

ICF-5500M

AEP Model



FM-SW-MARINE-MW 4-BAND PORTABLE RADIO

SPECIFICATIONS

Circuit:	superheterodyne	Power Output	
Semiconductors:	10 transistors, 1 IC, 1 FET 8 diodes	at 10% distortion: 1.8W	
Frequency Ranges:	FM 87.5-108 MHz (3.43-2.78 m) Marine 1.6-4.5 MHz (187-66.7m) SW 4.5-12 MHz (66.7-25 m) MW 530-1,605 kHz (566-187 m)	at maximum: 2.8W	
Intermediate Frequencies:	FM 10.7 MHz MW/Marine/SW 455 kHz	Current Drain	
Antennas:	FM/Marine/SW built-in telescopic antenna or external antenna MW/Marine built-in ferrite bar antenna	at no signal: FM 40mA Marine/SW/MW 32mA	
Sensitivity		Speaker:	120mm (4 3/4 inch) dia PM dynamic, 6.5Ω
at 50 mW output:	FM 1.4μV (3dB), S/N = 6 dB 4μV (12 dB), S/N = 30 dB MW 31.6μV/m (30dB/m), S/N = 6dB SW 1.4μV (3dB), S/N = 6dB Marine 4μV/m (2dB/m), S/N = 6dB	Inputs:	AUX IN approximately 3.3kΩ EXT ANT 75Ω unbalanced EXT POWER IIV DC 4.5V
Selectivity:	35 dB at ±10kHz off-resonance at 600 kHz	Outputs:	MPX OUT 5kΩ rec out 1kΩ earphone 6.5Ω
Signal-to-Noise Ratio:	FM 60 dB at 98 MHz with 54 dB (500μV) input MW 37 dB at 1,000 kHz with 60 dB/m (1mV/m) input Marine 44 dB at 3 MHz with 44 dB/m input SW 47 dB at 8 MHz with 44 dB input	TIMER:	60 minutes maximum
		Power Requirements:	4.5V DC, three size "C" flashlight batteries or 120V/220V AC, 50/60Hz house current using ac adaptor SONY AC-456C DC 12V using car battery cord SONY DCC-127
		Dimensions:	163 (w) x 204 (h) x 66.5 (d) mm 6 3/8 (w) x 8 (h) x 2 3/8 (d) inches
		Weight:	1,560 g (3 lb 7 oz) with batteries








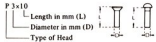



SONY
SERVICE MANUAL

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When ordering replacement parts, use **PART NUMBERS** listed in Parts List or shown in **EXPLODED VIEWS**.
Parts List reference numbers should not be used.

Hardware Nomenclature

P - Pan Head Screw 	SC - Set Screw 
PS - Pan Head Screw with Spring Washer 	E - Retaining Ring (E Washer) 
K - Flat Countersunk Head Screw 	W - Washer SW - Spring Washer LW - Lock Washer N - Nut
B - Binding Head Screw 	- Example -
RK - Oval Countersunk Head Screw 	
T - Truss Head Screw 	
R - Round Head Screw 	
F - Flat Filler Head Screw 	

SECTION 1 OUTLINE

1-1. BLOCK DIAGRAM

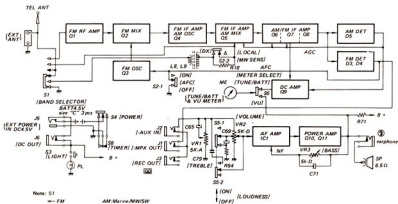


Fig. 1-1.

1-2. EXTERNAL VIEW

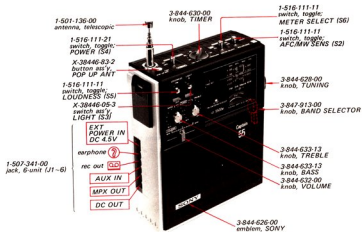


Fig. 1-2.

1-3. INTERNAL VIEW

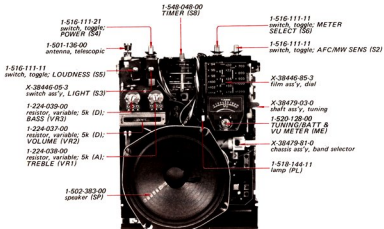
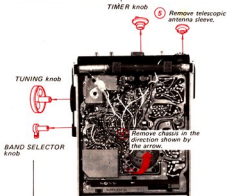
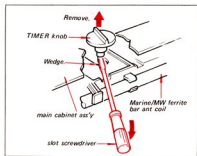
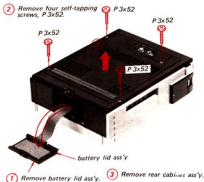


Fig. 1-3.

SECTION 2 DISASSEMBLY

2-1. REAR CABINET ASS'Y REMOVAL

Remove rear cabinet ass'y in the numerical order shown in Fig. 2-1.



2-2. CHASSIS REMOVAL

Remove chassis with electrical and mechanical parts, in the numerical order as shown below.

