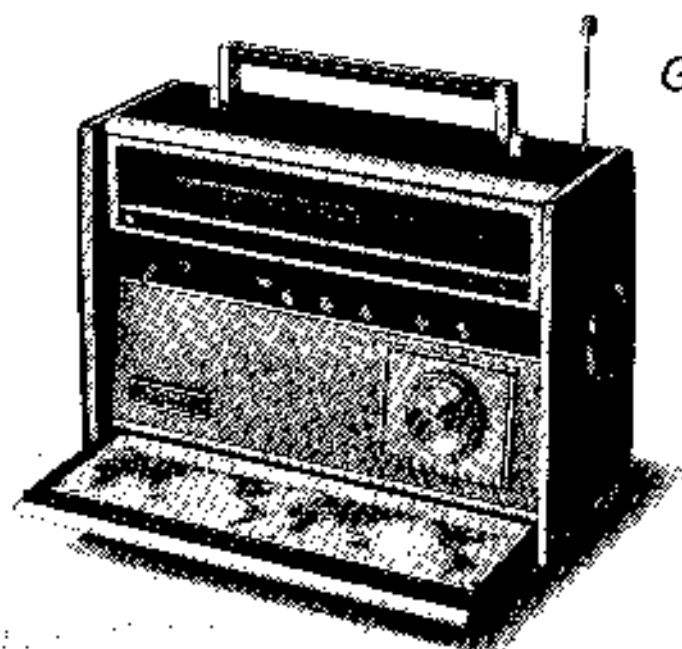




Set using ISO screws

CRF-5090

GEP Model
General Export Model



SPECIFICATIONS

Circuit System:	13 transistors, 10 diode superheterodyne, 7-transistors for battery circuit	Selectivity: at 110 kHz interval	45 dB or 1,400 x/11
Frequency Coverage:	LW 150 - 400 kHz (12,000 - 750 mV) MW 530 - 1,605 kHz (100 dB - 18.7 mV) SW1 1.6 - 3.2 MHz (187 - 86 mV) SW2 3.5 - 8.0 MHz (30 - 53 mV) SW3 9.0 - 14.0 MHz (33 - 21 mV) SW4 14 - 21 MHz (21 - 14 mV) SW5 21 - 26 MHz (14 - 11 mV)	Power Output: at 10% distortion maximum	1.8 W 2.7 W
Intermediate Frequency:	FM/AIR 10.7 MHz LW/MW/SW 455 kHz	Current Drain: at zero signal maximum	FM 40 mA, LW 35 mA 320 mA
Antenna System:	FM/AIR in-circuit antenna or external antenna (impedance 75 Ω) LW/MW built-in ferrite bar antenna or external antenna (high impedance) SW telescopic antenna or external antenna (impedance 75 Ω)	Power Requirement:	DC eight "D" size flashlight batteries 12 cells or car battery by using SONY car battery cable DCC-420W AC house current 100 V, 120 V, 220 V or 240 V AC, 50/60 Hz
Sensitivity at 50 mW output, 5% THD:	AIR 0.9 μV (1.3 dB) FM 0.7 μV (1.3 dB) LW 50 μV (132 dBm) MW 24 μV (121 dBm) SW1 1.2 μV (1.0 dB) SW2 1.0 V (10 dB) SW3 1.0 V (10 dB) SW4 1.2 μV (1.0 dB) SW5 1.3 μV (1.0 dB)	Speaker:	12 cm x 15 cm (4" x 6"), 8 Ω
		Dimensions:	340 mm (W) x 230 mm (H) x 160 mm (D) 13 3/8" x 9 1/8" x 6 3/16"
		Weight:	8.0 kg (14.3 lb) (overall, with batteries)

SONY®
SERVICE MANUAL

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— Hardware Nomenclature —

P	Pan Head Screw		
PS	Pan Head Screw with Spring Washer		
K	Flat Countersunk Head Screw		
B	Bracing Head Screw		
RK	Oval Countersunk Head Screw		
T	Tross Head Screw		
R	Round Head Screw		
F	Flat Filister Head Screw		
SC	Set Screw		
E	Retaining Ring (E Washer)		
	W	Washer	
	SW	Spring Washer	
	LW	Lock Washer	
	N	Nut	
— Example —			
— Type of Slot			
• P 3×10			
Length in mm (L)			
Diameter in mm (D)			
— Type of Head			

When ordering replacement parts, you should use **PART NUMBER** listed on the Parts List or shown in the **EXPLODED VIEW**.
The reference number should not be used for ordering purposes.

