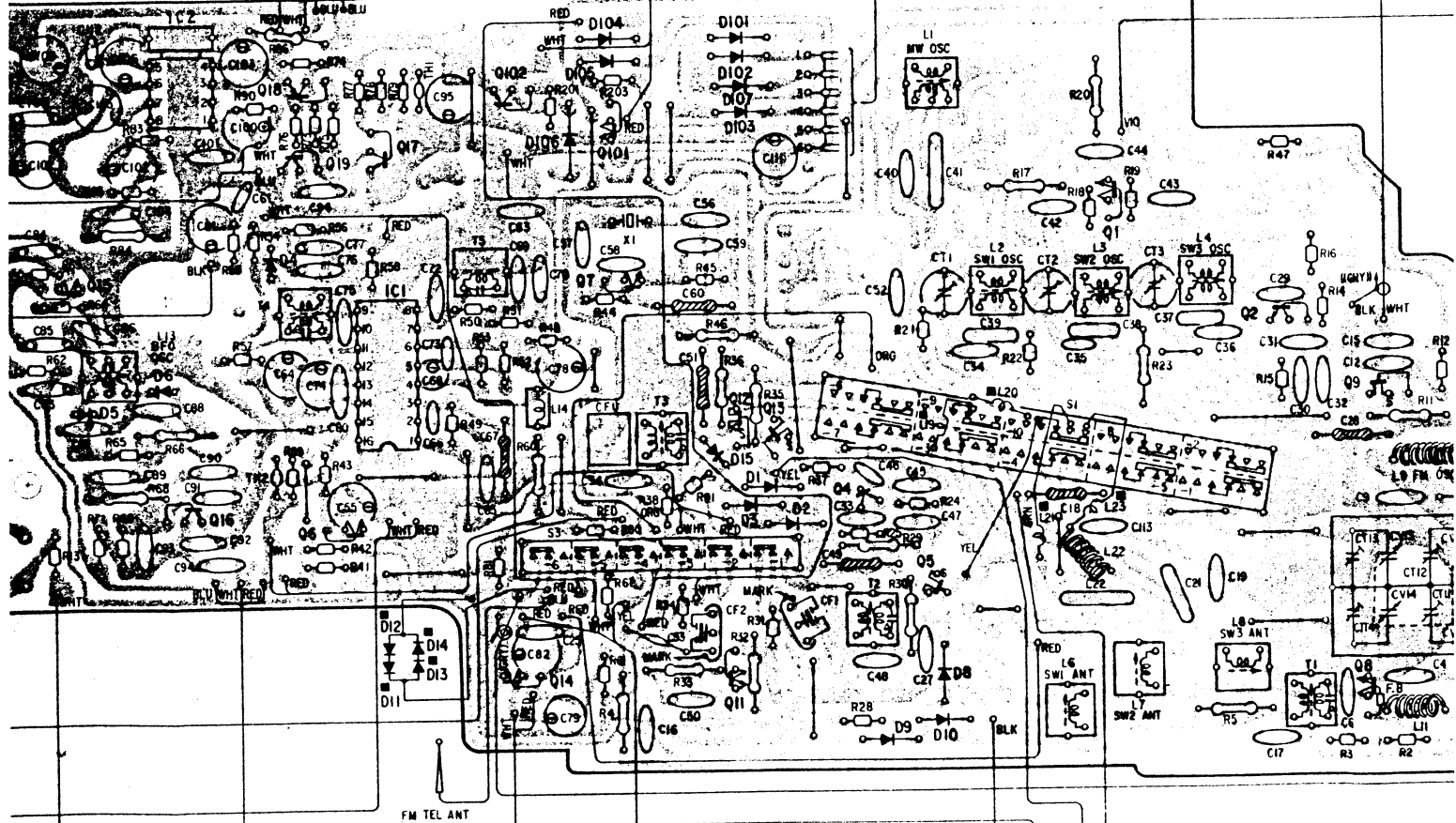
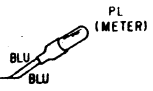
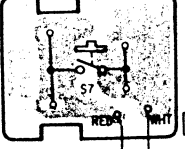
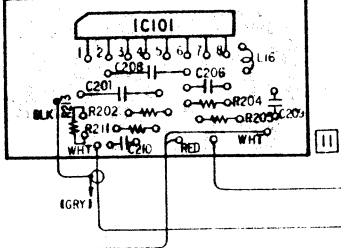
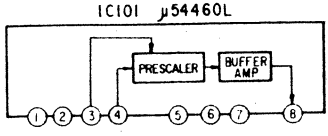
8