- ① Remove rear cabinet ass'y as outlined in 2-1 above.

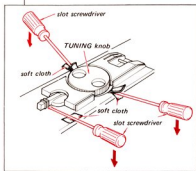
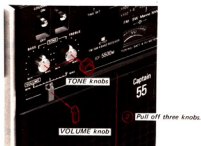


Fig. 2-3.

Note: In step ⑤, it is good help to push variable resistor shafts (BASS and TREBLE) and toggle switch knobs (LOUDNESS and LIGHT) as shown in Fig. 2-6. below.

Push shafts and knobs.

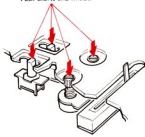


Fig. 2-6.

2-3. DIAL FILM ASS'Y REMOVAL

Remove dial film ass'y in the numerical order as shown below.

- ① Remove rear cabinet ass'y and chassis with electrical and mechanical parts mounted, as outlined in 2-1 and 2-2 above.
- ② Release main chassis claw by wedging with a slot screwdriver as shown in Fig. 2-7.
- ③ Remove dial film ass'y in the direction shown by the arrow holding the dial film with finger preventing it from being strongly rewound by dial film spring.

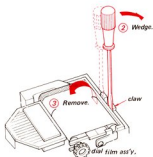


Fig. 2-7.

2-4. DIAL FILM ASS'Y RESETTING

- ① Set the tuning shaft at fully counterclockwise position.
- ② Put the dial film ass'y in place and align the marks on the dial film and dial film chassis as shown in Fig. 2-8.
If the marks can not be aligned correctly, loosen self-tapping screw, P 3x14, and carefully adjust the transmission gear so that the marks are aligned.
- ③ Turn the dial film spring in the direction shown by the arrow to give an adequate tension to the dial film.

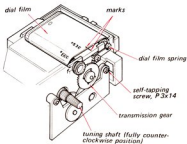


Fig. 2-8.

2-5. GEAR CHASSIS REMOVAL

Remove gear chassis in the numerical order as shown below.

- ① Remove rear cabinet ass'y and chassis with electrical and mechanical parts mounted, as outlined in 2-1 and 2-2 on page 5.

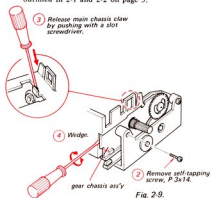
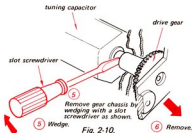


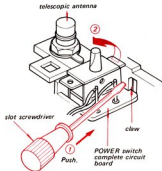
Fig. 2-9.



2-6. POWER SWITCH CIRCUIT BOARD REMOVAL

Remove POWER switch complete circuit board in the numerical order shown below.

- 1 Remove rear cabinet ass'y and chassis with electrical and mechanical parts mounted, as outlined in 2-1 and 2-2 on page 5.
- 2 Remove POWER switch complete circuit board in the direction shown by the arrow 2 by pushing main chassis claw with a slot screwdriver as shown in Fig. 2-11.



2-7. AFC/MW SENS AND METER SELECT SWITCH CIRCUIT BOARD REMOVAL

Remove AFC/MW SENS AND METER SELECT switch complete circuit board in the numerical order as shown below.

- 1 Remove rear cabinet ass'y and chassis with electrical and mechanical parts mounted, as outlined in 2-1 and 2-2 on pages 5 and 6.
- 2 Unsolder GRN antenna lead wire shown in Fig. 2-12.
- 3 Remove locking compound.

- 4 Remove AFC/MW SENS AND METER SELECT switch complete circuit board in the direction shown by the arrow 5 by pushing main chassis claw with a slot screwdriver as shown in Fig. 2-12.

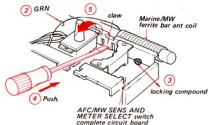


Fig. 2-12

2-8. CONTROL CIRCUIT BOARD REMOVAL

Remove control complete circuit board in the numerical order as shown below.

- 1 Remove rear cabinet ass'y and chassis with electrical and mechanical parts mounted, as outlined in 2-1 and 2-2 on pages 5 and 6.
- 2 Remove control complete circuit board in the direction shown by the arrow 3 by releasing chassis claw with a slot screwdriver as shown in Fig. 2-13. below.

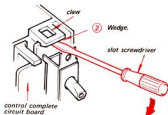


Fig. 2-13.

2-9. TUNE/BATT & VU METER REMOVAL

Remove TUNE/BATT & VU METER in the numerical order as shown below.

- ① Remove rear cabinet ass'y and chassis with electrical and mechanical parts mounted, as outlined in 2-1 and 2-2 on pages 5 and 6.
- ② Release main chassis claw by wedging with a slot screwdriver as shown in Fig. 2-14.
- ③ Remove TUNE/BATT & VU METER in the direction shown by the arrow.

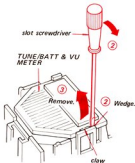


Fig. 2-14.

2-10. MAIN CIRCUIT BOARD REMOVAL

Remove main circuit board in the numerical order shown below.