2-3. FM FRONT END REMOVAL

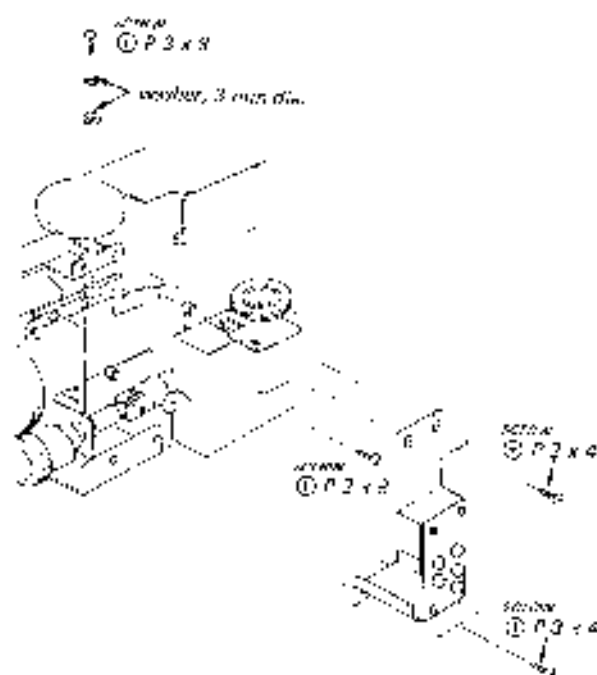


Fig. 2-3.

2-4. FM FRONT END REASSEMBLY

1. Rotate the dial drum fully clockwise and the double gear assembly fully counterclockwise.
2. Attach the FM/AIR selector lever A on the FM/AIR selector switch.
3. Set the FM front end with three screws. See Fig. 2-3, above.

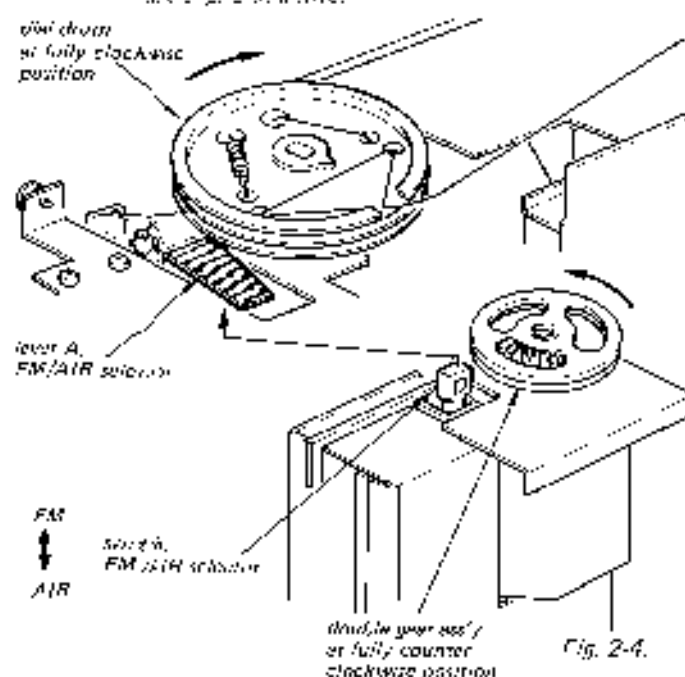


Fig. 2-4.