10

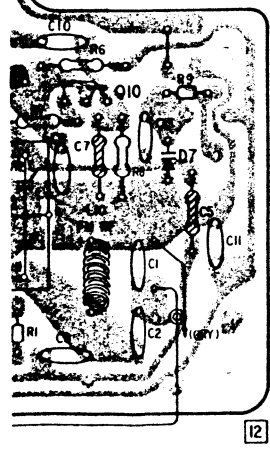
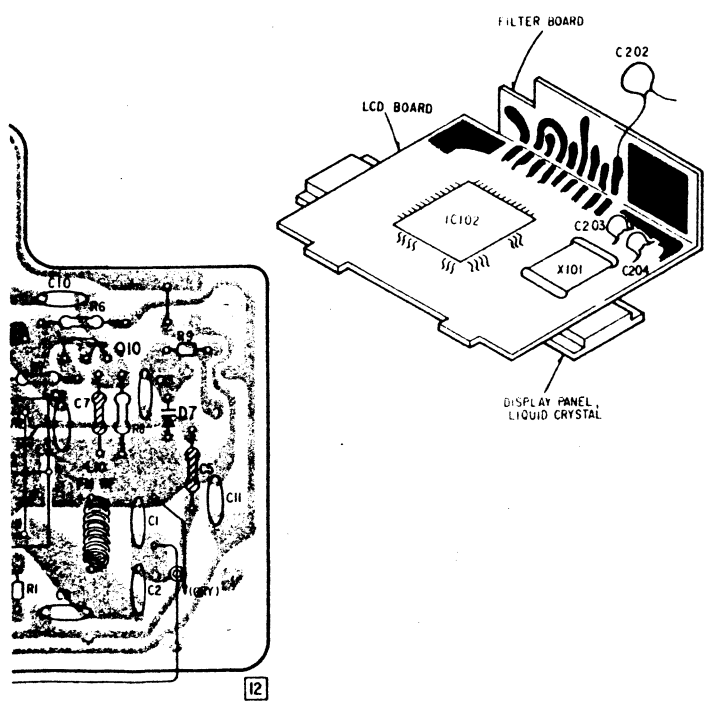
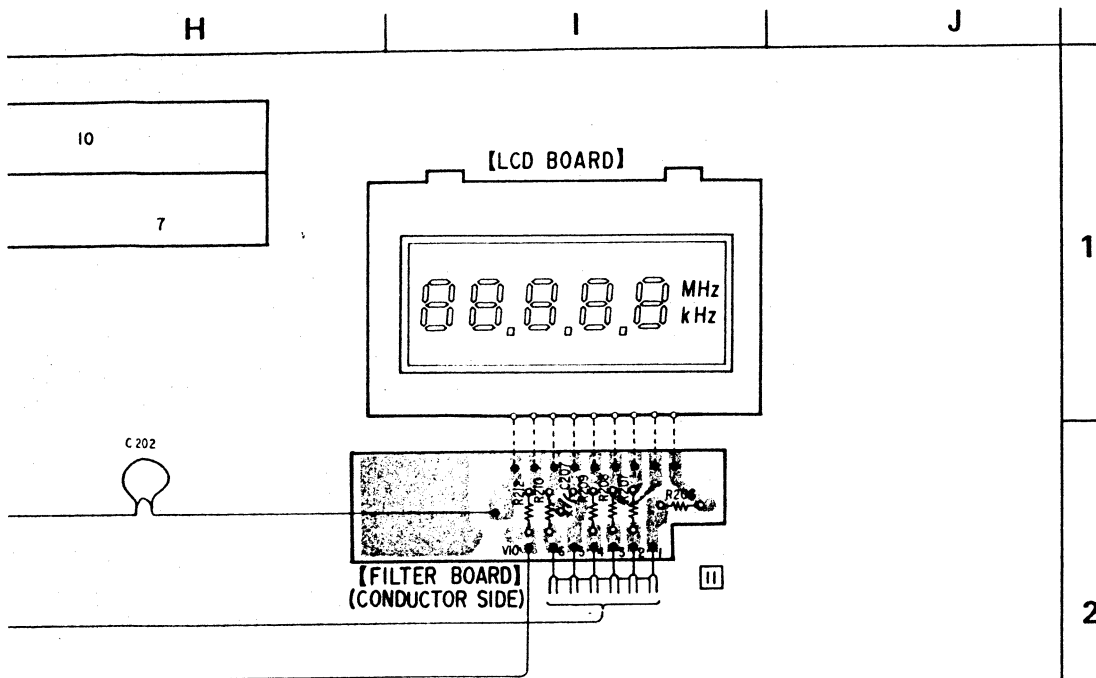
[LAMP SWITCH BOARD]  
(CONDUCTOR SIDE)

[PRESCALER BOARD]  
(CONDUCTOR SIDE)

[BOARD]  
(MOUNT SIDE)



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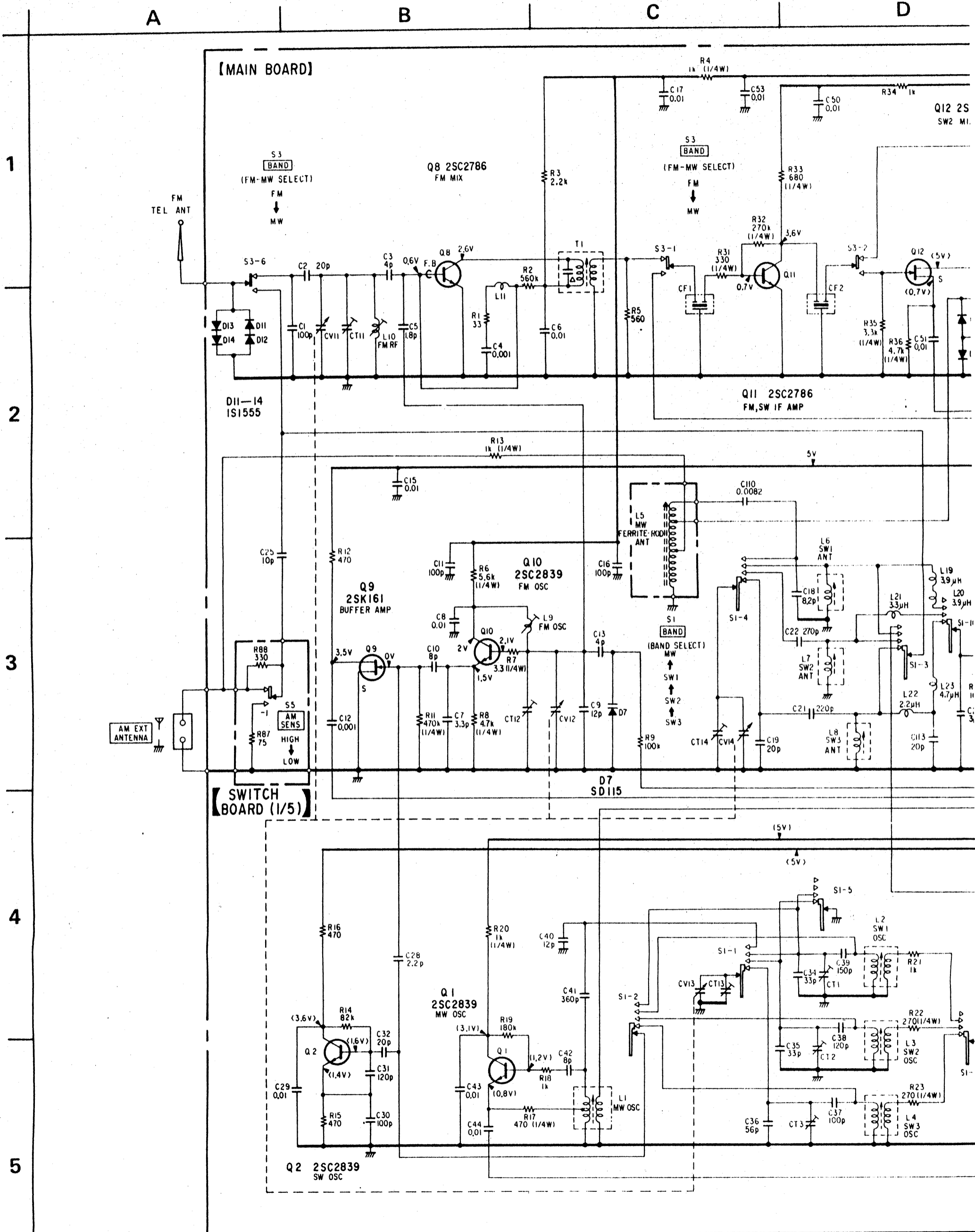
1  
2  
3  
4  
5

**Note:**

- ○ — : parts extracted from the component side.
- ● — : parts extracted from the conductor side.
- ■ : part mounted on the conductor side.