- ① Remove rear cabinet ass'y and chassis with electrical and mechanical parts mounted, as outlined in 2-1 and 2-2 on pages 5 and 6.
- ② Remove dial film ass'y as outlined in 2-3 on page 6.
- ③ Remove gear chassis as outlined in 2-5 on page 6.
- ④ Remove POWER switch complete circuit board as outlined in 2-6 on page 7.
- ⑤ Remove METER SELECT and AFC/MW SENS switch complete circuit board as outlined in 2-7 on page 7.

- ⑥ Remove control complete circuit board as outlined in 2-8 on page 7.
- ⑦ Remove TUNE/BATT & VU METER as outlined in 2-9 above in the direction shown by the arrow ⑦ in Fig. 2-15 below.
- ⑧ Remove wire tie as shown in Fig. 2-15 below.
- ⑨ Remove lamp from main chassis as shown in Fig. 2-15 below.
- ⑩ Unsolder WHT lead wire at telescopic antenna solder lug.
- ⑪ Remove two machine screws, P 3x6, shown in Fig. 2-15 below.

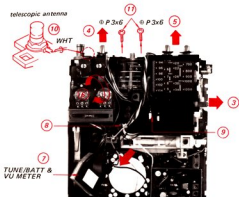


Fig. 2-15.

- ⑫ Remove main circuit board by releasing two main chassis claws shown in Fig. 2-16 below.

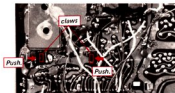


Fig. 2-16.

2-11. TELESCOPIC ANTENNA REMOVAL

Remove telescopic antenna in the numerical order as shown below.

- ① Perform all steps outlined in 2-10 main circuit board removal on page 8.
- ② Remove nut and telescopic antenna solder lug from telescopic antenna as shown in Fig. 2-17 below.

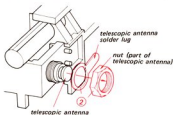


Fig. 2-17.

- ③ Lift up main circuit board as shown in Fig. 2-18 below.
- ④ Remove telescopic antenna as shown in Fig. 2-18 below.

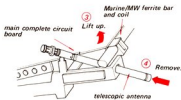


Fig. 2-18.

SECTION 3 ADJUSTMENTS

Test Equipment/Tools Required:

AM rf signal generator
 FM rf signal generator
 VOM
 VTVM
 Loop antenna
 6.5Ω, 2W resistor

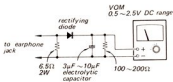
Note: 1. Remove chassis and TUNE/BATT & VU METER meter referring to 2-1, 2-2 (pages 5 and 6) and 2-9 (page 8) before performing adjustments.

2. Modulation

AM: 30% amplitude modulation by 400 Hz signal.
 FM: 222.5 kHz frequency deviation by 400 Hz signal.

3. AM, FM rf signal generator output level should be usable lowest possible for following adjustments.

4. When 0.5 ~ 1.5V AC range is not available on the VOM, use a VTVM instead of the VOM or use a rectifying circuit with the VOM 0.5 ~ 2.5V DC range as shown below.



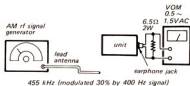
5. It is recommended that MW or Marine, FM and SW maximum sensitivity measurements on pages 13 and 14 be performed in a standard shielded room.

AM I-F Alignment

Settings:

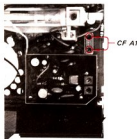
BAND SELECTOR switch: MW
 VOLUME control: MAX
 TONE controls: MAX

Procedure:



Adjust	VOM reading
CF A1	maximum

Adjustment Location:

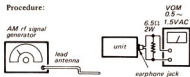


MW Frequency Coverage and Tracking Adjustments

Settings:

BAND SELECTOR switch: MW
 VOLUME control: MAX
 TONE controls: MAX

Procedure:

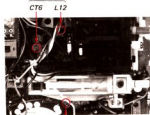


Adjustment	Step	Signal frequency	Tuning knob	Adjust	VOM reading
Frequency Coverage	1	520kHz	fully counterclockwise	L12	maximum
	2	1,680kHz	fully clockwise	CT6	maximum
Tracking	1	620kHz	tune in 620kHz	L9	maximum
	2	1,480kHz	tune in 1,480kHz	CT3	maximum

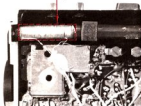
Note: Repeat above steps two or three times until desired result is obtained ending with step 2. Fix L9 with wax after adjustment.

Adjustment Locations:

frequency coverage



CT3 L9 tracking

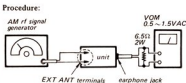


SW Frequency Coverage and Tracking Adjustments

Settings:

BAND SELECTOR switch: SW
 VOLUME control: MAX
 TONE controls: MAX

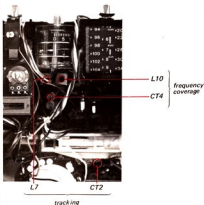
Procedure:



Adjustment	Step	Signal frequency	Tuning knob	Adjust	VOM reading
Frequency Coverage	1	4.3 MHz	fully counterclockwise	L10	maximum
	2	12.5 MHz	fully clockwise	CT4	maximum
Tracking	1	4.3 MHz	fully counterclockwise	L7	maximum
	2	12.5 MHz	fully clockwise	CT2	maximum

Note: Repeat above steps two or three times until desired result is obtained ending with step 2.