2-5. DIAL SCALE REASSEMBLY

1. Rotate the BAND SELECTOR knob fully clockwise.
2. Be sure that FM/AIR selector lever II is pushed upwards and that FM/AIR selector switch is pushed downwards. If not, remove the BAND SELECTOR knob and gear B and reattach the shaft of gear A by rotating it left.
3. Set the dial drum so that it shows AIR band and that the tip of the pointer is on the line of AIR band as shown in Fig. 2-6.

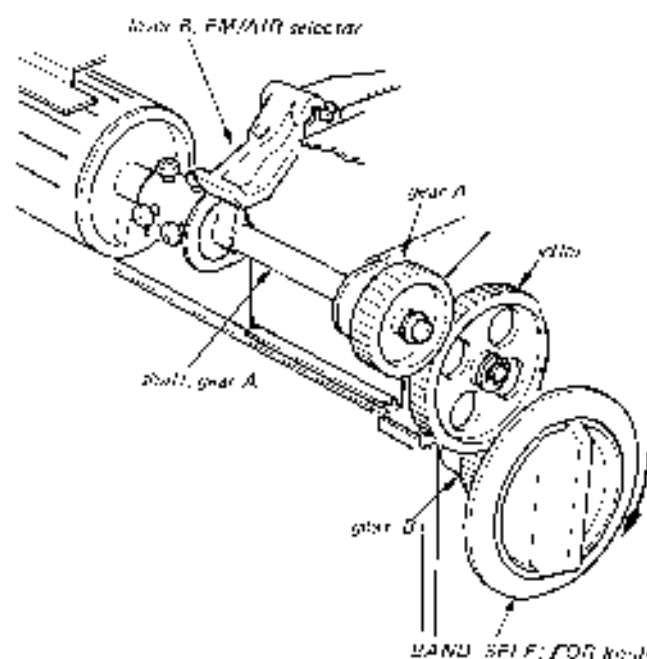


Fig. 2-5.

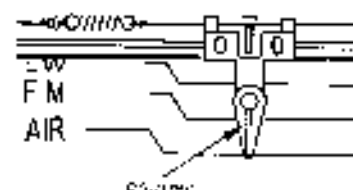


Fig. 2-6.

2-6. CIRCUIT BOARD REMOVAL

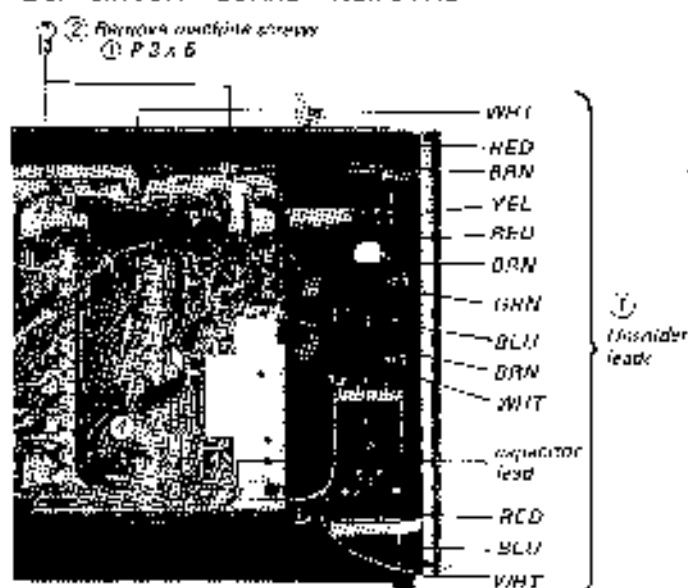


Fig. 2-7.

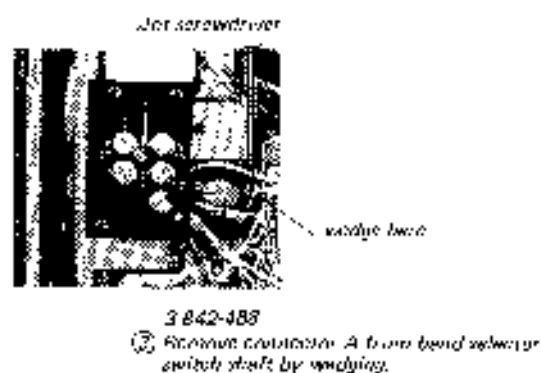


Fig. 2-8.

