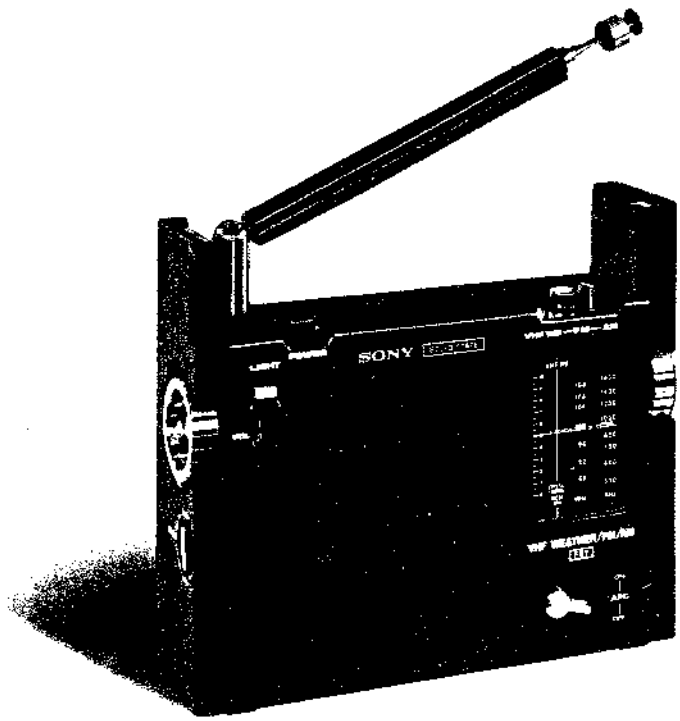
TFM-8100WA

USA Model

Canada Model



SPECIFICATIONS

Circuit: 15-transistor (1-FET) superheterodyne, 1 transistor for auxiliary circuit, and 12 diodes (including 1 LED)

Frequency Ranges:
FM 87.5 ~ 108 MHz (3.43 m ~ 2.78 m)
AM 530 ~ 1,605 kHz (566 m ~ 187 m)
VHF WB 161.0 ~ 163.3 MHz (1.86 m ~ 1.84 m)

Intermediate Frequencies:
FM 10.7 MHz
AM 455 kHz
VHF WB 10.7 MHz

Antennas:
FM, VHF WB built-in telescopic antenna
AM built-in ferrite bar antenna

Maximum Sensitivity at 50 mW output:
FM 1.25 μV (2 dB)
AM 76.6 μV/m (37 dB/m)
VHF WB 1 μV (0 dB)

Selectivity: 33 dB at ±10 kHz off-resonance at 1,400 kHz

Power Output
at 10% distortion: 900 mW
maximum: 1.2 W

Current Drain
at zero signal: FM 32 mA, AM 27 mA
at 10% distortion: 450 mA

Power Requirements: Three "C" size flashlight batteries 4.5 V in total, or
car battery by using SONY DCC-126 car battery cord or
house current by using SONY AC-81W ac power adaptor

Earphone Jack
impedance: 8 Ω

Record Out Jack
impedance: 1 kΩ
level: −60 dB (0.77 mV)

Speaker: 3¾" (9 cm) dia., PM dynamic, 8 Ω

Dimensions: 8 7/16" (W) x 7" (H) x 2 3/16" (D) (214 mm x 178 mm x 56 mm)

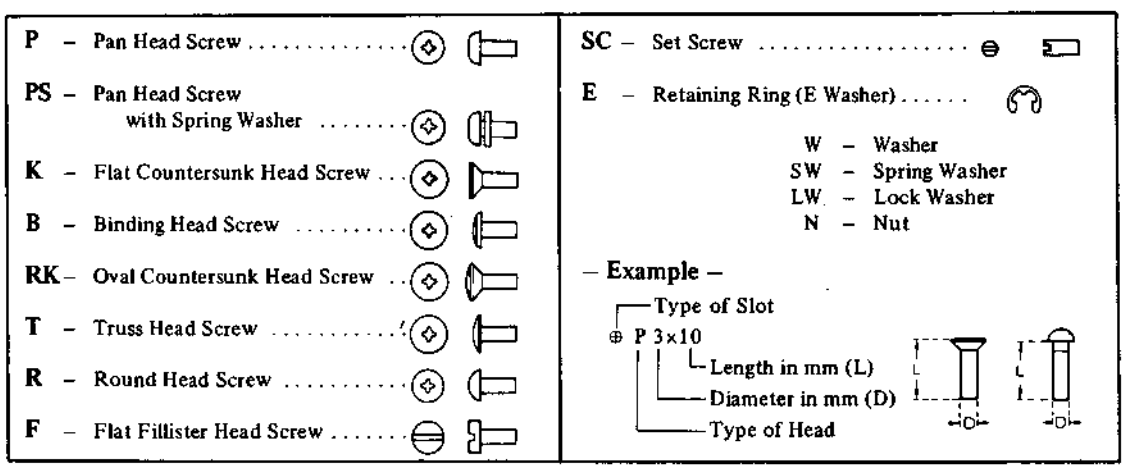
Weight: 2 lb 15 oz (1,350 g)

SONY®

SERVICE MANUAL

TABLE OF CONTENTS

– Hardware Nomenclature –

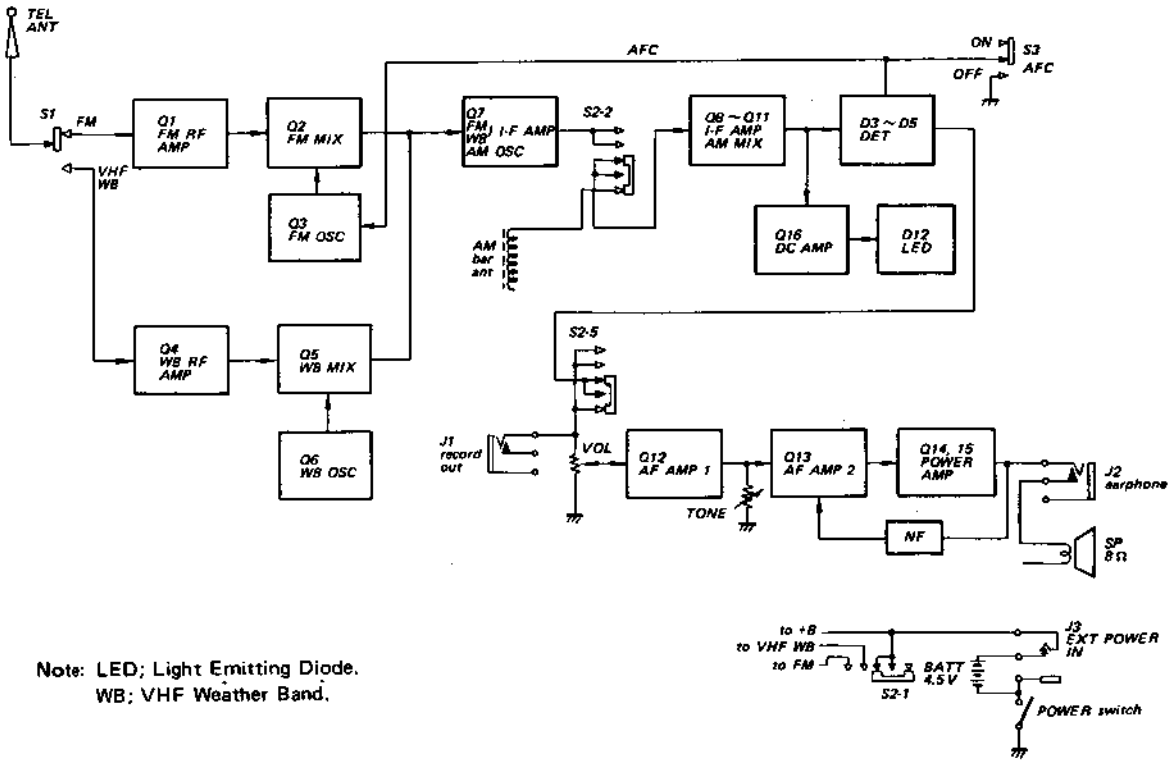


When ordering replacement parts, use PART NUMBERS listed in Parts Lists or shown in EXPLODED VIEWS. Parts list reference numbers should not be used.

Note: All screws used in the set are Phillips type (cross recess type) unless otherwise indicated. (-): slotted head.

SECTION 1
OUTLINE

1-1. BLOCK DIAGRAM



Note: LED; Light Emitting Diode.
WB; VHF Weather Band.

Fig. 1-1.

1-2. EXTERNAL VIEW

– Front View –

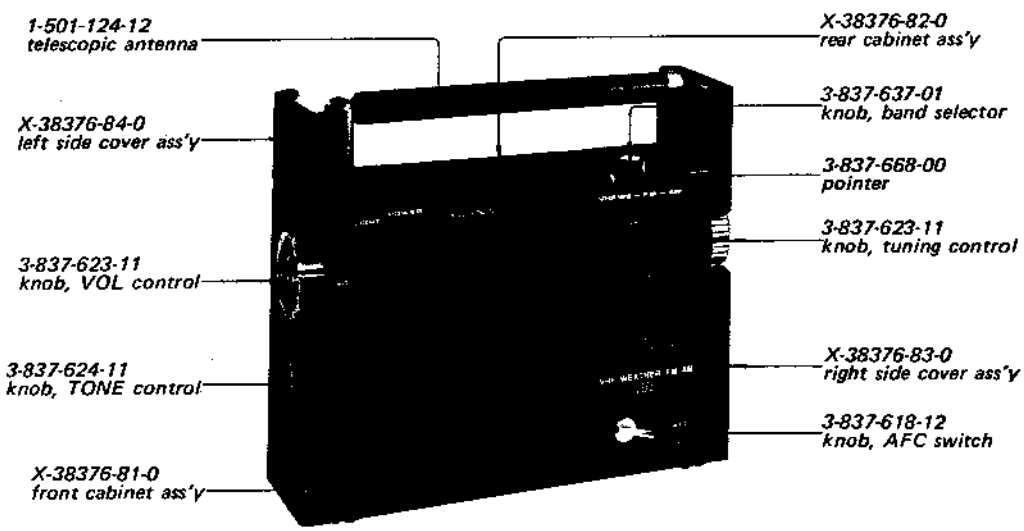
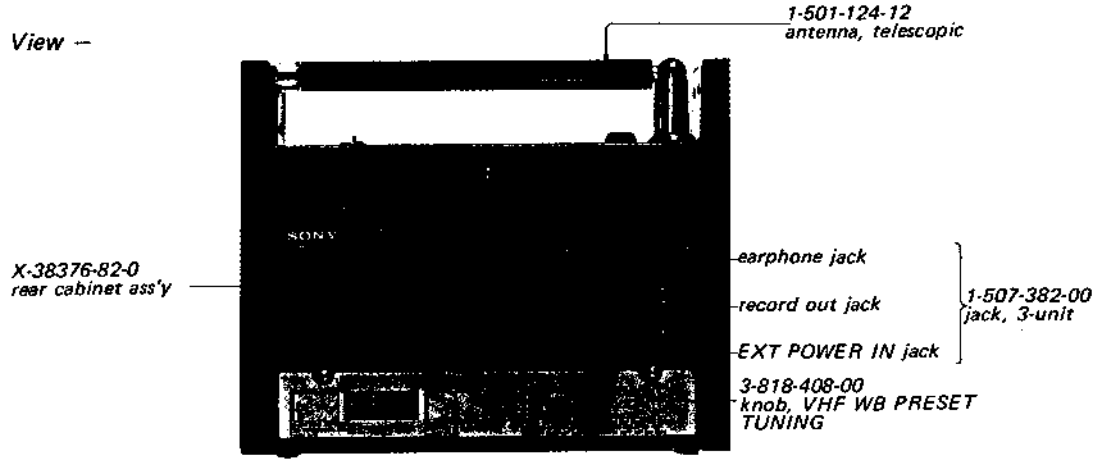


Fig. 1-2.