Adjustment Locations:

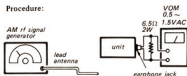


Marine Frequency Coverage and Tracking Adjustments

Settings:

BAND SELECTOR switch: Marine
 VOLUME control: MAX
 TONE controls: MAX

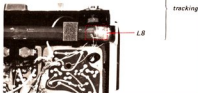
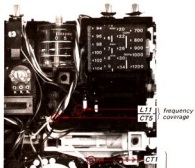
Procedure:



Adjustment	Step	Signal frequency	Tuning knob	Adjust	VOM reading
Frequency Coverage	1	1.5 MHz	fully counterclockwise	S11	maximum
	2	4.6 MHz	fully clockwise	CT5	maximum
Tracking	1	1.5 MHz	fully counterclockwise	L8	maximum
	2	4.6 MHz	fully clockwise	CT1	maximum

Note: Repeat above steps two or three times until desired result is obtained ending with step 2. Fix L8 with wax after adjustment.

Adjustment Locations:

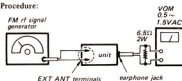


FM I-F Alignment and Discriminator Adjustment

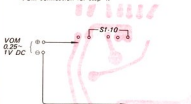
Settings:

BAND SELECTOR switch: FM
 VOLUME control: MAX
 TONE controls: MAX
 AFC switch: OFF

Procedure:



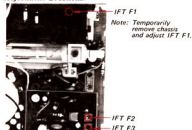
VOM connection for step 4.



Step	Signal frequency	Tuning knob	Adjust	VOM reading
1	Arround 18.7MHz with FM modulation	No station, no tuning pointer	R1 signal generator frequency	maximum
2	-0850-	-0850-	IFT F1-3	maximum
3	Repeat steps 1 and 2 two or three times.			
4	Turn modulation off. Increase output a little.	-0850-	IFT F3	"0V DC"

Note: Repeat above steps two or three times until desired result is obtained.

Adjustment Locations:

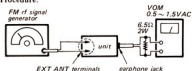


FM Frequency Coverage and Tracking Adjustments

Settings:

BAND SELECTOR switch: FM
 VOLUME control: MAX
 TONE controls: MAX
 AFC switch: OFF

Procedure:

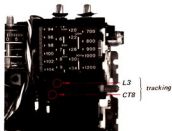
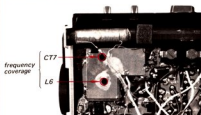


Adjustment	Step	Signal frequency	Tuning knob	Adjust	VOM reading
Frequency Coverage	1	86.5 MHz	fully counterclockwise	L6	maximum
	2	109.5 MHz	fully clockwise	CT7	maximum
Tracking	1	86.5 MHz	tune to 86.5 MHz	L3	maximum
	2	109.5 MHz	tune to 109.5 MHz	CT8	maximum

Note: In West Germany, the frequency coverage is from 87.5 MHz to 108 MHz.

Repeat above steps two or three times until desired result is obtained ending with step 2. Fix L6 and L3 with wax after adjustment.

Adjustment Locations:

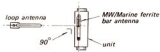
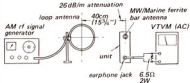


MW/Marine Maximum Sensitivity Measurement

Settings:

BAND SELECTOR switch: MW or Marine
 VOLUME control: MAX
 TONE controls: MAX
 LOUDNESS switch: OFF

Procedure:



Note: Distance between center of loop antenna and center axis of MW/Marine ferrite bar antenna and attenuation are dependent upon loop antenna used. In this case the attenuation is 26 dB/m at 40 cm.

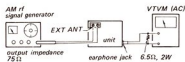
1. Set AM rf signal generator frequency to 1,000 kHz (MW) or 3 MHz (Marine), modulation to 400Hz, 30%.
2. Turn TUNING knob of the unit and tune in 1,000kHz (MW) or 3 MHz (Marine) signal to obtain maximum VTVM reading.
3. Vary AM rf signal generator attenuator to obtain 0.57V (50mW output) on the VTVM. Note VTVM reading in dB.
4. Turn modulation off and note VTVM reading in dB.
5. The difference of VTVM readings obtained in steps 3 and 4 is the signal-to-noise ratio at this condition.
6. Adjust AM rf signal generator attenuator until 6 dB signal-to-noise ratio is obtained keeping 0.57V (50mW output) varying VOLUME control. If the unit is not operating normally, 50 mW output may not be obtained at 6 dB signal-to-noise ratio.
7. Read the amount of signal generator attenuator and determine maximum sensitivity by subtracting 26 dB from the attenuator reading.
8. MW maximum sensitivity is 31.6μV/m (30 dB/m), Marine 4μV/m (2 dB/m).