2-7. DIAL CORD STRINGING

Dial Drum Driving Cord

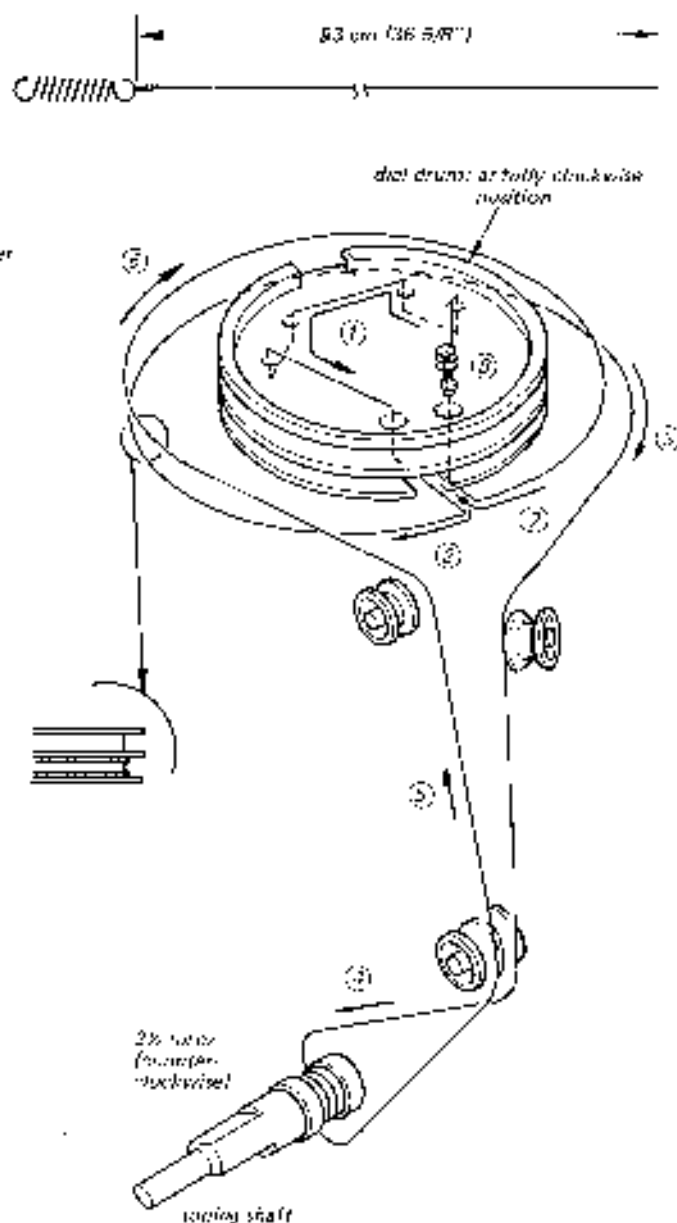


Fig. 2-9.