— Rear View —



1-3. INTERNAL VIEW

— Rear View —

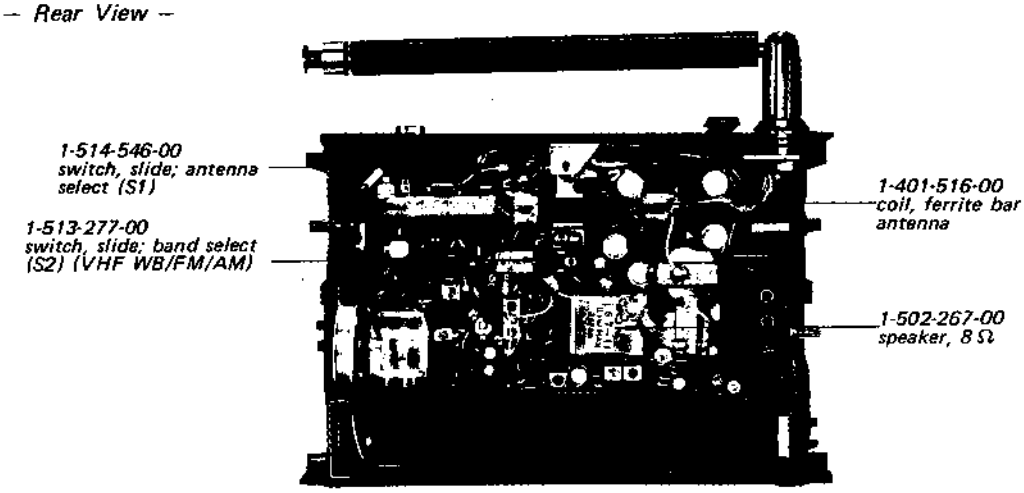


Fig. 1-4.

— Front View —

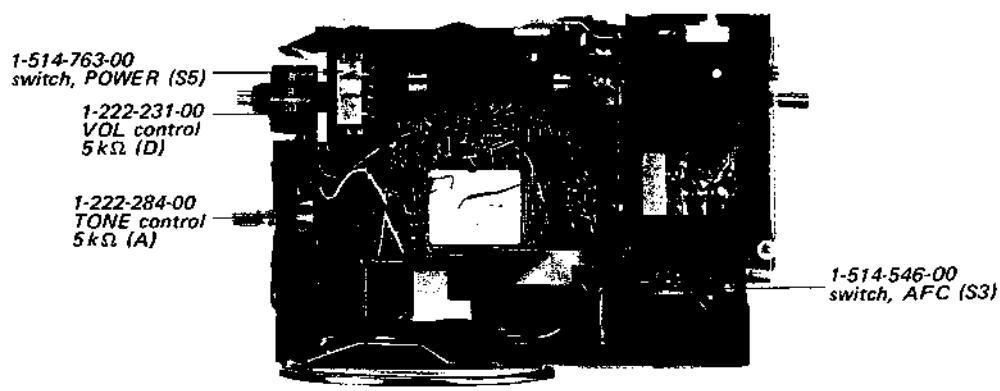


Fig. 1-5.

SECTION 2
DISASSEMBLY

2-1. REAR CABINET REMOVAL

Left Side Cover Removal

1. Remove the four screws labeled Ⓐ in Fig. 2-1.
2. Pull out the left side cover along with the VOL knob and TONE knob as shown in Fig. 2-1.

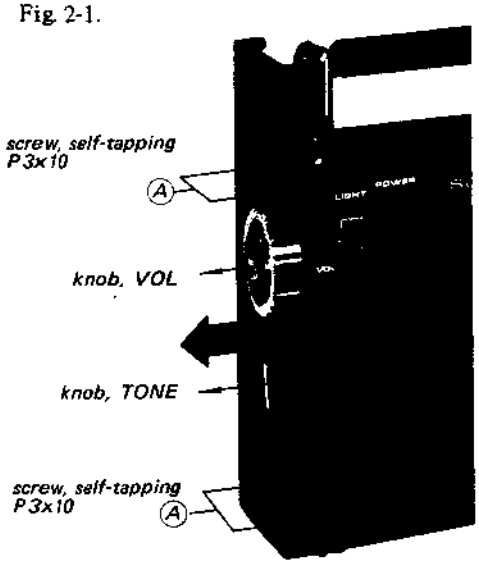


Fig. 2-1.

Right Side Cover Removal

3. Press down the ANTENNA RELEASE button shown in Fig. 2-2.
4. Pull out the telescopic antenna.

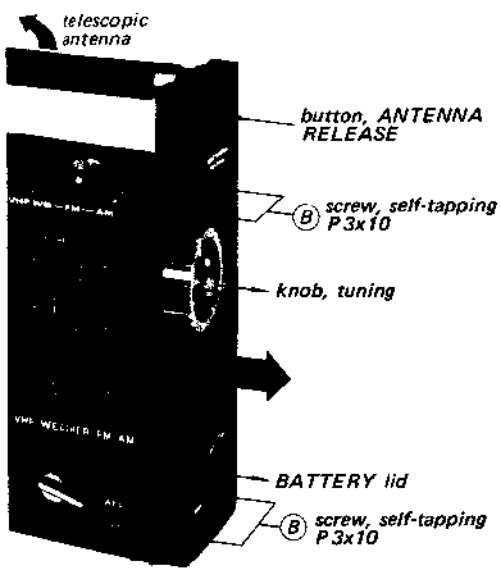


Fig. 2-2.

5. Remove the four screws labeled Ⓑ in Fig. 2-2.
6. Pull out the right side cover with the tuning knob and BATTERY lid as shown in Fig. 2-2.

Rear Cabinet Removal

7. Remove the three screws labeled Ⓒ in Fig. 2-3.
8. Lift up the rear cabinet.

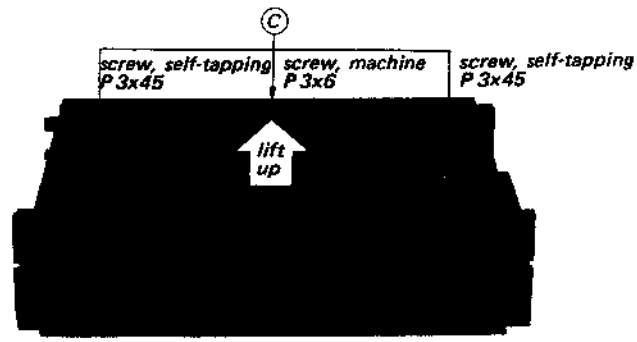


Fig. 2-3.

2-2. CHASSIS REMOVAL

1. Remove the rear cabinet.
2. Set the band selector to VHF WB (VHF Weather Band) position as shown in Fig. 2-4.
3. Push the POWER switch button as shown in Fig. 2-4.
4. Unsolder the transparent wire labeled Ⓓ in Fig. 2-4.
5. Remove the screw labeled Ⓔ in Fig. 2-4.
6. Lift up the chassis as shown by the arrow.

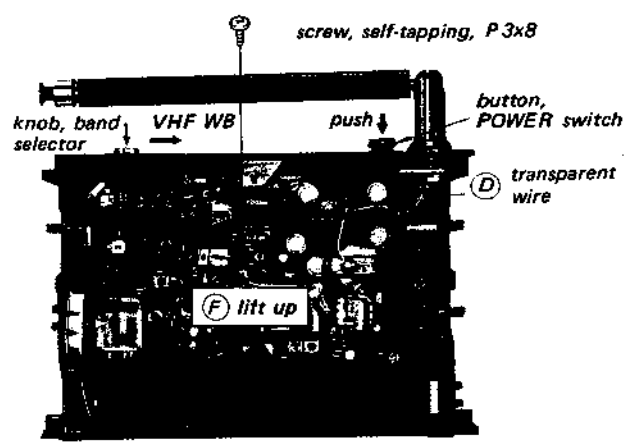


Fig. 2-4.

2-3. PRINTED CIRCUIT BOARD REMOVAL

1. Remove the rear cabinet and chassis, and follow the removing steps alphabetically as follows (Ⓖ through Ⓩ).

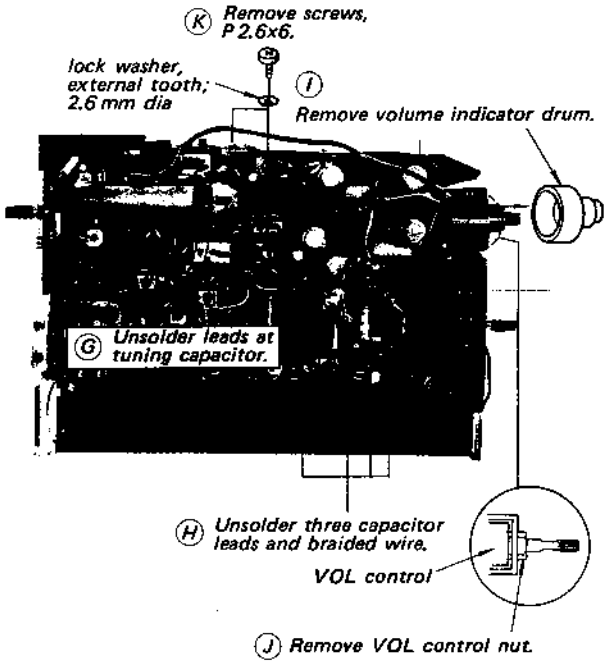


Fig. 2-5.

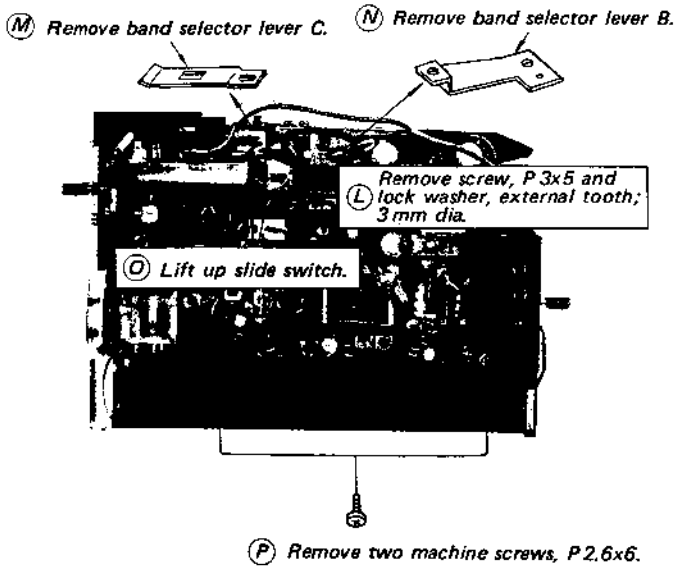


Fig. 2-6.

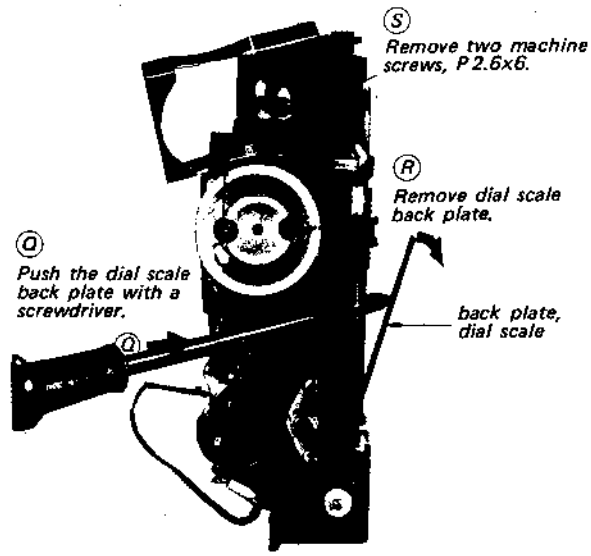


Fig. 2-7.