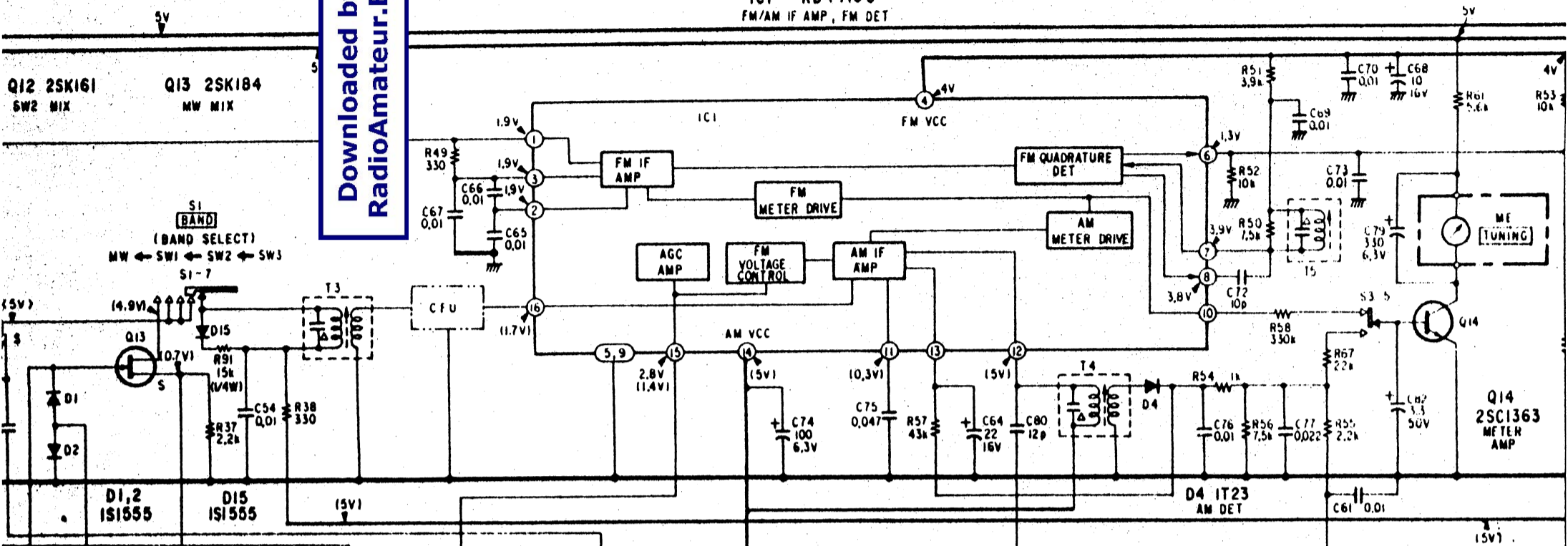


# 1-3. SCHEMATIC DIAGRAM

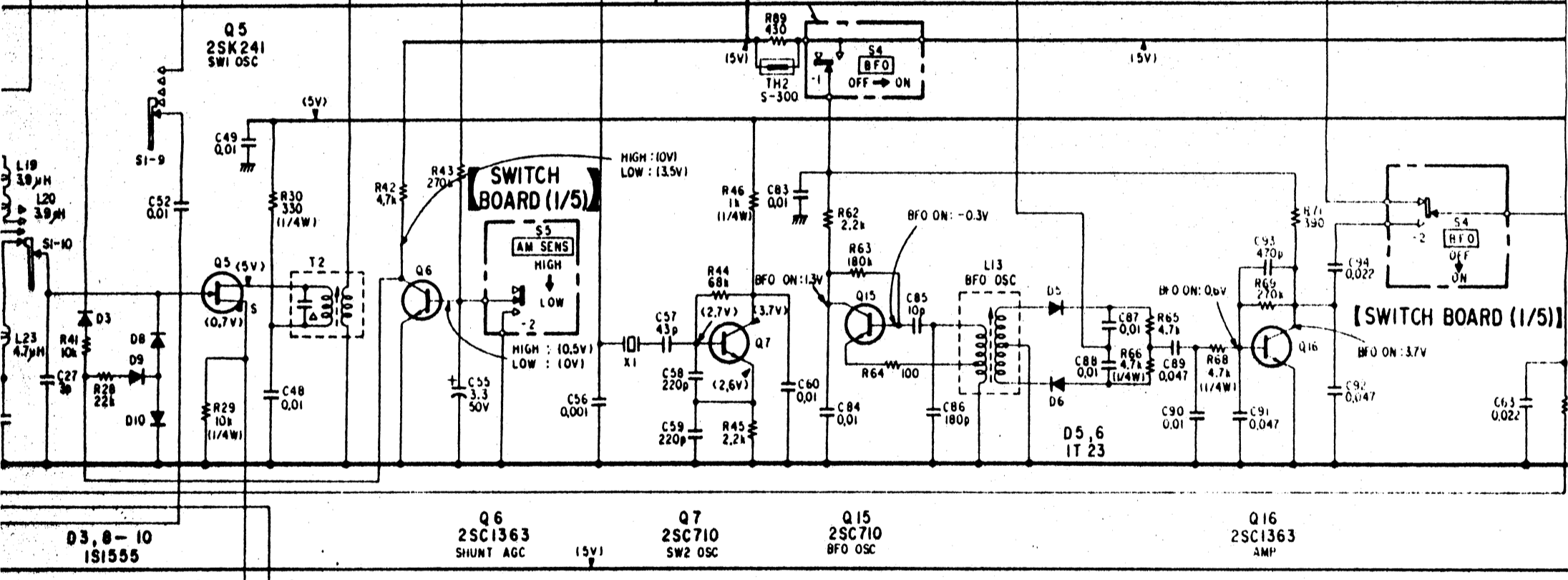


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IC1 KB4419C  
FM/AM IF AMP, FM DET