Pointer Driving Cord

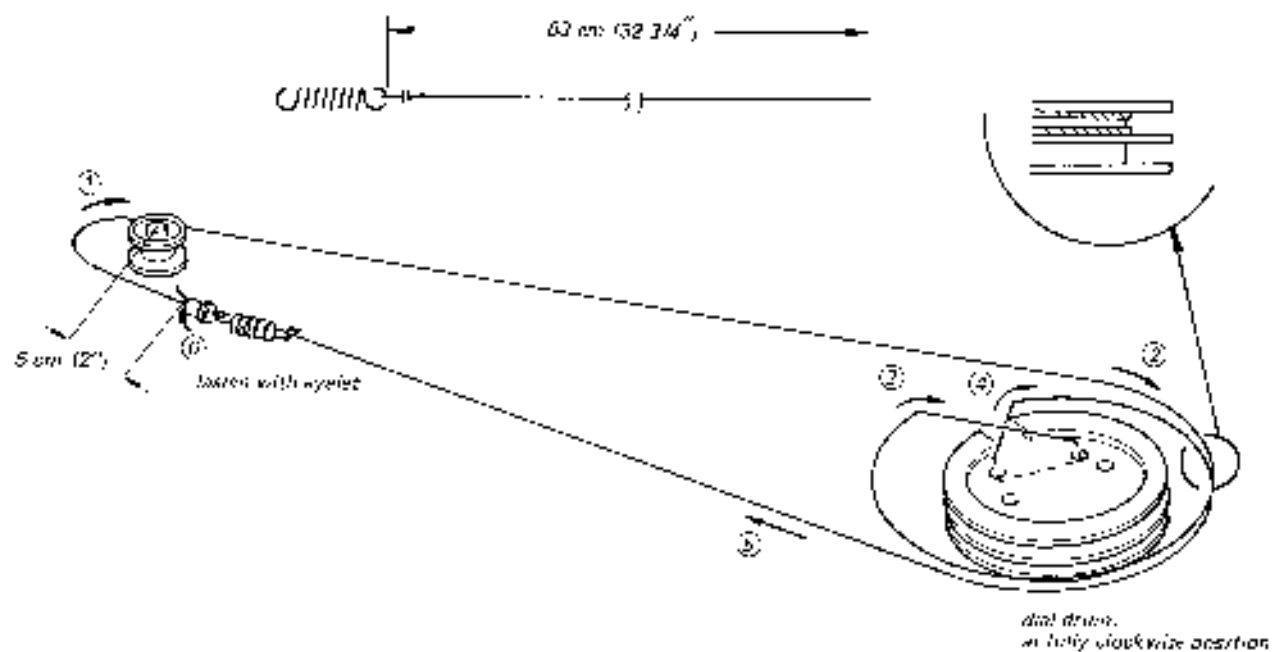


Fig. 2-10.

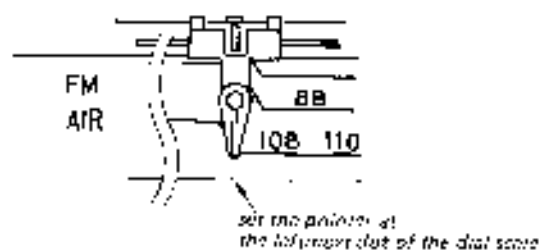


Fig. 2-11.

SECTION 3

CIRCUIT ADJUSTMENTS

Test Equipment/Tools Required:

Rf signal generator (for FM and AM)
 Loop antenna
 VTVM
 8 Ω resistor
 0.01 μ F ceramic capacitor
 Screwdriver for alignment

Preparation

VTVM Connection:

To EARPHONE jacks with 8 Ω load resistor in parallel

Modulation:

FM 400 Hz, 13.5 kHz frequency-modulated signal
 AM 400 Hz, 30% amplitude-modulated signal

VOLUME Control Setting: Mechanical mid position

TUNE Control Setting: Mechanical mid position

AFC Switch: OFF

BFO Control Setting: OFF

RF Gain Control Setting: NORMAL

SQUELCH Control Setting: Fully counter-clockwise position

3-1. FM I-F ALIGNMENT

Setup is shown in Fig. 3-1.

Set the BAND SELECTOR to FM.

Connect the rf signal generator to the FM/AIR ext. antenna terminals after detaching antenna tag as shown in Fig. 3-2.