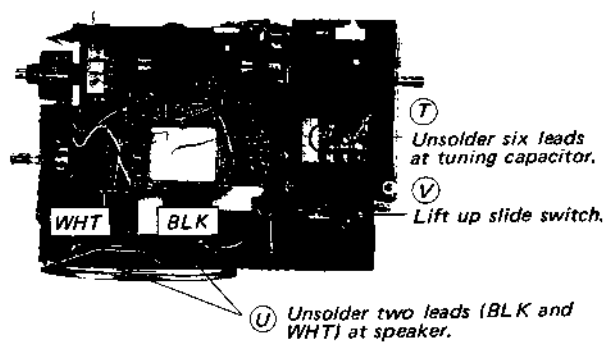


Fig. 2-8.

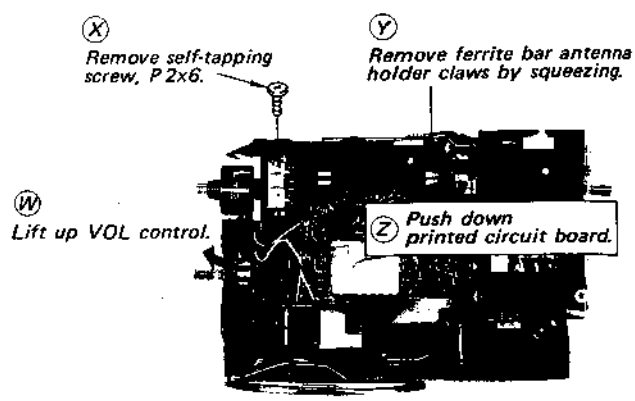


Fig. 2-9.

2-4. DIAL CORD STRINGING

Preparation

1. Remove the chassis.
2. Cut the dial cord by the specified length as shown in Fig. 2-10.

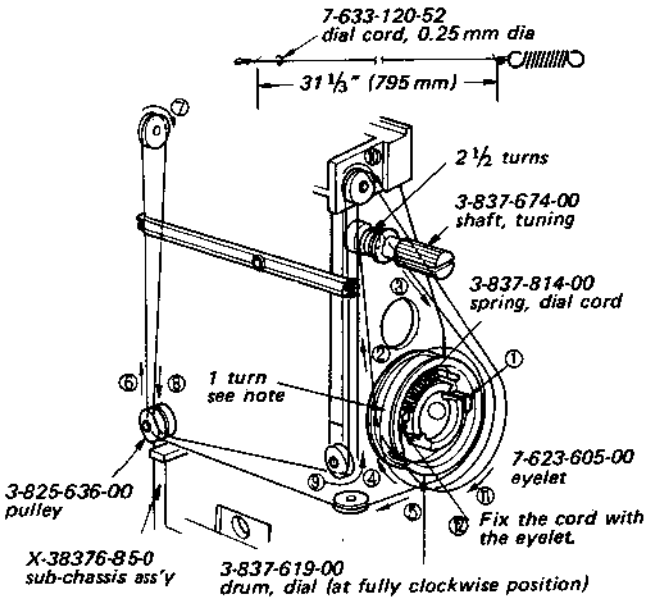


Fig. 2-10.

Stringing

1. Fix the dial cord to the protrusion (step ①) and string the cord in numerical order as shown in Fig. 2-10.

   Note: Pass through the dial cord at step ④ between the two cords of steps ② and ③ as shown in Fig. 2-11.

2. Fasten the both knots with a small amount of lock paint.

Pointer Setting

1. Rotate the dial shaft counterclockwise to the full.
2. Set the pointer to the slit as shown in Fig. 2-12.

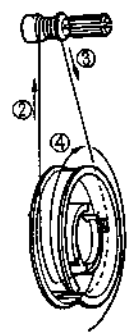
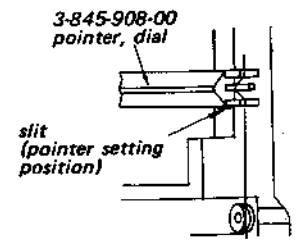


Fig. 2-11.



tuning shaft and dial drum at fully counterclockwise positions

Fig. 2-12.

SECTION 3
CIRCUIT ADJUSTMENTS

3-1. AM I-F ALIGNMENT

Test Equipment/Tools Required:

* AM rf signal generator
* Loop Antenna
* VOM
* Alignment screwdriver

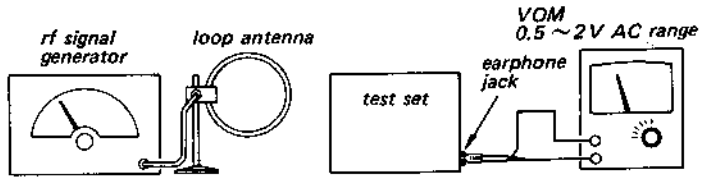


Fig. 3-1. AM i-f alignment, frequency coverage and tracking adjustment setup

Preparation:

AM rf signal generator modulation: 400 Hz, 30%
AM rf signal generator output level:
Usable lowest possible.
Band switch setting: AM
VOL control setting: Maximum
Test setup: See Fig. 3-1.

Rf Signal Generator Coupling	Rf Signal Generator Frequency	Receiver Dial Setting	Adjust	Remarks
Loop antenna See Fig. 3-1.	455 kHz	Tune out of the station.	Cores of 1. CFT A1 2. IFT A2 See Fig. 3-4.	Adjust for maximum meter reading. Repeat adjustment two or three times.

3-2. FM/VHF WB I-F ALIGNMENT

Test Equipment/Tools Required:

* FM rf signal generator
* VOM
* Alignment screwdriver
* 0.01 μF ceramic capacitor

Preparation:

FM rf signal generator modulation:
400 Hz, ± 22.5 kHz deviation
FM rf signal generator output level:
Usable lowest possible
FM rf signal generator coupling:
Direct connection to telescopic antenna solder lug, see Fig. 3-3.
Band switch setting: FM
VOL control setting: Maximum
AFC switch setting: OFF

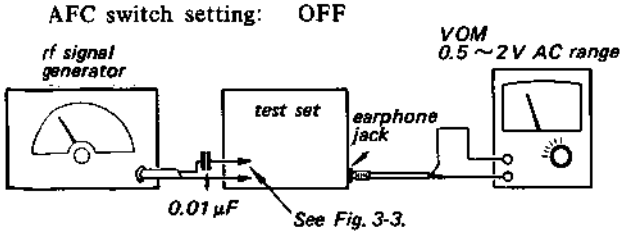


Fig. 3-2. FM/VHF WB i-f alignment, frequency coverage and tracking adjustment setup

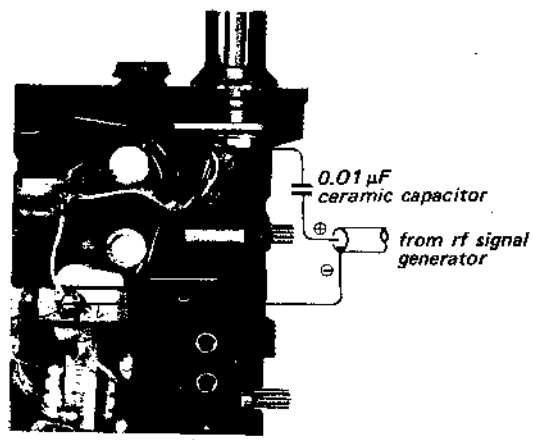


Fig. 3-3. FM/VHF WB rf signal generator coupling for i-f alignment, frequency coverage and tracking adjustment

Step	Rf Signal Generator Frequency	Receiver Dial Setting	Adjust	Procedure
1	10.7 MHz with FM modulation	No station, no beating position	Cores of IFT F1 IFT F2 See Fig. 3-4.	Test setup: See Fig. 3-2 and Fig. 3-3. Adjust for maximum meter reading.
2	– ditto –	– ditto –	Rf Signal generator frequency	Carefully adjust rf signal generator frequency around 10.7 MHz for maximum meter reading.
3	Repeat steps 1 and 2 two or three times with rf signal frequency obtained in step 2.			
4	No input Signal (noise only)	– ditto –	Core of IFT F3 See Fig. 3-4.	Test setup: See Fig. 3-2, Fig. 3-3 and Fig. 3-4. Adjust for "0V DC" meter reading.

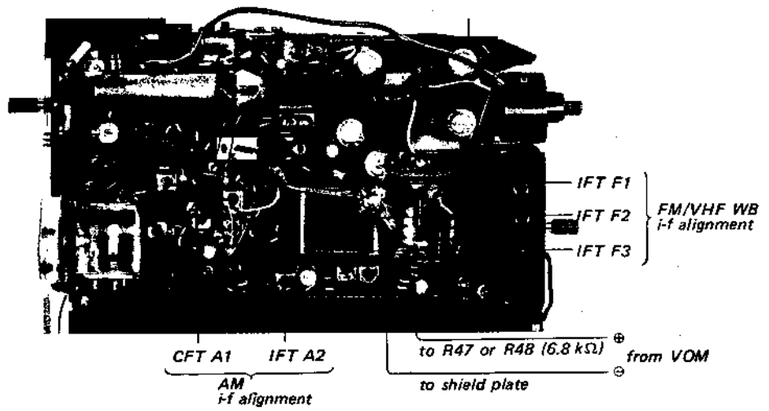


Fig. 3-4. Adjustment locations and VOM connection for step 4

3-3. FREQUENCY COVERAGE AND TRACKING ADJUSTMENT

Adjustment	Rf Signal Generator Coupling	Rf Signal Generator Frequency	Receiver Dial Setting	Adjust	Remarks
AM Frequency Coverage	Loop antenna (See Fig. 3-1.)	520 kHz	Minimum frequency	Core of AM osc coil L15	Rf signal generator modulation: 400 Hz, 30% AM Rf signal generator output level: Usable lowest possible. VOM connection: See Fig. 3-1. Band selector: AM VOL control setting: Maximum Adjust for maximum meter reading. Repeat adjustment two or three times ending with CT4 and CT3. Fix L14 with wax.
		1,680 kHz	Maximum frequency	AM osc trimmer CT4	
AM Tracking		620 kHz	Tune in 620 kHz signal	Position of AM ant coil L14	
		1,400 kHz	Tune in 1,400 kHz signal	AM ant trimmer CT3	

Adjustment	Rf Signal Generator Coupling	Rf Signal Generator Frequency	Receiver Dial Setting	Adjust	Remarks
FM Frequency Coverage	To telescopic antenna solder lug. (See Fig. 3-3.)	86 MHz	Minimum frequency	Core of FM osc coil L4	Rf signal generator modulation: 400 Hz, ±22.5 kHz FM Rf signal generator output level: Usable lowest possible. VOM connection: See Fig. 3-2. Band selector: FM VOL control setting: Maximum Adjust for maximum meter reading. Repeat adjustment two or three times ending with CT2 and CT1. Fix L4 and L3 with wax.
		109.5 MHz	Maximum frequency	FM osc trimmer CT2	
FM Tracking		86 MHz	Minimum frequency	Core of FM rf coil L3	
		109.5 MHz	Maximum frequency	FM rf trimmer CT1	
VHF WB Frequency Coverage	To telescopic antenna solder lug. (See Fig. 3-3.)	160 MHz	MIN position of R32 (PRESET TUNING)	Core of VHF WB osc coil L11	Rf signal generator modulation: 400 Hz, ±22.5 kHz FM Rf signal generator output level: Usable lowest possible. VOM connection: See Fig. 3-2. Band selector: VHF WB VOL control setting: Maximum Adjust for maximum meter reading. Repeat adjustment two or three times ending with R59 and L9. Fix L11, L7 and L9 with wax.
		164 MHz	MAX position of R32 (PRESET TUNING)	Adjustable resistor R59	
VHF WB Tracking		162.5 MHz	Tune in 162.5 MHz signal with R32 (PRESET TUNING)	Cores of VHF WB ant coil L7 and VHF WB rf coil L9	

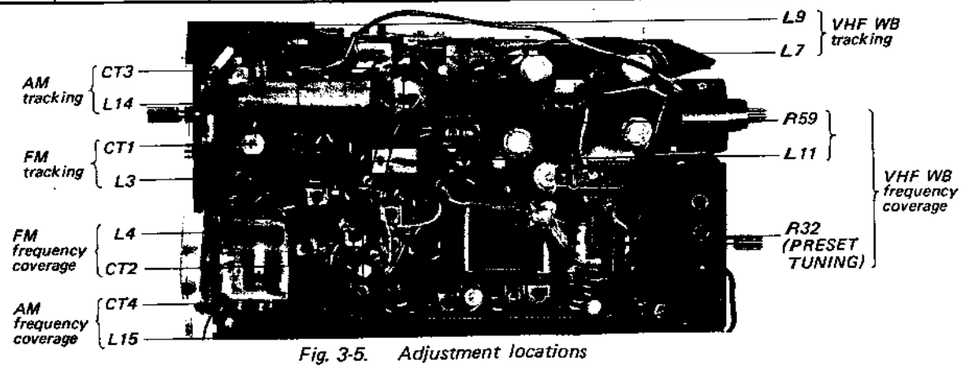


Fig. 3-5. Adjustment locations

3-4. ADJUSTMENT OF BASE BIAS VOLTAGE OF Q8

Preparation:

1. Band selector: AM (detune perfectly)
2. Connect an electrolytic capacitor (1μF ~ 5μF) across the base of Q7 and grounding circuit.