SW Maximum Sensitivity Measurement

Settings:

BAND SELECTOR switch: SW
 VOLUME control: MAX
 TONE controls: MAX
 LOUDNESS switch: OFF

Procedure:



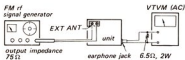
1. Set AM rf signal generator frequency to 8 MHz, modulation to 400Hz, 30%.
2. Turn TUNING knob of the unit and tune in 8 MHz signal to obtain maximum VTVM reading.
3. Vary AM rf signal generator attenuator to obtain 0.57V (50mW output) on the VTVM. Note VTVM reading in dB.
4. Turn modulation off and note VTVM reading in dB.
5. The difference of VTVM readings obtained in steps 3 and 4 is the signal-to-noise ratio at this condition.
6. When the signal-to-noise ratio is more than 6 dB, the amount of AM rf signal generator attenuator is the maximum sensitivity. If the unit is operating normally, this is not the case.
7. When the signal-to-noise ratio is less than 6 dB (the unit is operating normally), increase AM rf signal generator attenuator until 6 dB signal-to-noise ratio is obtained keeping 0.57V (50mW output) varying VOLUME control.
8. Read the amount of signal generator attenuator and determine maximum sensitivity.
9. SW maximum sensitivity is 1.4 μ V (3 dB).

FM Maximum Sensitivity Measurement

Settings:

BAND SELECTOR switch: FM
 VOLUME control: MAX
 TONE controls: MAX
 LOUDNESS switch: OFF
 AFC switch: OFF

Procedure:



1. Set FM rf signal generator frequency to 98MHz, modulation to 400Hz, 22.5kHz deviation, attenuator to about 3 dB.
2. Turn TUNING knob of the unit and tune in 98 MHz signal to obtain maximum VTVM reading.
3. Vary VOLUME control until 0.57 V (50mW output) is obtained on VTVM. Note VTVM reading in dB. If 0.57 V is not obtained, increase FM rf signal generator attenuator to obtain 0.57V VTVM reading.
4. Turn modulation off and note VTVM reading in dB.
5. The difference of VTVM readings obtained in steps 3 and 4 is the signal-to-noise ratio at this condition.
6. Adjust FM rf signal generator attenuator until 6 dB signal-to-noise ratio is obtained.
7. Repeat adjustment turning modulation on and off and varying VOLUME control keeping 0.57V (50mW output) until desired 6 dB signal-to-noise ratio is obtained.
8. Read the amount of signal generator attenuator. This is the maximum sensitivity.
9. FM maximum sensitivity is 1.4 μ V (3 dB).

SECTION 4
DIAGRAMS

4-1. SCHEMATIC DIAGRAM

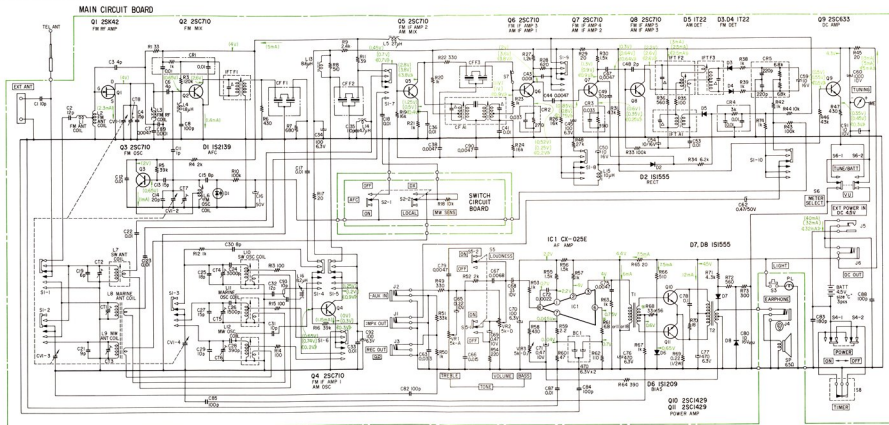


Fig. 4-1.

- Note: 1. All fixed resistors are in Ω , 5%, 1/4W carbon film type, $k=1,000$
 2. All fixed capacitors are in μF unless otherwise specified. $p = \mu\mu$
 3. All voltage and current readings are taken with a 20k Ω/V DC VOM with no signal received. Variations may be noted due to normal production tolerances.
 () : FM no mark: common
 | : SW
 < : MW

4. Capacitors marked ϕ are built in if transformers and ceramic filter.
 5. R61 and R68 marked Δ are to be selected to yield specified operating condition. R61 is selected to obtain 0.75V at pin 6 of IC1, R68 is selected to obtain 0.6V at the center tap of T1.