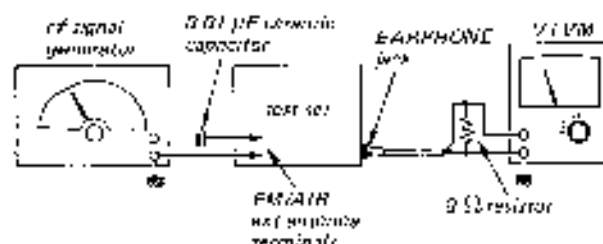


Fig. 3-1. FM/AIR i-f alignment, frequency coverage and tracking adjustment setup

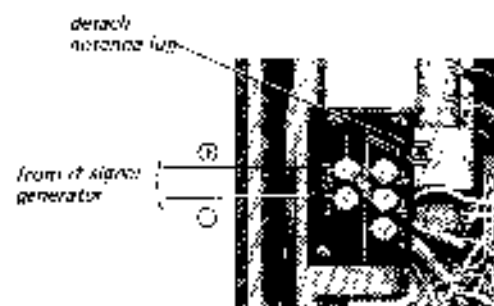


Fig. 3-2. Rf signal generator coupling

Rf Signal Generator Frequency	Rf Signal Modulation	Adjust	Remarks
10.7 MHz	400 Hz, 30% AM modulation	IFT 1-3 See Fig. 2-6.	Adjust for minimum meter reading (100)
10.7 MHz	400 Hz, 13.5 kHz FM modulation	IFT 1-4 IFT 1-2 (22) IFT 1-3 See Fig. 1-4 and Fig. 3-6.	Set the tuning knob at the best signal position. Adjust for maximum meter reading.

Note: (1). Minimum output will be observed at both extremes of the distributor. The maximum point will be obtained in the middle of the core thread length and maximum output will be obtained at both sides of the maximum point. Slowly and carefully turn the core to obtain maximum output.

(2). IFT 1-2 is unable to adjust from rear part of the set. Remove the front panel and adjust IFT 1-2 from front part. (See Fig. 2-4).

3-2. AM I-F ALIGNMENT

AM i-f alignment can be eliminated except when necessary. The ceramic filter CFT is factory preset and i-f transformer IFT-A1 is shielded by shield case. The intermediate frequency of the set is characterized by the ceramic filter because a ceramic filter has a peculiar vibrating frequency which depends on its size.

Preparation:

POWER switch : ON
BAND SELECTOR : MW
BFO switch : OFF
IF Signal Generator Coupling :
Loop antenna (See Fig. 3-3)

Modulation:

400 Hz 30 % amplitude-modulated signal

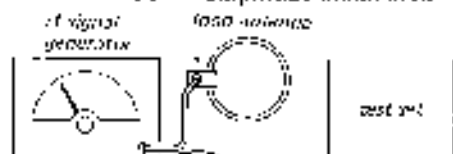


Fig. 3-3. AM i-f alignment and bfo osc coil adjustment setup

Modulate the rf signal with 400 Hz AM modulation. Vary the rf signal around 455 kHz to find the frequency of the set. The dial of the rf signal generator shows the frequency of the set, when the output power of the receiver becomes maximum. If the peak of the output power is not found around 455 kHz, adjust the ceramic filter cover after removing front panel and dial string as shown in Fig. 3-4.

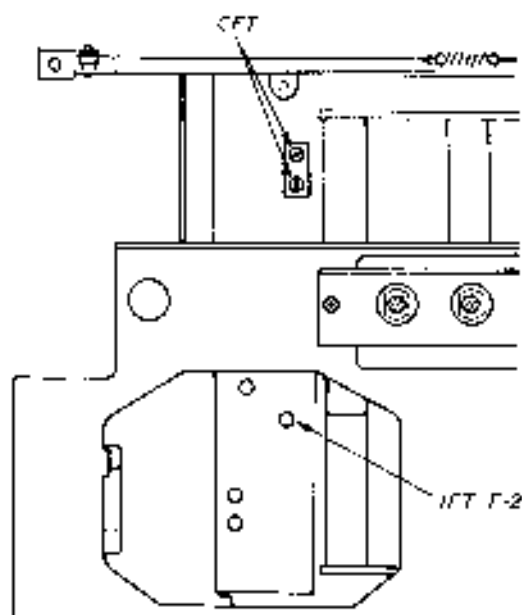


Fig. 3-4. Adjustment locations

3-3. BFO OSC COIL ADJUSTMENT

Preparation:

POWER switch : ON
BAND SELECTOR : MW
BFO switch : ON

BFO Control Setting:

Mechanical limit position as shown in Fig. 3-5.

Rf Signal Generator Coupling : Loop antenna

Setup : See Fig. 3-1.