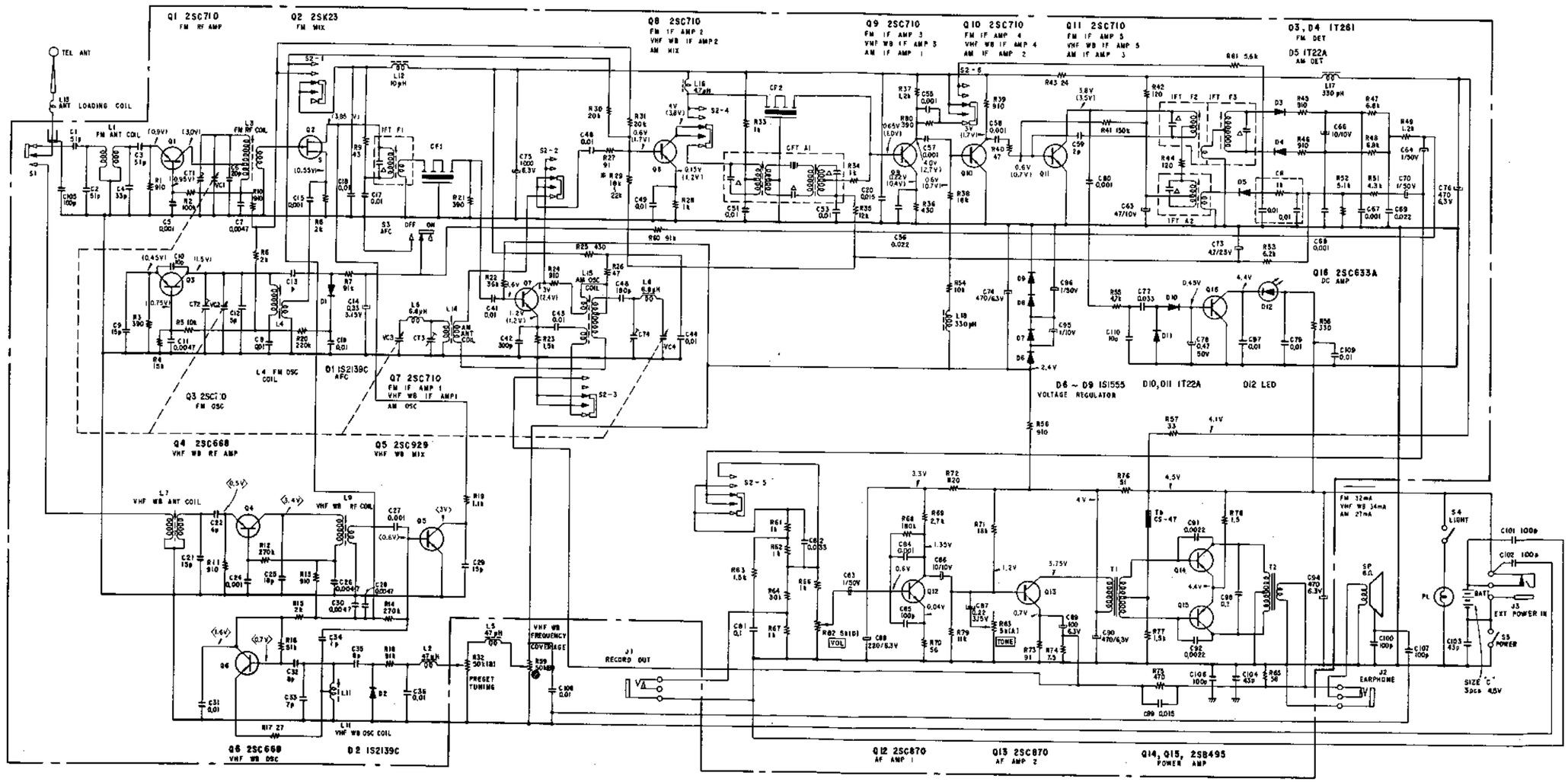
R29 must be selected to obtain 0.12V ~ 0.16V at the emitter of Q8.

R29: ¼W, 5% carbon film resistor

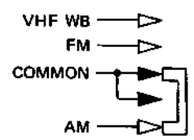
1-202-413-11	18k
1-202-414-11	20k
1-202-415-11	22k

SECTION 4
SCHEMATIC AND MOUNTING DIAGRAMS

4-1. SCHEMATIC DIAGRAM



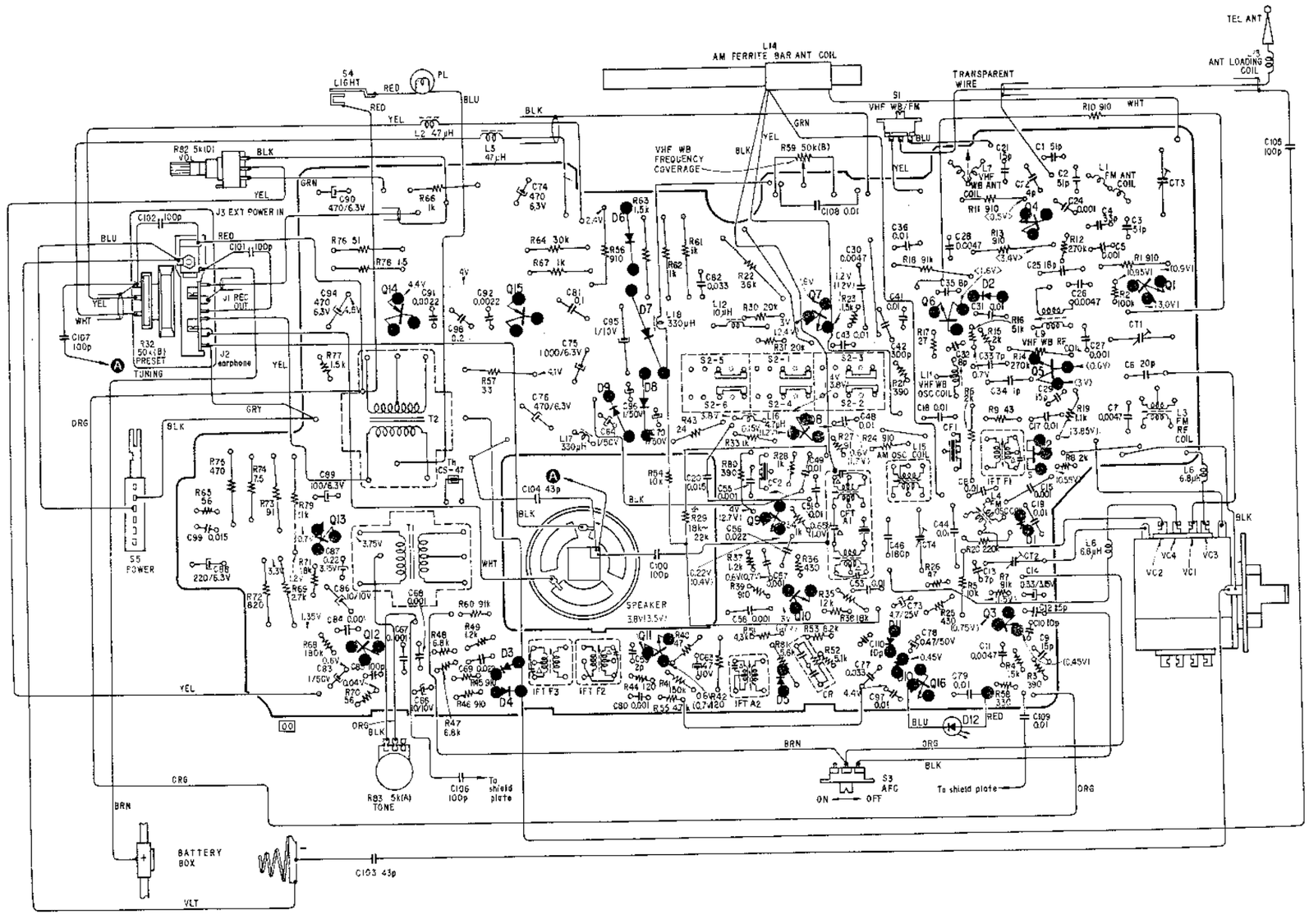
S2: Band Selector Switch



Note: 1. All capacitance values in μF and all resistance values in Ω unless otherwise noted.
2. All voltages measured with reference to battery positive terminal with a 20 kΩ/V DC VOM with no signal received. The values in ( ) are measured with band selector set to FM and in < > with AM, others are common. Variations may be noted due to normal production tolerances.
3. All currents measured with a 20 kΩ/V VOM with no signal received.
4. Capacitors marked △ are built in i-f transformers or ceramic filter.
5. The symbol ✻ indicates a component whose value is selected to yield specified operating condition.
6. ⏚ shows grounding to shield plate or case of i-f transformers.
7. ◐: Adjustable resistor.