6. Switch mode:

Ref. No.	Switch	Mode
S1	BAND SELECTOR	FM
S2	AFC/MW SENS	OFF ON
S3	TIMER	AFC ON
S4	POWER	OFF
S5	LOUDNESS	ON
S6	METER SELECT	VU
S7	FM selector	ON

7. DC resistance



4.2. MOUNTING DIAGRAM

- Conductor Side -

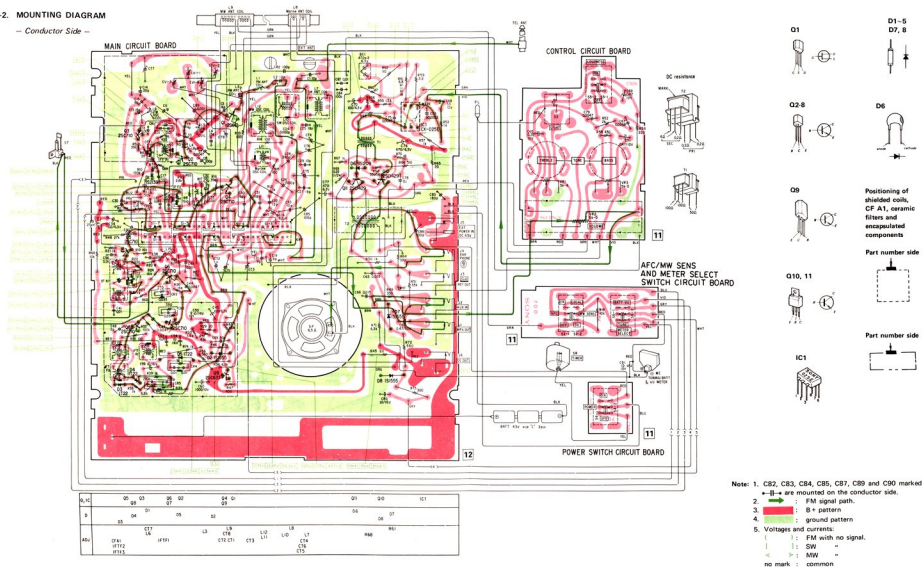


Fig. 4.2

5.2. EXPLODED VIEW (2)

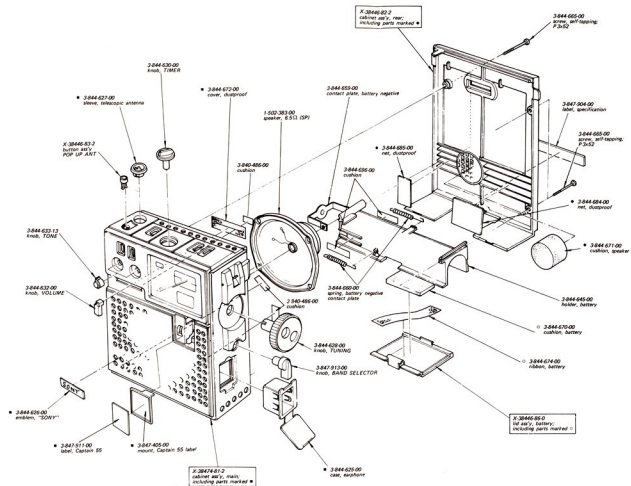


Fig. 5-2.

Note: 1. Parts without part numbers and names are not available.

2. All screws are Phillips type (cross recess type) unless otherwise indicated.
(-) slotted head

5-3. PACKING

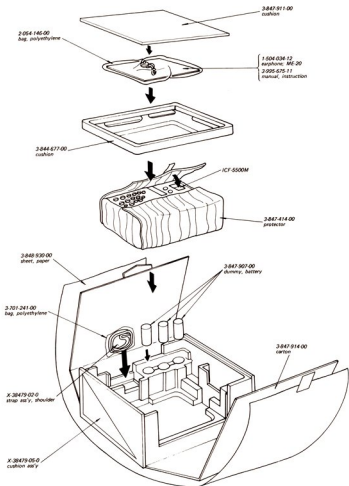


Fig. 5-3.

Note: 1. Parts without part numbers and names are not available.