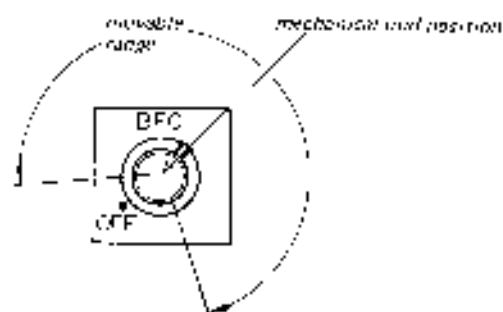


Fig. 3-5. BFO control setting

Rf Signal Generator Frequency	Adjust	Remarks
455 kHz unmodulated signal (*)	BFO osc coil L 220 See Fig. 3-6	Adjust to zero beat note.

Note: (*) Tune the rf signal generator frequency to the IF frequency of the set, which is found in AM I-F ALIGNMENT.

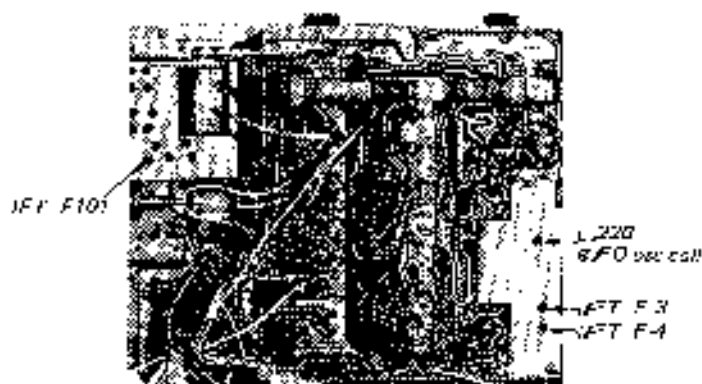


Fig. 3-6. Adjustment locations

3.4. FREQUENCY COVERAGE AND TRACKING ADJUSTMENT

Setup: FM/AIR See Fig. 3-4

LR/MW See Fig. 3-7.

SW1 - 5 See Fig. 3-8.

Note: Fully telescope the telescopic antenna.