4-2. MOUNTING DIAGRAM

– Conductor Side –

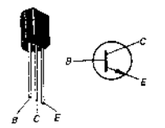


TRANSISTOR LOCATION:

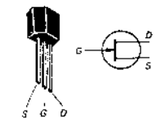
Q1: 2G	Q4: 2F	Q7: 2E	Q10: 4E	Q13: 3B	Q16: 4F
Q2: 3F	Q5: 3F	Q8: 3E	Q11: 4D	Q14: 2C	
Q3: 4F	Q6: 2F	Q9: 3E	Q12: 4C	Q15: 2CD	

Printed Circuit Board Part No.:
1-582-125

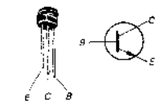
Q1, Q3, Q7 ~ Q11: 2SC710
Q12, Q13: 2SC870



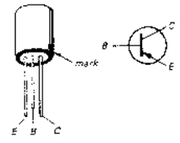
Q2: 2SK23



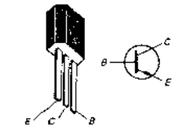
Q4, Q6: 2SC668
Q5: 2SC929



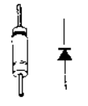
Q14, Q15: 2SB495



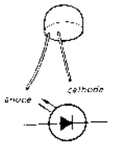
Q16: 2SC633A



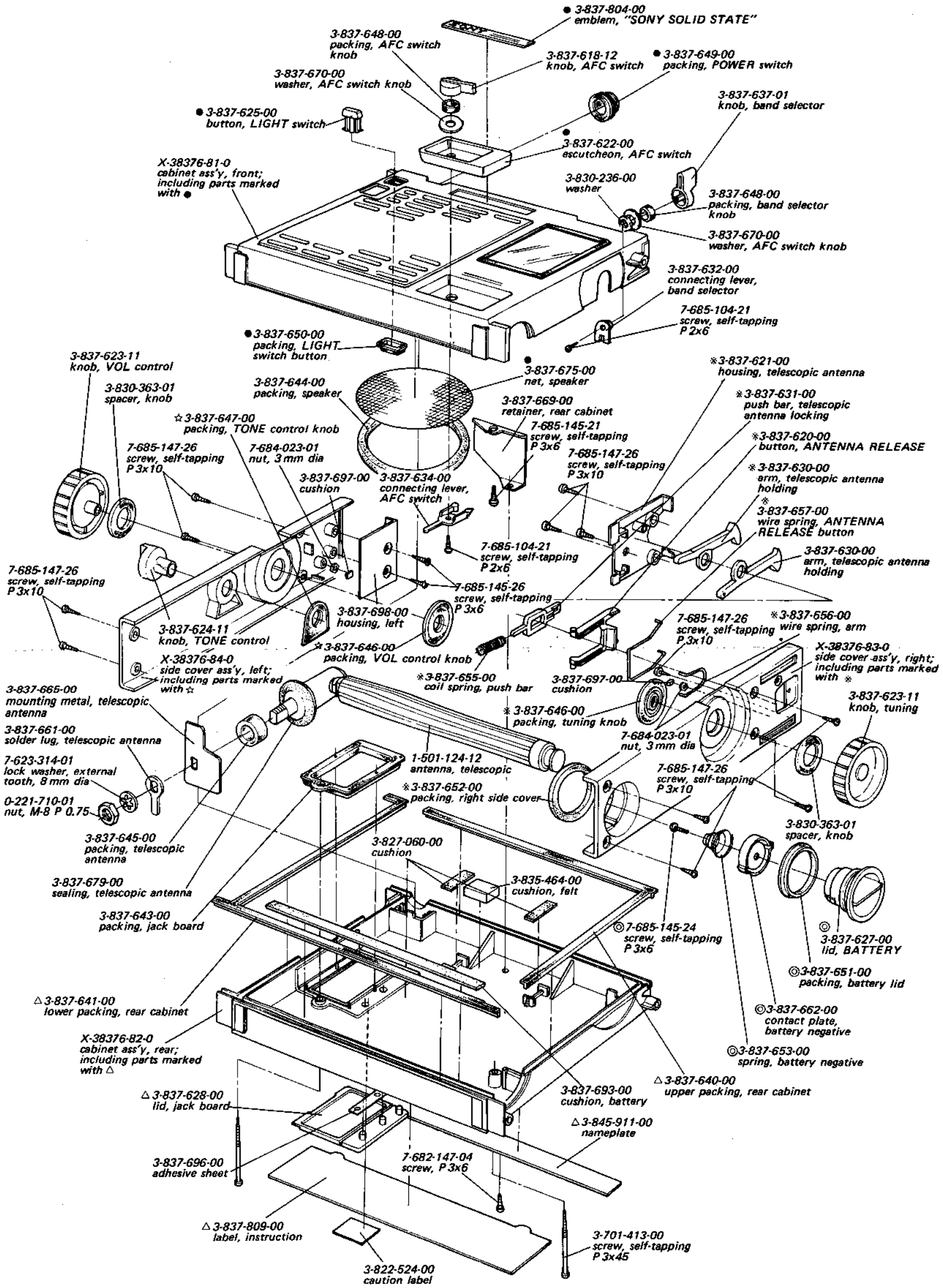
D1, D2: 1S2139C
D3, D4: 1T261
D5, D10, D11: 1T22A
D6 ~ D9: 1S1555



D12: LED

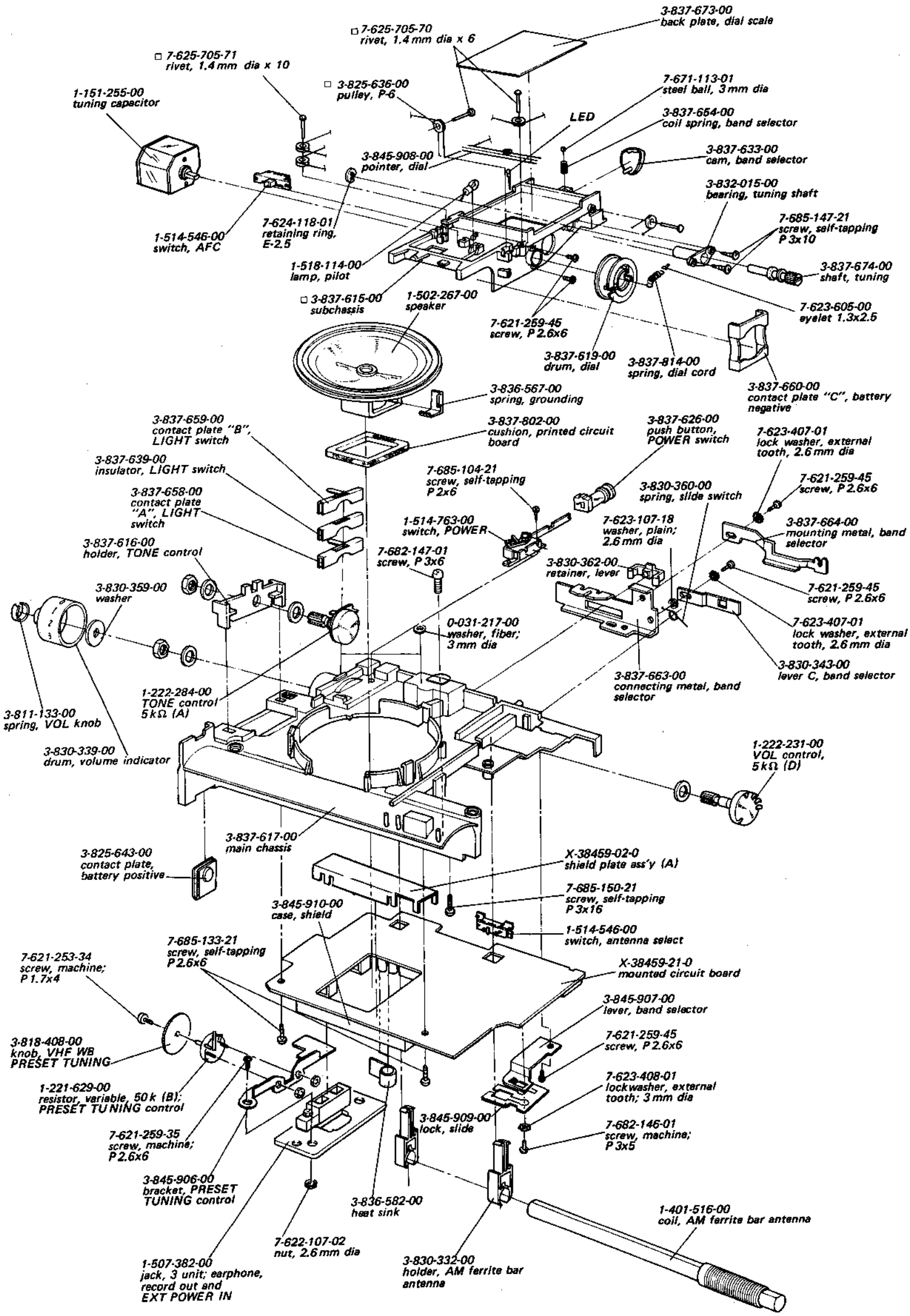


5-1. EXPLODED VIEW (1)



Note: Parts marked ◎ are included in BATTERY lid ass'y, X-38376-86-0.

Fig. 5-1.



Note: Parts marked □ are included in subchassis ass'y, X-38376-85-0.

Fig. 5-2.

5-3. PACKING

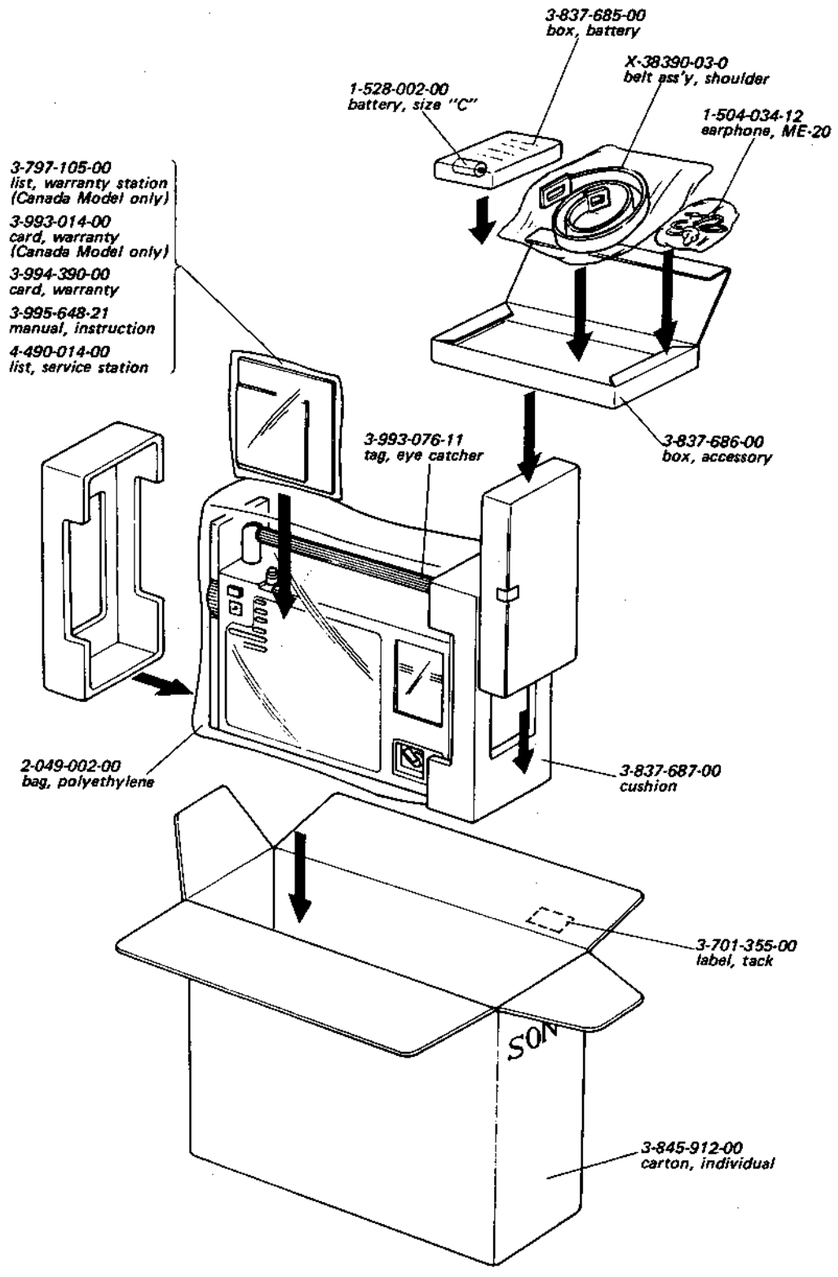


Fig. 5-3.