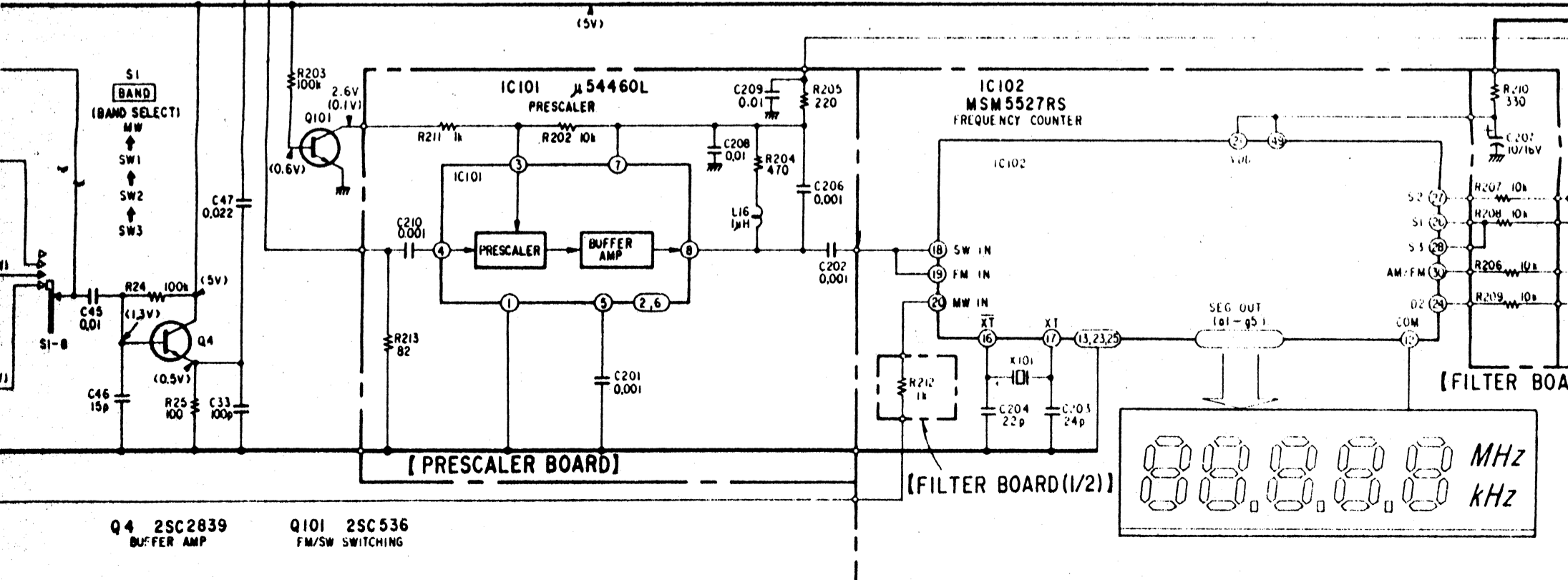


[SWITCH BOARD (1/5)]



[SWITCH BOARD (1/5)]

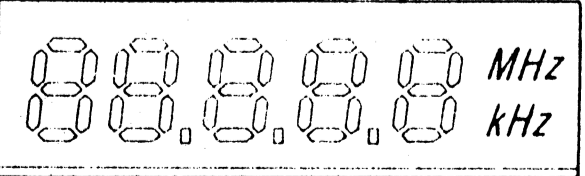
[SWITCH BOARD (1/5)]



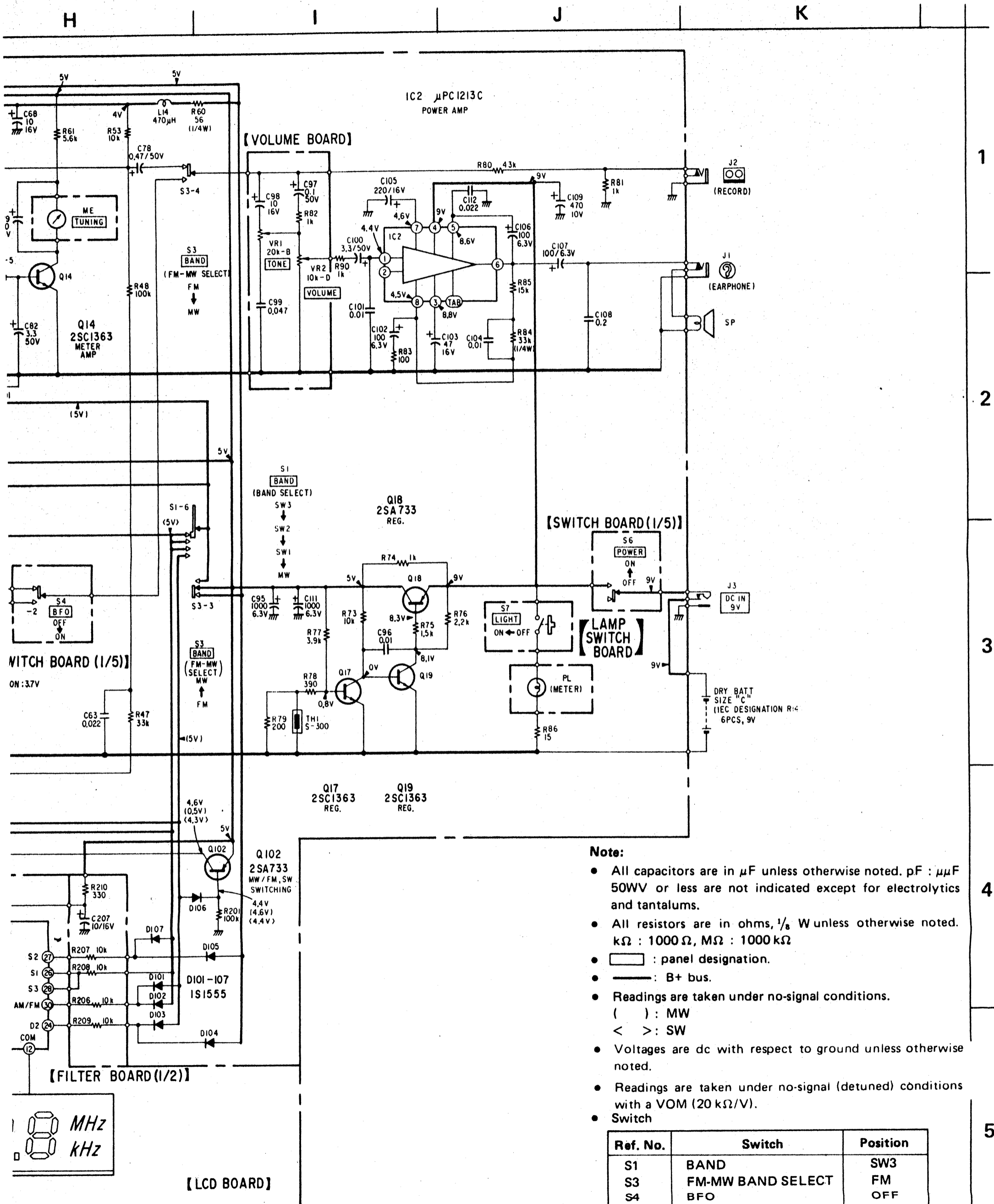
[PRESCALER BOARD]