SECTION 6 ELECTRICAL PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
COMPLETE CIRCUIT BOARDS					
X-38479-23-0		control	L7	1-401-565-00	coil, SW ant
X-38479-24-0		AFC/MW SENS and METER SELECT switch	L8)	1-401-564-00	coil, Marine/MW ferrite bar ant
X-38479-25-0		POWER switch	L9)		
X-38479-26-0		main	L10	1-405-622-00	coil, SW osc
			L11	1-405-621-00	coil, Marine osc
			L12	1-405-520-00	coil, MW osc
			L13	1-407-189-00	microinductor, 8.6 μ H
			L14	1-407-186-00	microinductor, 4.7 μ H
			L15	1-407-190-00	microinductor, 10 μ H
			L16	1-407-189-00	microinductor, 8.6 μ H
			T1	1-423-159-00	transformer, driver
			T2	1-427-331-00	transformer, output
SEMICONDUCTORS					
Q1		transistor 2SK42			
Q2		transistor 2SC710			
Q3		transistor 2SC710			
Q4		transistor 2SC710			
Q5		transistor 2SC710			
Q6		transistor 2SC710			
Q7		transistor 2SC710			
Q8		transistor 2SC710			
Q9		transistor 2SC633			
Q10		transistor 2SC1429			
Q11		transistor 2SC1429			
IC1		integrated circuit CX-025E			
D1		diode 1S1139			
D2		diode 1S1555			
D3		diode 1T262			
D4		diode 1T22			
D5		diode 1T22			
D6		diode 1S1209			
D7		diode 1S1555			
D8		diode 1S1555			
COILS AND TRANSFORMERS					
IFT A1	1-403-137-00	transformer, AM i-f	BC1	1-123-042-11	470 6.3V electrolytic (2-unit)
IFT F1	1-403-242-31	transformer, FM i-f	C1	1-102-947-11	10p
IFT F2	1-403-272-31	transformer, FM i-f	C2	1-102-949-11	12p
IFT F3	1-403-273-31	transformer, FM i-f	C3	1-102-941-11	4p
			C4	1-102-951-11	15p
			C5	-----	
L1	1-401-527-00	coil, FM ant	C6	1-102-941-11	4p
L2	1-401-526-00	coil, FM ant	C7	1-101-922-11	0.0047
L3	1-425-739-00	coil, FM rf	C8	1-102-973-11	100p
L4	1-407-181-00	microinductor; 1.8 μ H	C9	-----	
L5	1-407-162-00	microinductor; 27 μ H	C10	-----	
L6	1-405-568-00	coil, FM osc	C11	1-102-938-11	1p
			C12	1-105-833-12	0.01 mylar
			C13	1-102-951-11	15p
			C14	1-102-954-11	20p
			C15	1-102-962-11	8p
			C16	1-121-952-11	1 50V electrolytic
			C17	1-105-833-12	0.01 mylar
			C18	1-105-833-12	0.01 mylar
			C19	1-102-943-11	6p
			C20	-----	
			C21	1-102-946-11	9p
			C22	1-105-833-12	0.01 mylar
			C23	1-105-833-12	0.01 mylar
			C24	1-103-736-11	3,000p styrol
			C25	1-102-953-11	18p
			C26	1-103-729-11	1,500p styrol
			C27	1-102-951-11	15p
			C28	1-103-714-11	390p styrol
			C29	1-102-947-11	10p
			C30	1-102-945-11	8p
CAPACITORS					
All capacitors are in μ F and ceramic type unless otherwise specified. p = μ p					

<i>Ref. No.</i>	<i>Part No.</i>	<i>Description</i>
C31	1-102-947-11	10p
C32	1-102-949-11	12p
C33	1-105-833-12	0.01 mylar
C34	1-121-413-11	100 6.3V electrolytic
C35	1-102-947-11	10p
C36	1-105-833-12	0.01 mylar
C37	-----	-----
C38	1-101-922-11	0.0047
C39	-----	-----
C40	-----	-----
C41	1-101-923-11	0.01
C42	-----	-----
C43	1-101-918-11	0.001
C44	1-101-922-11	0.0047
C45	1-121-413-11	100 6.3V electrolytic
C46	-----	-----
C47	1-101-922-11	0.0047
C48	1-102-939-11	2p
C49	1-102-962-11	30p
C50	1-121-651-11	10 16V electrolytic
C51	-----	-----
C52	-----	-----
C53	1-101-923-11	0.01
C54	1-121-651-11	10 16V electrolytic
C55	-----	-----
C56	-----	-----
C57	-----	-----
C58	-----	-----
C59	1-121-651-11	10 16V electrolytic
C60	1-121-736-11	1000 10V electrolytic
C61	-----	-----
C62	1-121-726-11	0.47 50V electrolytic
C63	1-105-839-12	0.033 mylar
C64	-----	-----
C65	1-127-020-11	0.22 10V solid aluminum
C66	1-105-835-12	0.015 mylar
C67	1-105-831-12	0.0068 mylar
C68	1-121-402-11	33 10V electrolytic
C69	1-127-022-11	0.47 10V solid aluminum
C70	1-121-413-11	100 6.3V electrolytic
C71	1-127-022-11	0.47 10V solid aluminum
C72	1-105-825-12	0.0022 mylar
C73	-----	-----
C74	-----	-----
C75	1-105-829-12	0.0047 mylar
C76	1-121-424-11	470 6.3V electrolytic
C77	1-121-424-11	470 6.3V electrolytic
C78	1-105-845-12	0.1 mylar
C79	1-105-829-12	0.0047 mylar
C80	1-121-651-11	10 16V electrolytic
C81	-----	-----
C82	1-102-973-11	100p

<i>Ref. No.</i>	<i>Part No.</i>	<i>Description</i>
C83	1-102-976-11	180p
C84	1-102-973-11	100p
C85	1-102-973-11	100p
C86	-----	-----
C87	1-101-923-11	0.01
C88	1-102-973-11	100p
C89	1-101-918-11	0.001
C90	1-105-829-12	0.0047 mylar
C91	1-121-469-11	10 10V electrolytic
C92	1-121-413-11	100 6.3V electrolytic
C93	1-102-947-11	10p