SECTION 6
ELECTRICAL PARTS LIST

Ref. No.	*Part No.*	*Description*
	MOUNTED CIRCUIT BOARD	
	X-38459-21-0	mounted circuit board
	SEMICONDUCTORS	
Q1		transistor 2SC710
Q2		transistor 2SK23
Q3		transistor 2SC710
Q4		transistor 2SC668
Q5		transistor 2SC929
Q6		transistor 2SC668
Q7		transistor 2SC710
Q8		transistor 2SC710
Q9		transistor 2SC710
Q10		transistor 2SC710
Q11		transistor 2SC710
Q12		transistor 2SC870
Q13		transistor 2SC870
Q14		transistor 2SB495
Q15		transistor 2SB495
Q16		transistor 2SC633A
D1		diode 1S2139C
D2		diode 1S2139C
D3		diode 1T261
D4		diode 1T261
D5		diode 1T22A
D6		diode 1S1555
D7		diode 1S1555
D8		diode 1S1555
D9		diode 1S1555
D10		diode 1T22A
D11		diode 1T22A
D12		diode LED
Th	1-800-191-00	thermistor CS-47
	COILS AND TRANSFORMERS	
L1	1-401-517-00	coil, FM ant
L2	1-407-165-11	47μH, micro inductor
L3	1-425-756-00	coil, FM rf
L4	1-405-550-00	coil, FM osc
L5	1-407-165-11	47μH, micro inductor
L6	1-407-188-11	6.8μH, micro inductor
L7	1-425-373-00	coil, VHF.WB ant

Ref. No.	*Part No.*	*Description*
L8	1-407-188-11	6.8μH, micro inductor
L9	1-405-550-00	coil, VHF WB rf
L10		----------
L11	1-405-551-00	coil, VHF WB osc
L12	1-407-169-11	10μH, micro inductor
L13	1-401-201-00	coil, antenna loading
L14	1-401-516-00	coil, AM ferrite bar antenna
L15	1-405-566-00	coil, AM osc
L16	1-407-186-11	4.7μH, micro inductor
L17	1-407-175-11	330μH, micro inductor
L18	1-407-175-11	330μH, micro inductor
CFT A1	1-403-165-15	ceramic filter, AM i-f
IFT A2	1-403-801-00	transformer, AM i-f
IFT F1	1-403-242-31	transformer, FM i-f
IFT F2	1-403-272-31	transformer, FM discriminator (primary)
IFT F3	1-403-273-31	transformer, FM discriminator (secondary)
CF1	1-527-184-11	ceramic filter
CF2	1-527-184-11	ceramic filter
T1	1-423-077-11	transformer, driver
T2	1-427-341-00	transformer, output

CAPACITORS

All fixed capacitors are ceramic type expressed in μF unless otherwise specified with p, which means μμF.

C1	1-101-882-11	51p		
C2	1-101-882-11	51p		
C3	1-101-882-11	51p		
C4	1-101-963-11	33p		
C5	1-101-918-11	0.001		
C6	1-101-958-11	20p		
C7	1-101-922-11	0.0047		
C8	1-105-833-12	0.01		mylar
C9	1-102-951-11	15p		
C10	1-102-947-11	10p		
C11	1-101-922-11	0.0047		
C12	1-102-260-11	5p		
C13	1-102-944-11	7p		
C14	1-127-047-11	0.33	3.15 V	solid aluminum
C15	1-101-918-11	0.001		
C16		----------		
C17	1-101-923-11	0.01		
C18	1-101-923-11	0.01		
C19	1-101-923-11	0.01		
C20	1-105-835-12	0.015		mylar
C21	1-102-951-11	15p		

Ref. No.	Part No.	Description		
C22	1-102-937-11	4p		
C23		----------		
C24	1-101-918-11	0.001		
C25	1-102-953-11	18p		
C26	1-101-922-11	0.0047		
C27	1-101-918-11	0.001		
C28	1-101-922-11	0.0047		
C29	1-102-951-11	15p		
C30	1-101-922-11	0.0047		
C31	1-105-833-12	0.01		mylar
C32	1-102-945-11	8p		
C33	1-102-944-11	7p		
C34	1-102-934-11	1p		
C35	1-102-865-11	8p		
C36	1-101-923-11	0.01		
C37		----------		
C38		----------		
C39		----------		
C40		----------		
C41	1-105-833-12	0.01		mylar
C42	1-107-096-11	300p		silvered mica
C43	1-105-833-12	0.01		mylar
C44	1-105-833-12	0.01		mylar
C45		----------		
C46	1-103-607-11	180p		polystyrene
C47		----------		
C48	1-105-833-12	0.01		mylar
C49	1-105-833-12	0.01		mylar
C50		----------		
C51	1-105-833-12	0.01		mylar
C52		----------		
C53	1-101-923-11	0.01		
C54		----------		
C55	1-105-821-12	0.001		mylar
C56	1-101-924-11	0.022		
C57	1-101-918-11	0.001		
C58	1-101-918-11	0.001		
C59	1-102-935-11	2p		
C60		----------		
C61		----------		
C62		----------		
C63	1-121-352-11	47	10V	electrolytic
C64	1-121-391-11	1	50V	electrolytic
C65		----------		
C66	1-121-651-11	10	10V	electrolytic
C67	1-101-918-11	0.001		
C68	1-101-918-11	0.001		
C69	1-105-837-12	0.022		mylar
C70	1-121-391-11	1	50V	electrolytic
C71		----------		
C72		----------		
C73	1-121-395-11	4.7	25V	electrolytic

Ref. No.	Part No.	Description		
C74	1-121-424-11	470	6.3V	electrolytic
C75	1-121-736-11	1,000	6.3V	electrolytic
C76	1-121-424-11	470	6.3V	electrolytic
C77	1-105-839-12	0.033		mylar
C78	1-121-434-11	0.47	50V	electrolytic
C79	1-101-923-11	0.01		
C80	1-105-821-12	0.001		mylar
C81	1-101-797-11	0.1		
C82	1-105-839-12	0.033		mylar
C83	1-121-391-11	1	50V	electrolytic
C84	1-105-821-12	0.001		mylar
C85	1-102-973-11	100p		
C86	1-121-651-11	10	10V	electrolytic
C87	1-127-046-11	0.22	3.15V	solid aluminum
C88	1-121-419-11	220	6.3V	electrolytic
C89	1-121-413-11	100	6.3V	electrolytic
C90	1-121-424-11	470	6.3V	electrolytic
C91	1-105-825-12	0.0022		mylar
C92	1-105-825-12	0.0022		mylar
C93		----------		
C94	1-121-424-11	470	6.3V	electrolytic
C95	1-127-049-11	1	10V	solid aluminum
C96	1-121-391-11	1	50V	electrolytic
C97	1-101-923-11	0.01		
C98	1-101-798-11	0.2		
C99	1-105-835-12	0.015		mylar
C100	1-102-973-11	100p		
C101	1-102-973-11	100p		
C102	1-102-973-11	100p		
C103	1-102-966-11	43p		
C104	1-102-966-11	43p		
C105	1-102-973-11	100p		
C106	1-102-973-11	100p		
C107	1-102-973-11	100p		
C108	1-105-833-12	0.01		mylar
C109	1-101-923-11	0.01		
C110	1-102-947-11	10p		
CT1	1-141-097-21	capacitor, trimmer		
CT2	1-141-097-21	capacitor, trimmer		
CT3	1-141-097-21	capacitor, trimmer		
CT4	1-141-097-21	capacitor, trimmer		
VC1 ~ VC4	1-151-255-00	capacitor, tuning		

RESISTORS

All fixed resistors are in Ω, ¼W, ±5% composition type unless otherwise specified.

R1	1-202-382-11	910
R2	1-202-431-11	100 k

Ref. No.	Part No.		Description
R3	1-202-373-11	390	
R4	1-202-411-11	15 k	
R5	1-202-407-11	10 k	
R6	1-202-390-11	2 k	
R7	1-202-430-11	91 k	
R8	1-202-390-11	2 k	
R9	1-202-340-11	43	
R10	1-202-382-11	910	
R11	1-202-382-11	910	
R12	1-202-441-11	270 k	
R13	1-202-382-11	910	
R14	1-210-841-11	270 k	micro resistor
R15	1-202-390-11	2 k	
R16	1-202-424-11	51 k	
R17	1-202-335-11	27	
R18	1-202-430-11	91 k	
R19	1-202-384-11	1.1 k	
R20	1-202-439-11	220 k	
R21	1-202-373-11	390	
R22	1-202-420-11	36 k	
R23	1-202-387-11	1.5 k	
R24	1-202-382-11	910	
R25	1-202-374-11	430	
R26	1-202-341-11	47	
R27	1-202-358-11	91	
R28	1-202-383-11	1 k	
	1-202-413-11	18 k	
* R29	1-202-414-11	20 k	
	1-202-415-11	22 k	
R30	1-202-414-11	20 k	
R31	1-202-414-11	20 k	
R32	1-224-069-00	resistor, variable, 50 k(B); PRESET TUNING	
R33	1-202-383-11	1 k	
R34	1-202-383-11	1 k	
R35	1-202-409-11	12 k	
R36	1-202-374-11	430	
R37	1-202-385-11	1.2 k	
R38	1-202-413-11	18 k	
R39	1-202-382-11	910	
R40	1-202-341-11	47	
R41	1-202-435-11	150 k	
R42	1-202-361-11	120	
R43	1-202-334-11	24	
R44	1-202-361-11	120	
R45	1-202-382-11	910	
R46	1-202-382-11	910	
R47	1-202-403-11	6.8 k	
R48	1-202-403-11	6.8 k	
R49	1-202-385-11	1.2 k	
R50		----------	
R51	1-202-398-11	4.3 k	
R52	1-202-400-11	5.1 k	
R53	1-202-402-11	6.2 k	
R54	1-202-407-11	10 k	
R55	1-202-399-11	4.7 k	
R56	1-202-382-11	910	
R57	1-202-337-11	33	
R58	1-202-371-11	330	
R59	1-221-629-00	resistor, adjustable, 50 k (B)	
R60	1-202-430-11	91 k	
R61	1-202-383-11	1 k	
R62	1-202-383-11	1 k	
R63	1-202-387-11	1.5 k	
R64	1-202-418-11	30 k	
R65	1-202-343-11	56	
R66	1-202-383-11	1 k	
R67	1-202-383-11	1 k	
R68	1-210-838-11	180 k	micro resistor
R69	1-202-393-11	2.7 k	
R70	1-202-343-11	56	
R71	1-210-113-11	18 k	micro resistor
R72	1-202-381-11	820	
R73	1-202-358-11	91	
R74	1-202-322-11	7.5	
R75	1-202-375-11	470	
R76	1-202-342-11	51	
R77	1-202-387-11	1.5 k	
R78	1-244-605-11	1.5	carbon
R79	1-202-408-11	11 k	
R80	1-202-373-11	390	
R81	1-202-401-11	5.6 k	
R82	1-222-231-00	resistor, variable 5 k(D); VOL control	
R83	1-222-284-00	resistor, variable, 5 k(A); TONE control	
CR	1-231-204-00	encapsulated component; C-R ($0.01\,\mu F + 1\,k\Omega + 0.01\,\mu F$)	

* : to be selected.

MISCELLANEOUS

TEL ANT	1-501-124-12	antenna, telescopic
SP	1-502-267-00	speaker, 8 Ω
J1 ~ J3	1-507-382-00	jack, 3-unit; earphone, record out and EXT POWER IN
S1	1-514-546-00	switch, antenna select
S2	1-513-277-00	switch, slide; band select
S3	1-514-546-00	switch, AFC
S5	1-514-763-00	switch, POWER
PL	1-518-114-00	lamp, pilot
	1-536-408-00	terminal, pin

SONY CORPORATION

SONY®

NEW

Complete Spare Parts List

Model TFM-8100WA

U.S.A. MODEL
CANADA MODEL

"IMPORTANT"

When ordering parts, please do not fail to furnish us the following:

1. Part Number
2. Model Name
3. Description as mentioned in this parts list

We are now using EDPS (Electronic Data Processing System) in all the departments concerned, for procurement, inventory control, packing, warehousing, etc. Your orders are processed mainly from the PART NUMBERS referred by you. Incorrect part numbers, therefore, will result in incorrect parts shipment. To assure prompt shipment of correct parts, your cooperation will be appreciated.

NOTE:

Prices are subject to change without notice.