[FILTER BOARD (1/2)]

[FILTER BOA







**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF :  $\mu\mu\text{F}$   
50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms,  $\frac{1}{8}$  W unless otherwise noted.  
k $\Omega$  : 1000  $\Omega$ , M $\Omega$  : 1000 k $\Omega$
- : panel designation.
- : B+ bus.
- Readings are taken under no-signal conditions.  
( ) : MW  
< > : SW
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (20 k $\Omega$ /V).
- Switch

Ref. No.	Switch	Position
S1	BAND	SW3
S3	FM-MW BAND SELECT	FM
S4	BFO	OFF
S5	AM SENS.	HIGH
S6	POWER	OFF
S7	LIGHT	OFF

Note: Voltages are measured with a VOM (50k $\Omega$ /V).

# SECTION 2 EXPLODED VIEWS AND PARTS LIST

A

B

C

2-1.

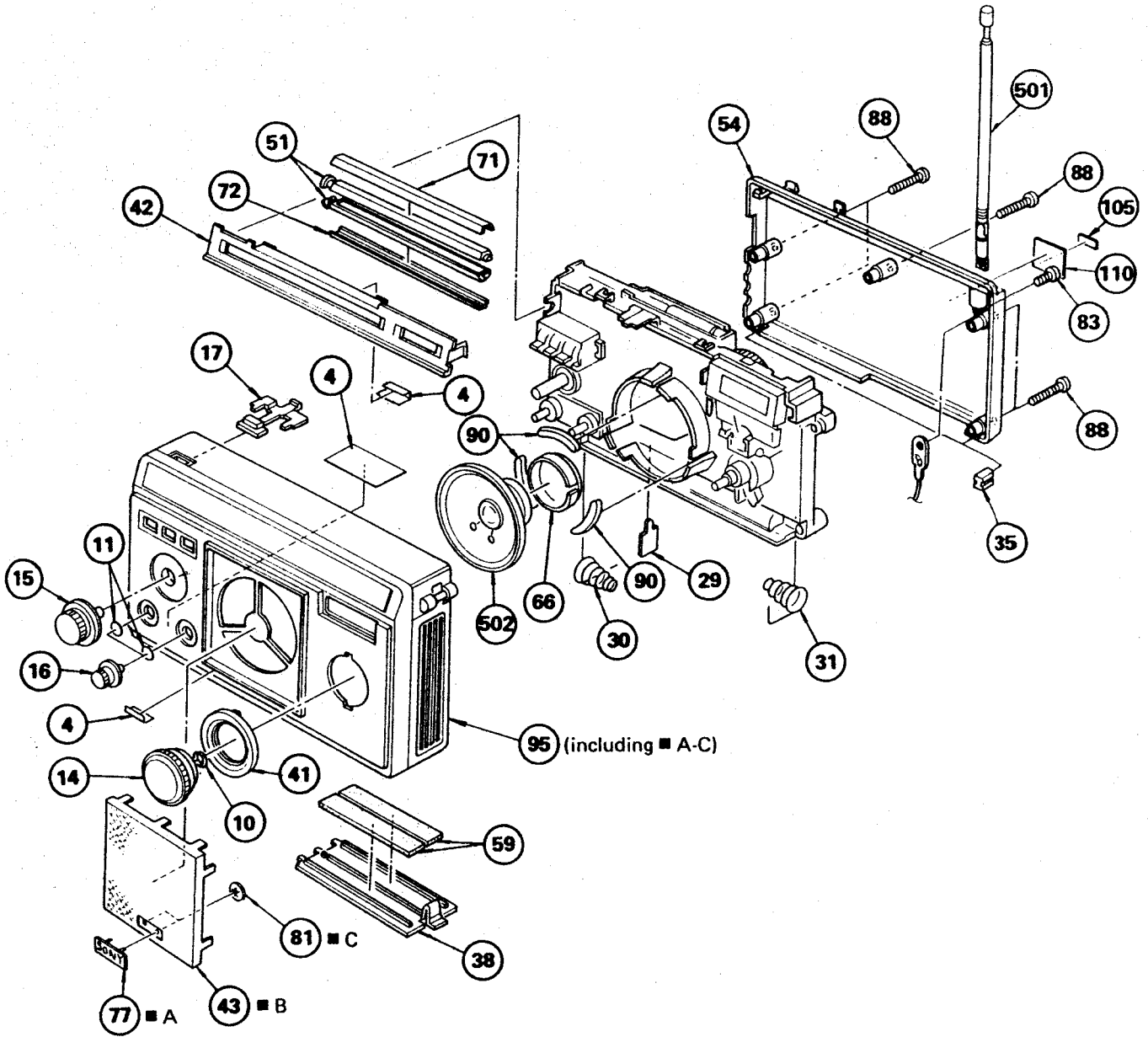
1

2

3

4

5



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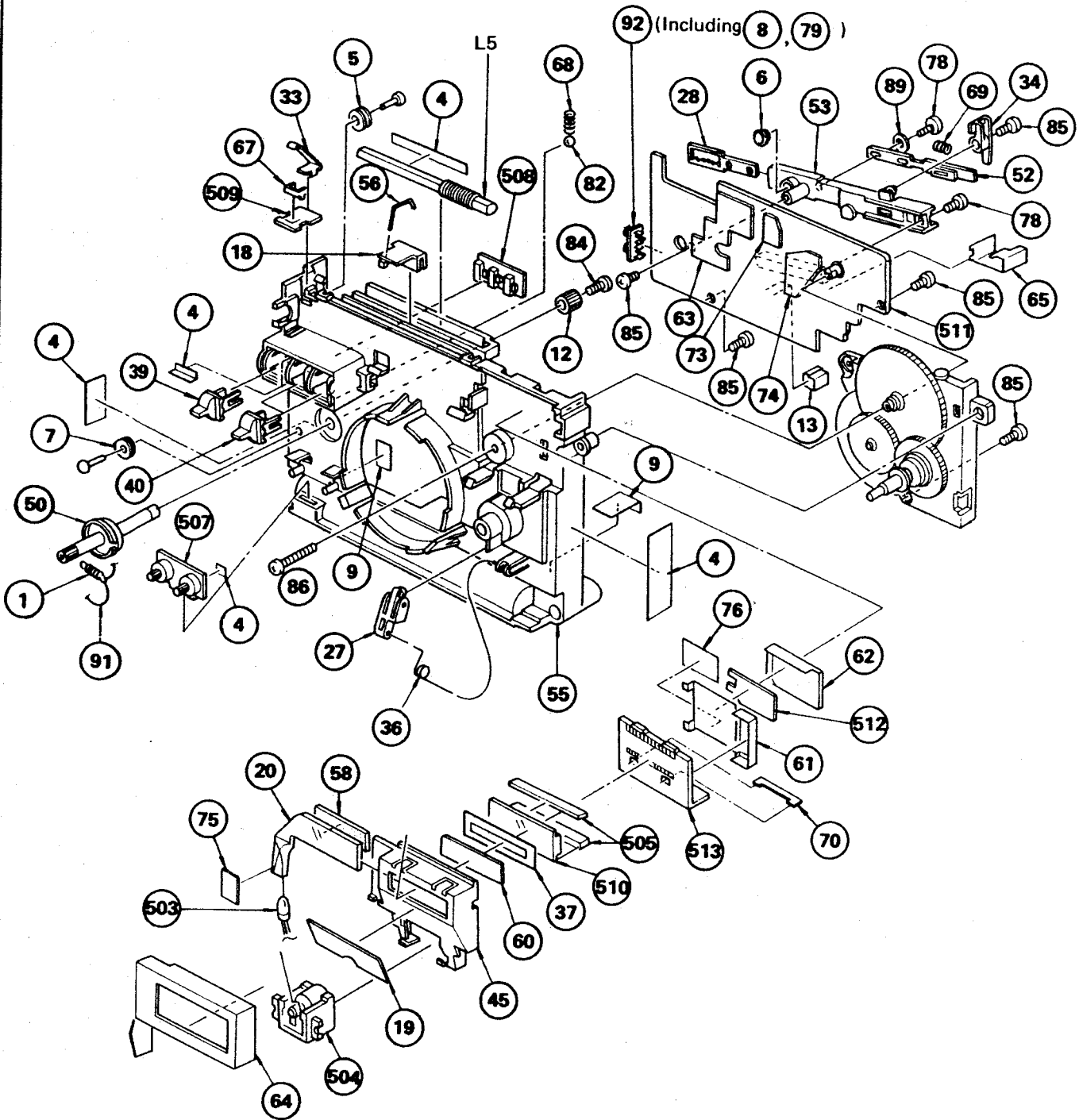
A

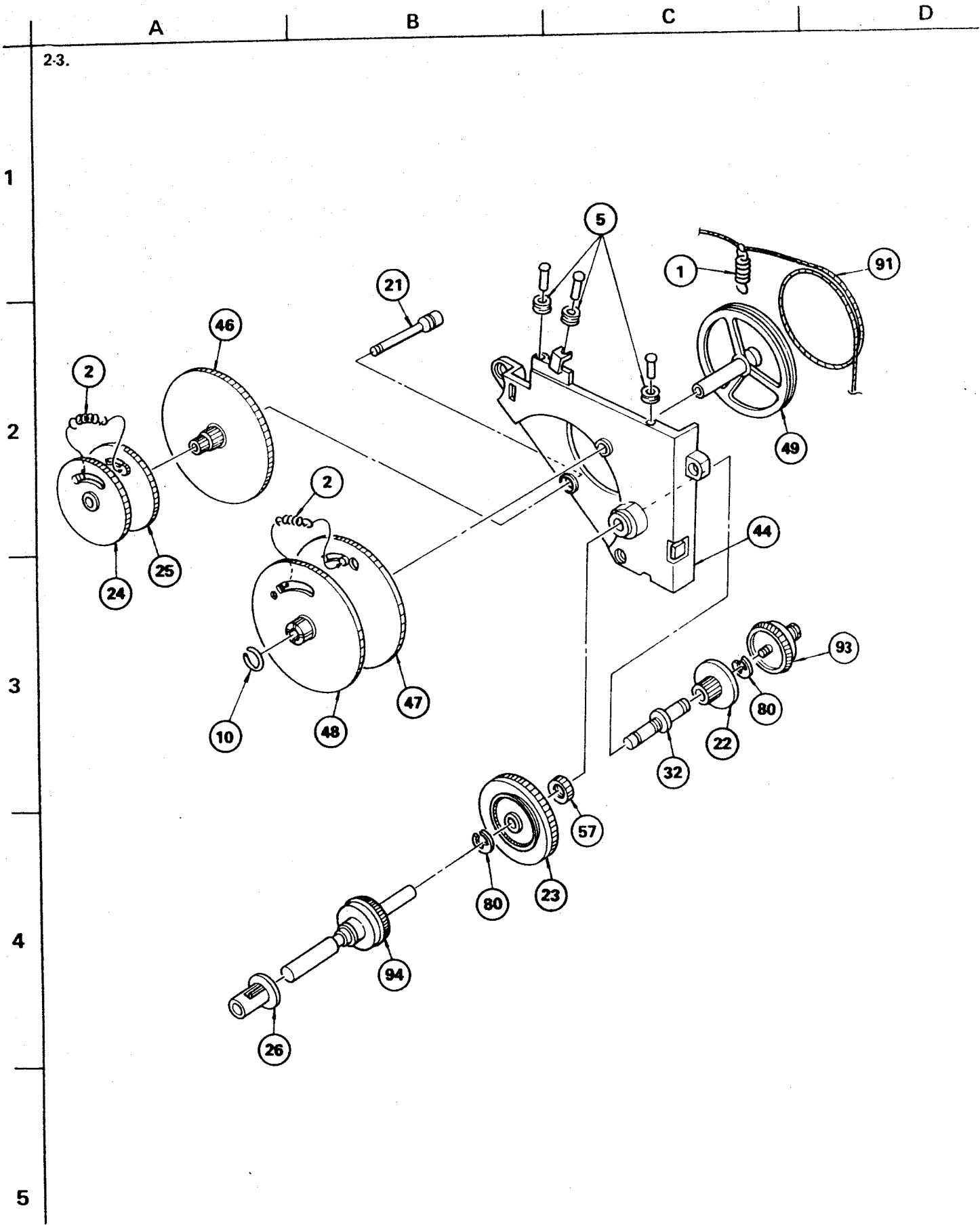
B

C

D

2-2.