CT1, 2	1-141-144-00	capacitor, trimmer; 2-unit
CT3	1-141-097-21	capacitor, trimmer
CT4, 6	1-141-144-00	capacitor, trimmer; 2-unit
CT5	1-141-097-21	capacitor, trimmer
CT7	1-141-140-00	capacitor, trimmer
CT8	1-141-140-00	capacitor, trimmer
CV1	1-151-196-14	capacitor, tuning

RESISTORS

All fixed resistors are in Ω , $\frac{1}{2}W$ and $\pm 5\%$ carbon film type unless otherwise specified. $k = 1000$

R1	1-240-437-11	33
R2	-----	-----
R3	1-240-523-11	120k
R4	1-240-480-11	2k
R5	1-240-511-11	39k
R6	1-240-464-11	430
R7	1-240-469-11	680
R8	1-240-466-11	510
R9	1-240-482-11	2.4k
R10	1-240-521-11	100k
R11	1-244-711-11	39k
R12	1-240-473-11	1k
R13	1-240-449-11	100
R14	1-240-449-11	100
R15	1-244-649-11	100
R16	1-240-511-11	39k
R17	1-240-432-11	20
R18	1-240-497-11	10k
R19	1-244-702-11	16k
R20	1-240-473-11	1k
R21	1-240-473-11	1k
R22	1-240-461-11	330
R23	1-240-473-11	1k
R24	1-240-502-11	16k
R25	-----	-----

Ref. No.	Part No.	Description
R26	1-240-502-11	16k
R27	1-240-475-11	1.2k
R28	1-240-468-11	620
R29	1-240-432-11	20
R30	1-244-677-11	1.5k
R31	1-240-512-11	43k
R32		-----
R33	1-240-521-11	100k
R34	1-240-492-11	6.2k
R35	1-240-449-11	100
R36	1-244-667-11	560
R37		-----
R38	1-244-673-11	1k
R39	1-244-673-11	1k
R40		-----
R41		-----
R42	1-240-473-11	1k
R43	1-240-521-11	100k
R44	1-244-697-11	10k
R45	1-240-432-11	20
R46	1-240-512-11	43k
R47	1-240-464-11	430
R48	1-240-507-11	27k
R49	1-244-661-11	330
R50	1-244-673-11	1k
R51	1-240-509-11	33k
R52	1-244-680-11	2k
R53	1-244-673-11	1k
R54	1-244-657-11	220
R55	1-244-677-11	1.5k
R56	1-244-677-11	1.5k
R57	1-244-673-11	1k
R58	1-244-664-11	430
R59	1-244-609-11	2.2
R60	1-244-641-11	47
	1-244-621-11	6.8
* R61	1-244-626-11	11
	1-244-631-11	18
R62	1-244-650-11	110
R63	1-244-673-11	1k
R64	1-244-663-11	390
R65	1-244-632-11	20
R66	1-244-666-11	510
R67	1-244-673-11	1k
	1-244-637-11	33
* R68	1-244-643-11	56

* : to be selected

Ref. No.	Part No.	Description
R69	1-207-455-11	0.22 1/2W wirewound
R70	1-244-631-11	18
R71	1-244-688-11	4.3k
R72	1-244-667-11	560
R73	1-244-660-11	300
R74	1-240-473-11	1k
VR1	1-224-038-00	5k (A), variable; TREBLE
VR2	1-224-037-00	5k (D), variable; VOLUME
VR3	1-224-039-00	5k (D), variable; BASS

MISCELLANEOUS

CF A1	1-403-165-15	filter, ceramic; AM i-f
CF F1	1-527-198-51	filter, ceramic; FM i-f
CF F2	1-527-198-51	filter, ceramic; FM i-f
CF F3	1-527-198-51	filter, ceramic; FM i-f
CR1	1-231-204-11	encapsulated component; 0.01 μ F + 0.01 μ F + 1k Ω
CR2	1-231-208-11	encapsulated component; 0.033 μ F + 270 Ω
CR3	1-231-209-11	encapsulated component; 0.033 μ F + 390 Ω
CR4	1-231-211-11	encapsulated component; 0.01 μ F + 0.01 μ F + 3k Ω
CR5	1-231-202-11	encapsulated component; 220 pF + 220 pF + 6.8k Ω + 6.8k Ω
J1-6	1-507-341-00	jack, 6-unit; MPX OUT, AUX IN, rec out, EXT POWER IN DC 4.5 V, DC OUT
ME	1-520-128-00	TUNING/BATT & VU METER
PL	1-518-144-11	lamp
SP	1-502-383-00	speaker, 6.5 Ω
S1	1-516-332-00	switch, slide; BAND SELECTOR
S2	1-516-111-11	switch, toggle; AFC/MW SENS
S3	X-38446-05-3	switch ass'y, LIGHT
S4	1-516-111-21	switch, toggle; POWER
S5	1-516-111-11	switch, toggle; LOUDNESS
S6	1-516-111-11	switch, toggle; METER SELECT
S7	1-516-331-00	switch, leaf
S8		switch; part of TIMER
TEL ANT	1-501-136-00	antenna, telescopic
TIMER	1-548-048-00	TIMER

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