COMPLETE SPARE PARTS LIST FOR TFM-8100WA

(USA Model, Canada Model)

JULY, 1972

Part No.	Description	Unit Price
	A. MECHANICAL PARTS	
X-38376-81-0	Cabinet Ass'y, front; including	$2.58
3-837-622-00	Escutcheon, AFC switch	0.03
3-837-625-00	Button, LIGHT switch	0.04
3-837-649-00	Packing, POWER switch	0.08
3-837-650-00	Packing, LIGHT switch button	0.03
3-837-675-00	Net, speaker	0.02
3-837-804-00	Emblem, "SONY SOLID STATE"	0.13
X-38376-82-0	Cabinet Ass'y, rear; including	1.65
3-837-628-00	Lid, jack board	0.03
3-837-640-00	Upper Packing, rear cabinet	0.12
3-837-641-00	Lower Packing, rear cabinet	0.12
3-837-809-00	Label, instruction	0.05
3-845-911-00	Nameplate	0.06
3-837-696-00	Adhesive Sheet	0.02
X-38376-83-0	Side Cover Ass'y, right; including	1.75
3-837-620-00	Button, ANTENNA RELEASE	0.04
3-837-621-00	Housing, telescopic antenna	0.03
3-837-630-00	Arm, telescopic antenna holding	0.03
3-837-631-00	Push Bar, telescopoc antenna locking	0.03
3-837-646-00	Packing, tuning knob	0.06
3-837-652-00	Packing, right side cover	0.04
3-837-655-00	Coil Spring, push bar	0.02
3-837-656-00	Wire Spring, arm	0.02
3-837-657-00	Wire Spring, ANTENNA RELEASE button	0.03
3-837-697-00	Cushion, side cover nut	0.01
7-684-023-01	Nut, 3 mm dia	0.28/100
7-685-148-27	Screw, self-tapping; (+) P 3 x 12	0.28/100
X-38376-84-0	Side Cover Ass'y, left; including	1.20
3-837-646-00	Packing, VOL control knob	0.06
3-837-647-00	Packing, TONE control knob	0.06
3-837-697-00	Cushion	0.01
7-684-023-01	Nut, 3 mm dia	0.28/100

Part No.	Description	Unit Price
X-38376-85-0	Sub Chassis Ass'y; including	$0.36
3-825-636-00	Pulley, P-6	0.01
3-837-615-00	Sub Chassis	0.09
7-625-705-10	Rivet; 1.4 mm dia, 10 mm long	0.15/100
7-625-705-70	Rivet; 1.4 mm dia, 6 mm long	0.15/100
X-38376-86-0	BATTERY Lid Ass'y; including	0.29
3-837-627-00	Lid, BATTERY	0.04
3-837-651-00	Packing; battery lid	0.04
3-837-653-00	Spring, battery negative	0.03
3-837-662-00	Contact Plate, battery negative	0.09
7-685-145-24	Screw, self-tapping; (+) P 3 x 6	0.23/100
X-38459-02-0	Shield Plate Ass'y (A)	0.04
X-38459-03-0	Shield Plate Ass'y (B)	0.03
	* * *	
0-031-217-00	Washer, fiber; 3 mm dia	0.01
0-221-710-01	Nut, telescopic antenna; M-8, P 0.75	0.01
3-701-413-00	Screw, self-tapping; P 3 x 45	0.02
3-811-133-00	Spring, VOL knob	0.02
3-818-408-00	Knob, VHF WB PRESET TUNING	0.02
3-822-524-00	Label, caution	0.01
3-825-643-00	Contact Plate, battery positive	0.04
3-827-060-00	Cushion	0.01
3-830-332-00	Holder, AM ferrite bar antenna	0.02
3-830-339-00	Drum, volume indicator	0.03
3-830-343-00	Lever C, band selector	0.02
3-830-359-00	Washer	0.02
3-830-360-00	Spring, slide switch	0.02
3-830-362-00	Retainer, lever A	0.02
3-830-363-01	Spacer, knob	0.02
3-832-015-00	Bearing, tuning shaft	0.02
3-835-464-00	Cushion, felt	0.01
3-836-567-00	Spring, grounding	0.03
3-836-582-00	Heat Sink	0.03
3-837-613-03	Side Cover, right	0.37
3-837-616-00	Holder, TONE control	0.02
3-837-617-00	Main Chassis	0.20
3-837-618-12	Knob, AFC switch	0.02
3-837-619-00	Drum, dial	0.04
3-837-623-11	Knob, tuning and VOL control	0.03
3-837-624-11	Knob, TONE control	0.03
3-837-626-00	Pushbutton, POWER switch	0.03

Part No.	Description	Unit Price
3-837-632-00	Connecting Lever, band selector	$0.03
3-837-633-00	Cam, band selector	0.02
3-837-634-00	Connecting Lever, AFC switch	0.03
3-837-637-01	Knob, band selector	0.08
3-837-639-00	Insulator, LIGHT switch	0.01
3-837-643-00	Packing, jack board	0.07
3-837-644-00	Packing, speaker	0.06
3-837-645-00	Packing, telescopic antenna	0.03
3-837-648-00	Packing, AFC switch knob	0.02
3-837-648-00	Packing, band selector knob	0.02
3-837-654-00	Coil Spring, band selector	0.02
3-837-658-00	Contact Plate "A", LIGHT switch	0.03
3-837-659-00	Contact Plate "B", LIGHT switch	0.03
3-837-660-00	Contact Plate "C", battery negative	0.10
3-837-661-00	Solder Lug, telescopic antenna	0.03
3-837-663-00	Connecting Metal, band selector	0.05
3-837-664-00	Mounting Metal, band selector	0.03
3-837-665-00	Mounting Metal, telescopic antenna	0.02
3-837-669-00	Retainer, rear cabinet	0.03
3-837-670-00	Washer, AFC switch knob	0.01
3-837-673-00	Back Plate, dial scale	0.02
3-837-674-00	Shaft, tuning	0.06
3-837-679-00	Sealing, telescopic antenna	0.03
3-837-693-00	Cushion, battery	0.02
3-837-698-00	Housing, left	0.03
3-837-802-00	Cushion, printed circuit board	0.02
3-837-814-00	Spring, dial cord	0.02
3-845-906-00	Bracket, VOL control	0.03
3-845-907-00	Lever, band selector	0.03
3-845-908-00	Pointer, dial	0.06
3-845-909-00	Lock, slide	0.02
3-845-910-00	Case, shield	0.09
3-845-914-00	Cushion	0.02

Part No.	Description	Unit Price
	B. SCREWS, NUTS, WASHERS AND MISCELLANEOUS	
7-621-253-34	Screw, machine; P 1.7 x 4	$0.09/100
7-621-259-35	Screw, machine; P 2.6 x 6	0.09/100
7-621-259-45	Screw, machine; P 2.6 x 6	0.09/100
7-622-107-02	Nut, 2.6 mm dia	0.28/100
7-623-314-01	Lockwasher, internal tooth; 8 mm dia	0.49/100
7-623-407-01	Lockwasher, external tooth; 2.6 mm dia	0.19/100
7-623-408-01	Lockwasher, external tooth; 3 mm dia	0.19/100
7-623-507-01	Lug, solder; 2.6 mm dia	0.12/100
7-623-605-00	Eyelet; 1.3 mm dia, 2.5 mm long	0.06/100
7-624-118-01	Retaining Ring; E-2.5	0.39/100
7-625-705-70	Rivet; 1.4 mm dia, 6 mm long	0.15/100
7-625-705-71	Rivet; 1.4 mm dia, 10 mm long	0.15/100
7-633-120-52	Cord, dial; 0.25 mm dia, 900 mm long	0.02/m
7-671-113-01	Steel Ball; 3 mm dia	0.01 (1 pc)
7-682-146-01	Screw, machine; P 3 x 5	0.08/100
7-682-147-01	Screw, machine; P 3 x 6	0.08/100
7-623-107-18	Washer, plain; 2.6 mm dia	0.26/100
7-682-147-04	Screw, machine; P 3 x 6	0.19/100
7-684-023-01	Nut, 3 mm dia	0.28/100
7-685-104-21	Screw, self-tapping; P 2 x 6	0.28/100
7-685-133-21	Screw, self-tapping; P 2.6 x 6	0.28/100
7-685-145-21	Screw, self-tapping; P 3 x 6	0.23/100
7-685-145-26	Screw, self-tapping; P 3 x 6	0.23/100
7-685-146-21	Screw, self-tapping; P 3 x 8	0.24/100
7-685-147-21	Screw, self-tapping; P 3 x 10	0.28/100
7-685-147-26	Screw, self-tapping; P 3 x 10	0.28/100
7-685-150-21	Screw, self-tapping; P 3 x 16	0.28/100

Ref. No.	Part No.	Description		Unit Price
		C. ELECTRICAL PARTS		
		Mounted Circuit Board		
	X-38459-21-0	Mounted Circuit Board		$12.66
		Semiconductors		
Q1		Transistor	2SC710	0.12
Q2		Transistor	2SK23	0.43
Q3		Transistor	2SC710	0.12
Q4		Transistor	2SC668	0.16
Q5		Transistor	2SC929	0.13
Q6		Transistor	2SC668	0.16
Q7		Transistor	2SC710	0.12
Q8		Transistor	2SC710	0.12
Q9		Transistor	2SC710	0.12
Q10		Transistor	2SC710	0.12
Q11		Transistor	2SC710	0.12
Q12		Transistor	2SC870	0.12
Q13		Transistor	2SC870	0.12
Q14		Transistor	2SB495	0.19
Q15		Transistor	2SB495	0.19
Q16		Transistor	2SC633A	0.14
D1		Diode	1S2139C	0.13
D2		Diode	1S2139C	0.13
D3		Diode	1T261	0.05
D4		Diode	1T261	0.05
D5		Diode	1T22A	0.05
D6		Diode	1S1555	0.07
D7		Diode	1S1555	0.07
D8		Diode	1S1555	0.07
D9		Diode	1S1555	0.07
D10		Diode	1T22A	0.05
D11		Diode	1T22A	0.05
D12		Diode	LED	1.52
Th1	1-800-191-00	Thermistor	CS-47	0.04

Ref. No.	Part No.	Description	Unit Price
		Coils and Transformers	
L1	1-401-517-00	Coil, FM ant	$0.05
L2	1-407-165-11	47 µH, micro inductor	0.03
L3	1-425-756-00	Coil, FM rf	0.10
L4	1-405-550-00	Coil, FM osc	0.09
L5	1-407-165-11	47 µH, micro inductor	0.03
L6	1-407-188-11	6.8 µH, micro inductor	0.04
L7	1-425-373-00	Coil, VHF WB ant	0.06
L8	1-407-188-11	6.8 µH, micro inductor	0.04
L9	1-405-550-00	Coil, VHF WB rf	0.09
L10	-	-	-
L11	1-405-551-00	Coil, VHF WB osc	0.08
L12	1-407-169-11	10 µH, micro inductor	0.03
L13	1-401-201-00	Coil, antenna loading	0.03
L14	1-401-516-00	Coil, AM ferrite bar antenna	0.20
L15	1-405-566-00	Coil, AM osc	0.09
L16	1-407-186-11	4.7 µH, micro inductor	0.04
L17	1-407-175-11	330 µH, micro inductor	0.03
L18	1-407-175-11	330 µH, micro inductor	0.03
CFT A1	1-403-165-15	Ceramic Filter, AM i-f	0.30
IFT A2	1-403-801-00	Transformer, AM i-f	0.12
IFT F1	1-403-242-31	Transformer, FM i-f	0.14
IFT F2	1-403-272-31	Transformer, FM discriminator (primary)	0.13
IFT F3	1-403-273-31	Transformer, FM discriminator (secondary)	0.13
CF1	1-527-184-11	Ceramic Filter	0.12
CF2	1-527-184-11	Ceramic Filter	0.12
T1	1-423-077-11	Transformer, driver	0.19
T2	1-427-341-00	Transformer, output	0.20