GENERAL SECTION

No.	Part No.	Description
1	3-561-883-00	SPRING, TENSION
2	▲;3-642-752-00	SPRING, TENSION
3	.....	
4	3-831-441-XX	SPACER
5	3-834-636-00	PULLEY
6	3-889-773-00	COLLAR
7	3-839-611-00	PULLEY
8	3-840-416-00	SCREW, ANT TERMINAL
9	▲;3-849-374-00	SPACER, (35X20X0.3)
10	3-880-436-00	SPRING, KNOB
11	3-889-774-00	SPACER, KNOB
12	3-883-939-00	GEAR (D)
13	▲;3-887-524-00	PLATE, SHIELD
14	3-889-702-00	KNOB (A)
15	3-889-703-00	KNOB (B)
16	3-889-704-00	KNOB (C)
17	3-889-705-00	BUTTON, LAMP
18	▲;3-889-706-00	TABLE, POINTER
19	3-889-708-00	SCALE, DIAL, METER
20	3-889-709-00	CHIP, ILLUMINATION
21	▲;3-889-710-00	SHAFT (A)
22	3-889-712-00	GEAR (A)
23	3-889-713-00	GEAR (B)
24	3-889-714-00	GEAR (C)
25	3-889-715-00	GEAR (D)
26	▲;3-889-717-00	COLLAR
27	3-889-718-00	LEVER
28	3-889-720-00	SLIDER (A)
29	3-889-721-00	BOARD, TERMINAL, POSITIVE
30	3-889-722-00	TERMINAL, NEGATIVE
31	3-889-723-00	TERMINAL, RELAY
32	▲;3-889-725-00	BEARING (B)
33	3-889-726-00	PLATE, CONTACT, LAMP
34	3-889-727-00	LEVER, SWITCH
35	3-889-728-00	FOOT, RUBBER
36	3-889-729-00	SPRING
37	3-889-730-00	SPACER
38	3-889-731-00	LID, BATTERY CASE
39	3-889-733-01	KNOB (D)
40	3-889-733-11	KNOB (D)
41	3-889-734-00	RING, ORNAMENTAL
42	3-889-735-00	PLATE, BACK
43	3-889-737-00	PANEL, SPEAKER
44	3-889-738-00	CHASSIS (B)
45	3-889-739-00	HOLDER, METER

GENERAL SECTION

No.	Part No.	Description
46	3-889-740-00	GEAR (E)
47	3-889-741-00	GEAR (F)
48	3-889-742-00	GEAR (G)
49	3-889-743-00	DRUM, DIAL
50	3-889-744-00	SHAFT, SELECTION, BAND
51	3-889-745-00	SHAFT, SCALE
52	3-889-746-00	SLIDER (B)
53	3-889-747-00	HOLDER, SWITCH
54	3-889-749-00	CABINET (REAR)
55	3-889-750-00	CHASSIS (A)
56	3-889-751-00	POINTER
57	3-889-752-00	NUT (DIA.9)
58	3-889-753-00	CUSHION (ILLUMINATION CHIP)
59	▲;3-889-754-00	CUSHION
60	3-889-755-00	PLATE, POLARIZATION
61	▲;3-889-758-00	PLATE (A), SHIELD
62	▲;3-889-759-00	PLATE (B), SHIELD
63	▲;3-889-760-00	PLATE (C), SHIELD
64	▲;3-889-761-00	PLATE (D), SHIELD
65	▲;3-889-767-00	CASE (WA), SHIELD
66	▲;3-889-768-00	PLATE (E), SHIELD
67	3-889-769-00	PLATE, TERMINAL
68	3-889-770-00	SPRING (A), COMPRESSION
69	3-889-771-00	SPRING (B), COMPRESSION
70	▲;3-889-775-00	RETAINER, PC BOARD
71	3-889-777-00	SCALE, DIAL (FM,MW)
72	3-889-778-00	SCALE, DIAL (SW1,2,3)
73	▲;3-889-782-00	PLATE (G), SHIELD
74	▲;3-889-783-00	PLATE (H), SHIELD
75	▲;3-889-785-00	PLATE, INSULATION
76	4-855-845-00	SPACER
77	4-857-661-11	EMBLEM, SONY
78	7-621-775-10	SCREW +B 2.6X4
79	7-623-108-12	W 3,MIDDLE
80	7-624-109-04	STOP RING 5.0, TYPE -E
81	7-624-200-11	PUSH NUT 2
82	7-671-114-01	BALL 4, STEEL
83	7-682-546-04	SCREW +B 3X5
84	7-685-535-19	SCREW +BTP 2.6X10 TYPE2 N-S
85	7-685-547-19	SCREW +BTP 3X10 TYPE2 N-S
86	7-621-260-65	SCREW +P 2.6X30
87	.....	
88	7-685-553-19	SCREW +BTP 3X30 TYPE2 N-S
89	7-688-003-01	W3, SMALL
90	9-911-815-02	CUSHION, SP

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- 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 numbers (0-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:μF, PF:μLF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:  
 UA... : LA... , UPA... : PA... , UPC... : PC,  
 UPD... : PD...



GENERAL SECTION

No.	Part No.	Description
91	9-911-825-52	STRING, DIAL
92	X-3887-201-0	ANTENNA ASSY, OUTER
93	X-3889-702-0	SCREW ASSY
94	X-3889-703-0	SHAFT (B) ASSY
95	X-3889-705-1	CABINAT ASSY, FRONT

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
101	1-463-385-00	ADAPTOR, AC (AC-160W)
102	1-504-075-00	EARPHONE, MAGNETIC
103	3-544-147-00	BAG, POLYETHYLENE
104	3-701-625-00	BAG, POLYETHYLENE
105	3-701-999-00	LABEL, SERIAL NUMBER
106	3-703-264-11	LABEL (B), SERIAL NUMBER
107	3-844-683-00	BUTTON
108	3-887-278-02	WAVE HAND BOOK
109	3-889-757-00	CUSHION
110	3-889-762-00	LABEL, MODEL NUMBER (USA)
111	3-889-780-00	CASE, ADAPTOR
112	3-889-781-00	INDIVIDUAL CARTON
113	3-889-784-00	SPACER
114	3-995-911-21	MANUAL, INSTRUCTION
115	X-3844-608-0	BAND ASSY, SHOULDER

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	1-501-250-00	ANTENNA, TELESCOPIC (5 STEP)
502	1-502-892-00	SPEAKER
503	1-518-306-00	LAMP, PILOT
504	1-520-445-00	METER
505	1-535-389-00	CONDUCTOR, CONNECTION
506	1-543-152-00	CORE, FERRITE (FOR Q8)
507	▲;1-606-318-00	PC BOARD, VR
508	▲;1-606-319-00	PC BOARD, SWITCH
509	▲;1-606-321-00	PC BOARD, LAMP CONTACT
510	1-806-323-00	DISPLAY PANEL, LIQUID CRYSTAL
511	▲;A-3660-352-A	MOUNTED PCB (A), MAIN
512	▲;1-606-540-00	PC BOARD, PRESCALER
513	X-3889-708-1	COUNTER ASSY
CF1	1-527-795-71	FILTER, CERAMIC
CF2	1-527-795-71	FILTER, CERAMIC
CFU	1-527-290-00	FILTER, CERAMIC
CT1	1-141-232-00	CAP, TRIMAR 11PF
CT2	1-141-232-00	CAP, TRIMAR 11PF
CT3	1-141-232-00	CAP, TRIMAR 11PF
CT1-4	1-151-394-00	CAP, TUNING, POLYETHYLENE
CVI-4		
D1	8-719-815-55	DIODE 1S1555
D2	8-719-815-55	DIODE 1S1555
D3	8-719-815-55	DIODE 1S1555
D4	8-719-026-11	DIODE 1T261
D5	8-719-026-11	DIODE 1T261
D6	8-719-026-11	DIODE 1T261
D7	8-719-713-93	DIODE 1S2139C
D8	8-719-815-55	DIODE 1S1555
D9	8-719-815-55	DIODE 1S1555
D10	8-719-815-55	DIODE 1S1555
D15	8-719-815-55	DIODE 1S1555
D101	8-719-815-55	DIODE 1S1555
D102	8-719-815-55	DIODE 1S1555
D103	8-719-815-55	DIODE 1S1555
D104	8-719-815-55	DIODE 1S1555
D105	8-719-815-55	DIODE 1S1555
D106	8-719-815-55	DIODE 1S1555
D107	8-719-815-55	DIODE 1S1555
IC1	8-759-900-44	IC KB4419C
IC2	8-759-100-11	IC UPC1213C
IC101	8-759-600-11	IC M54460L
J1	1-507-578-00	JACK
J2	1-507-578-00	JACK
J3	1-507-459-00	JACK

**NOTE:**

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- 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 numbers (E-888-116-XX or E-888-888-X) may be different from those used in the set.

**CAPACITORS:**

- All capacitors are in  $\mu$ F. Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF:  $\mu$ F, PF:  $\mu$ F.

**RESISTORS**

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

**COILS**

- MMH : mH, UH :  $\mu$ H

**SEMICONDUCTORS**

- In each case, U :  $\mu$ , for example:  
UA :  $\mu$ A, UPA :  $\mu$ PA, UPC :  $\mu$ PC, UPD :  $\mu$ PD

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
L1	1-405-755-00	COIL, MW OSC
L2	1-405-976-00	COIL, OSCILLATOR (SW1)
L3	1-405-975-00	COIL, OSCILLATOR (SW2)
L4	1-405-974-00	COIL, OSCILLATOR (SW3)
L5	1-401-933-00	ANTENNA, FERRITE-ROD (MW)
L6	1-401-930-00	COIL, ANT (SW1)
L7	1-401-931-00	COIL, ANT (SW2)
L8	1-401-932-00	COIL, ANT (SW3)
L11	1-401-454-00	ANTENNA COIL
L13	1-405-714-00	COIL, OSC
L14	1-408-203-00	MICRO INDUCTOR 470UH
L16	1-407-882-00	COIL
L19	1-408-558-00	MICRO INDUCTOR 3.9UH
L20	1-408-558-00	MICRO INDUCTOR 3.9UH
L21	1-408-557-00	MICRO INDUCTOR 3.3UH
L22	1-408-555-00	MICRO INDUCTOR 2.2UH
L23	1-408-559-00	MICRO INDUCTOR 4.7UH
Q1	8-729-883-92	TRANSISTOR 2SC2839
Q2	8-729-883-92	TRANSISTOR 2SC2839
Q4	8-729-883-92	TRANSISTOR 2SC2839
Q5	8-729-200-55	TRANSISTOR 2SK241-Y
Q6	8-729-660-37	TRANSISTOR 2SC1363-7
Q7	8-729-671-14	TRANSISTOR 2SC710-14
Q8	8-729-167-42	TRANSISTOR 2SC1674
Q9	8-729-216-13	TRANSISTOR 2SK161
Q10	8-729-883-92	TRANSISTOR 2SC2839
Q11	8-729-883-92	TRANSISTOR 2SC2839
Q12	8-729-216-13	TRANSISTOR 2SK161
Q13	8-729-216-13	TRANSISTOR 2SK161
Q14	8-729-660-37	TRANSISTOR 2SC1363-7
Q15	8-729-671-13	TRANSISTOR 2SC710-13
Q16	8-729-660-37	TRANSISTOR 2SC1363-7
Q17	8-729-660-37	TRANSISTOR 2SC1363-7
Q18	8-729-612-77	TRANSISTOR 2SA1027R
Q19	8-729-660-37	TRANSISTOR 2SC1363-7
Q101	8-729-853-63	TRANSISTOR 2SC536SP
Q102	8-729-612-77	TRANSISTOR 2SA1027R

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
S1	1-514-316-00	SLIDE SWITCH
S3	1-553-936-00	SWITCH, SLIDE
S4	1-553-938-00	SWITCH, SLIDE
S5	1-553-938-00	SWITCH, SLIDE
S6	1-553-015-00	SWITCH, SLIDE
T1	1-403-872-00	I.F.T
T2	1-404-354-00	COIL, IF
T3	1-404-023-00	COIL, IFT
T4	1-404-100-00	COIL, IFT
T5	1-404-249-00	COIL, FM DETECTOR
TH1	1-800-071-XX	TH DIRECT-HEATING DISK S-300
TH2	1-800-071-XX	TH DIRECT-HEATING DISK S-300
VR1	1-228-498-00	RES, VAR, CARBON 10K
VR2	1-228-497-00	RES, VAR, CARBON 10K
X1	1-527-867-00	OSCILLATOR, CRYSTAL
X101	1-527-863-00	OSCILLATOR, CRYSTAL

## NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- 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 numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

## CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

## RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

## COILS

- MMH : mH, UH : μH

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## SEMICONDUCTORS

- In each case, U : μ, for example:  
 UA.... : μA...., UPA.... : μPA...., UPC.... : μPC,  
 UPD.... : μPD....