Ref. No.	Part No.	Description	Unit Price
		Capacitors	
		All fixed capacitors are ceramic type expressed in µF except as specified with p, which means µµF.	
C1	1-101-882-11	51 p	$0.02
C2	1-101-882-11	51 p	0.02
C3	1-101-882-11	51 p	0.02
C4	1-101-963-11	33 p	0.02
C5	1-101-918-11	0.001	0.02
C6	1-101-958-11	20 p	0.02
C7	1-101-922-11	0.0047	0.02
C8	1-105-833-12	0.01 mylar	0.02
C9	1-102-951-11	15 p	0.02
C10	1-102-947-11	10 p	0.02
C11	1-101-922-11	0.0047	0.02
C12	1-102-260-11	5 p	0.02
C13	1-102-944-11	7 p	0.02
C14	1-127-047-11	0.33 3.15 V solid aluminum	0.05
C15	1-101-918-11	0.001	0.02
C16	-	-	-
C17	1-101-923-11	0.01	0.02
C18	1-101-923-11	0.01	0.02
C19	1-101-923-11	0.01	0.02
C20	1-105-835-12	0.015 mylar	0.02
C21	1-102-951-11	15 p	0.02
C22	1-102-937-11	4 p	0.02
C23	-	-	-
C24	1-101-918-11	0.001	0.02
C25	1-102-953-11	18 p	0.02
C26	1-101-922-11	0.0047	0.02
C27	1-101-918-11	0.001	0.02
C28	1-101-922-11	0.0047	0.02
C29	1-102-951-11	15 p	0.02
C30	1-101-922-11	0.0047	0.02
C31	1-105-833-12	0.01 mylar	0.02
C32	1-102-945-11	8 p	0.02
C33	1-102-944-11	7 p	0.02
C34	1-102-934-11	1 p	0.02
C35	1-102-865-11	8 p	0.02
C36	1-101-923-11	0.01	0.02
C37	-	-	-

Ref. No.	Part No.	Description	Unit Price
C38	-	-	-
C39	-	-	-
C40	-	-	-
C41	1-105-833-12	0.01 mylar	$0.02
C42	1-107-096-11	300 p silvered mica	0.02
C43	1-105-833-12	0.01 mylar	0.02
C44	1-105-833-12	0.01 mylar	0.02
C45	-	-	-
C46	1-103-607-11	180 p polystyrene	0.03
C47	-	-	-
C48	1-105-833-12	0.01 mylar	0.02
C49	1-105-833-12	0.01 mylar	0.02
C50	-	-	-
C51	1-105-833-12	0.01 mylar	0.02
C52	-	-	-
C53	1-101-923-11	0.01	0.02
C54	-	-	-
C55	1-105-821-12	0.001 mylar	0.02
C56	1-101-924-11	0.022	0.02
C57	1-101-918-11	0.001	0.02
C58	1-101-918-11	0.001	0.02
C59	1-102-935-11	2 p	0.02
C60	-	-	-
C61	-	-	-
C62	-	-	-
C63	1-121-352-11	47 10 V electrolytic	0.04
C64	1-121-391-11	1 50 V electrolytic	0.03
C65	-	-	-
C66	1-121-651-11	10 10 V electrolytic	0.04
C67	1-101-918-11	0.001	0.02
C68	1-101-918-11	0.001	0.02
C69	1-105-837-12	0.022 mylar	0.02
C70	1-121-391-11	1 50 V electrolytic	0.03
C71	-	-	-
C72	-	-	-
C73	1-121-395-11	4.7 25 V electrolytic	0.07
C74	1-121-424-11	470 6.3 V electrolytic	0.12
C75	1-121-736-11	1,000 6.3 V electrolytic	0.12
C76	1-121-424-11	470 6.3 V electrolytic	0.12
C77	1-105-839-12	0.033 mylar	0.03
C78	1-121-434-11	0.47 50 V electrolytic	0.04
C79	1-101-923-11	0.01	0.02
C80	1-105-821-12	0.001 mylar	0.02

Ref. No.	Part No.	Description	Unit Price
C81	1-101-797-11	0.1	$0.02
C82	1-105-839-12	0.033 mylar	0.03
C83	1-121-391-11	1 50 V electrolytic	0.03
C84	1-105-821-12	0.001 mylar	0.02
C85	1-102-973-11	100 p	0.02
C86	1-121-651-11	10 10 V electrolytic	0.04
C87	1-127-046-11	0.22 3.15 V solid aluminum	0.05
C88	1-121-419-11	220 6.3 V electrolytic	0.06
C89	1-121-413-11	100 6.3 V electrolytic	0.05
C90	1-121-424-11	470 6.3 V electrolytic	0.12
C91	1-105-825-12	0.0022 mylar	0.02
C92	1-105-825-12	0.0022 mylar	0.02
C93	-	-	-
C94	1-121-424-11	470 6.3 V electrolytic	0.12
C95	1-127-049-11	1 10 V solid aluminum	0.37
C96	1-121-391-11	1 50 V electrolytic	0.03
C97	1-101-923-11	0.01	0.02
C98	1-101-798-11	0.2	0.03
C99	1-105-835-12	0.015 mylar	0.02
C100	1-102-973-11	100 p	0.02
C101	1-102-973-11	100 p	0.02
C102	1-102-973-11	100 p	0.02
C103	1-102-966-11	43 p	0.02
C104	1-102-966-11	43 p	0.02
C105	1-102-973-11	100 p	0.02
C106	1-102-973-11	100 p	0.02
C107	1-102-973-11	100 p	0.02
C108	1-105-833-12	0.01 mylar	0.02
C109	1-101-923-11	0.01	0.02
C110	1-102-947-11	10 p	0.02
CT1	1-141-097-21	Capacitor, trimmer	0.05
CT2	1-141-097-21	Capacitor, trimmer	0.05
CT3	1-141-097-21	Capacitor, trimmer	0.05
CT4	1-141-097-21	Capacitor, trimmer	0.05
VC1-VC4	1-151-255-00	Capacitor, tuning	0.75

Ref. No.	Part No.	Description	Unit Price
		Resistors	
		All fixed resistors are in Ω, 1/4 W, ±5 % composition type unless otherwise specified.	
R1	1-202-382-11	910	$0.02
R2	1-202-431-11	100 k	0.02
R3	1-202-373-11	390	0.02
R4	1-202-411-11	15 k	0.02
R5	1-202-407-11	10 k	0.02
R6	1-202-390-11	2 k	0.02
R7	1-202-430-11	91 k	0.02
R8	1-202-390-11	2 k	0.02
R9	1-202-340-11	43	0.02
R10	1-202-382-11	910	0.02
R11	1-202-382-11	910	0.02
R12	1-202-441-11	270 k	0.02
R13	1-202-382-11	910	0.02
R14	1-210-841-11	270 k micro resistor	0.02
R15	1-202-390-11	2 k	0.02
R16	1-202-424-11	51 k	0.02
R17	1-202-335-11	27	0.02
R18	1-202-430-11	91 k	0.02
R19	1-202-384-11	1.1 k	0.02
R20	1-202-439-11	220 k	0.02
R21	1-202-373-11	390	0.02
R22	1-202-420-11	36 k	0.02
R23	1-202-387-11	1.5 k	0.02
R24	1-202-382-11	910	0.02
R25	1-202-374-11	430	0.02
R26	1-202-341-11	47	0.02
R27	1-202-358-11	91	0.02
R28	1-202-383-11	1 k	0.02
*R29	1-202-413-11 1-202-414-11 1-202-415-11	18 k 20 k 22 k	0.02 0.02 0.02
R30	1-202-414-11	20 k	0.02
R31	1-202-414-11	20 k	0.02
R32	1-224-069-00	Resistor, variable, 50 k (B); PRESET TUNING	0.19
R33	1-202-383-11	1 k	0.02
R34	1-202-383-11	1 k	0.02
R35	1-202-409-11	12 k	0.02

*: To be selected.

Ref. No.	Part No.	Description	Unit Price
R36	1-202-374-11	430	$0.02
R37	1-202-385-11	1.2 k	0.02
R38	1-202-413-11	18 k	0.02
R39	1-202-382-11	910	0.02
R40	1-202-341-11	47	0.02
R41	1-202-435-11	150 k	0.02
R42	1-202-361-11	120	0.02
R43	1-202-334-11	24	0.02
R44	1-202-361-11	120	0.02
R45	1-202-382-11	910	0.02
R46	1-202-382-11	910	0.02
R47	1-202-403-11	6.8 k	0.02
R48	1-202-403-11	6.8 k	0.02
R49	1-202-385-11	1.2 k	0.02
R50	-	-	-
R51	1-202-398-11	4.3 k	0.02
R52	1-202-400-11	5.1 k	0.02
R53	1-202-402-11	6.2 k	0.02
R54	1-202-407-11	10 k	0.02
R55	1-202-399-11	4.7 k	0.02
R56	1-202-382-11	910	0.02
R57	1-202-337-11	33	0.02
R58	1-202-371-11	330	0.02
R59	1-221-629-00	Resistor, adjustable, 50 k (B)	0.06
R60	1-202-430-11	91 k	0.02
R61	1-202-383-11	1 k	0.02
R62	1-202-383-11	1 k	0.02
R63	1-202-387-11	1.5 k	0.02
R64	1-202-418-11	30 k	0.02
R65	1-202-343-11	56	0.02
R66	1-202-383-11	1 k	0.02
R67	1-202-383-11	1 k	0.02
R68	1-210-838-11	180 k micro resistor	0.02
R69	1-202-393-11	2.7 k	0.02
R70	1-202-343-11	56	0.02
R71	1-210-113-11	18 k micro resistor	0.02
R72	1-202-381-11	820	0.02
R73	1-202-358-11	91	0.02
R74	1-202-322-11	7.5	0.02
R75	1-202-375-11	470	0.02
R76	1-202-342-11	51	0.02
R77	1-202-387-11	1.5 k	0.02
R78	1-244-605-11	1.5 carbon	0.02

Ref. No.	Part No.	Description	Unit Price
R79	1-202-408-11	11 k	$0.02
R80	1-202-373-11	390	0.02
R81	1-202-401-11	5.6 k	0.02
R82	1-222-231-00	Resistor, variable, 5 k (D); VOL control	0.14
R83	1-222-284-00	Resistor, variable, 5 k (A); TONE control	0.14
CR	1-231-204-00	Encapsulated Component; C-R (0.01 µF+1 kΩ+ 0.01 µF)	0.04

Miscellaneous

TEL ANT	1-501-124-12	Antenna, telescopic	1.22
SP	1-502-267-00	Speaker, 8 Ω	0.98
J1-J3	1-507-382-00	Jack, 3-unit; earphone, record out and EXT POWER IN	1.82
S1	1-514-546-00	Switch, antenna select	0.09
S2	1-513-277-00	Switch, slide; band select	0.30
S3	1-514-546-00	Switch, AFC	0.09
S5	1-514-763-00	Switch, POWER	0.20
PL	1-518-114-00	Lamp, pilot	0.17
	1-536-408-00	Terminal, pin	0.01
	1-582-125-00	Printed Circuit Board	0.30

Part No.	Description	Unit Price
	D. ATTACHED ITEMS	
X-38390-03-0	Belt Ass'y, shoulder	$0.88
1-504-034-12	Earphone, ME-20	0.21
1-528-002-00	Battery, size "C"	
2-049-002-00	Bag, polyethylene	0.01
3-837-685-00	Box, battery	0.02
3-837-686-00	Box, accessory	0.03
3-837-687-00	Cushion	0.04
3-845-912-00	Carton, individual	0.15
3-993-076-11	Tag, eye catcher	0.02
3-994-390-00	Card, warranty	0.01
3-995-648-21	Manual, instruction	0.05
4-490-014-14	List, service station	0.02