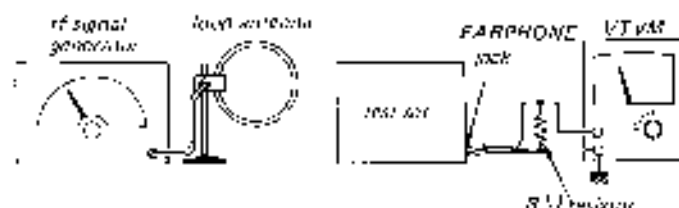


Fig. 3-7. LR/MW frequency coverage and tracking adjustment setup

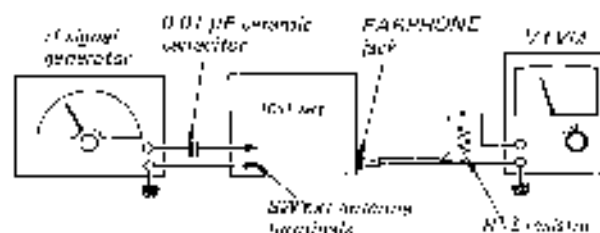


Fig. 3-8. SW1-5 frequency coverage and tracking adjustment setup

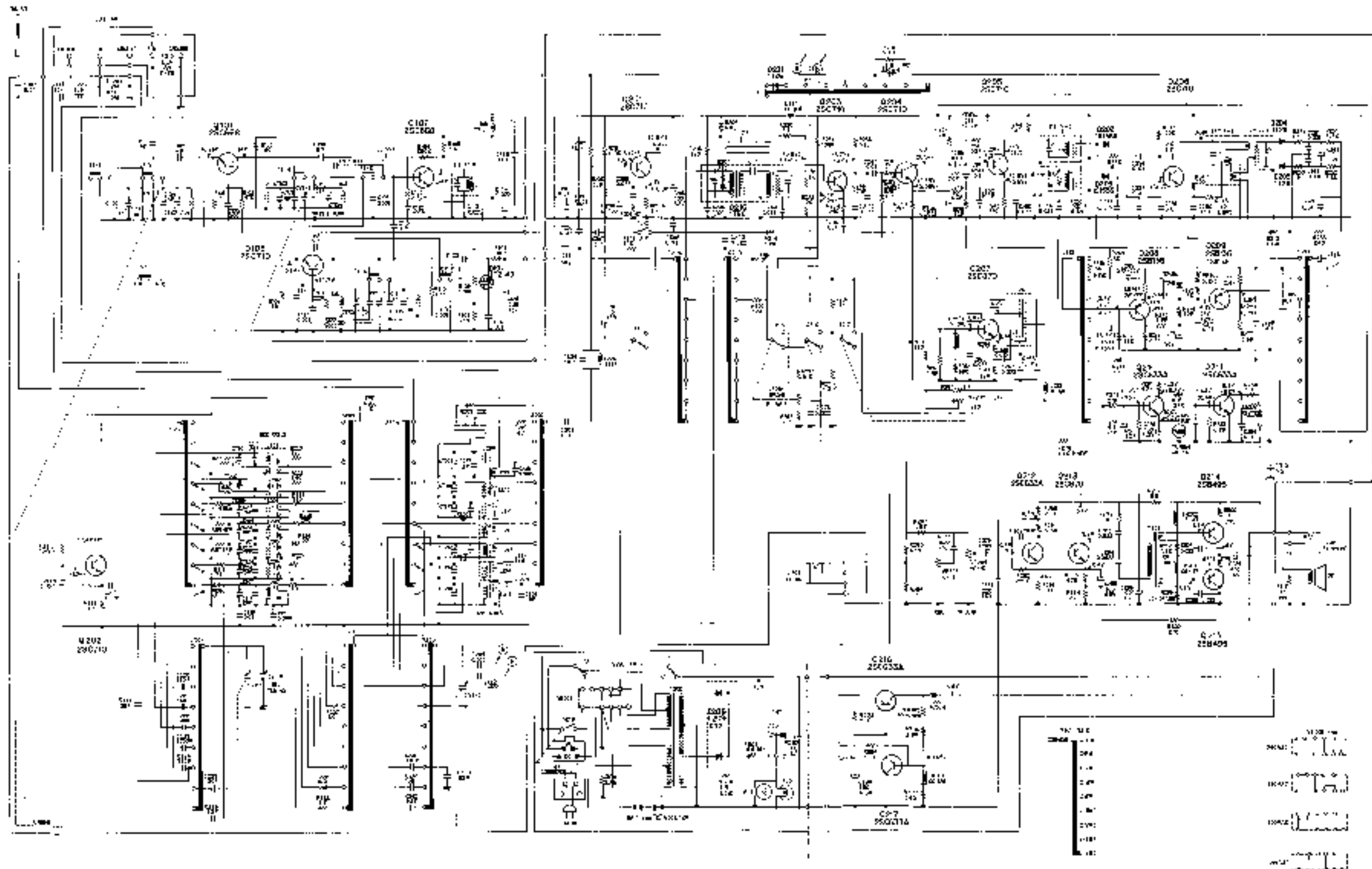
Note: In West Germany the FM frequency coverage should be within the range between 87.5 MHz and 108 MHz. Make the frequency coverage by adjusting on coil L106 and use trimmer CT105 with the indicated frequency signal from the rf signal generator.

Adjustment	Rf Signal Generator Coupling	Rf Signal Generator Frequency	Receiver Pointer Setting	Adjust	Remarks
FM Frequency Coverage	To FM/AIR section (achieved by detaching out line) (See Fig. 3-4)	85.5 MHz	Fully left	FM osc coil L106	BAND SELECTOR : FM Adjust for maximum meter reading.
		109.5 MHz	Fully right	FM osc trimmer CT105	
FM Tracking		80.5 KHz	Tune in 80.5 MHz signal	FM osc coil L106 FM osc coil L107	
		109.5 MHz	Tune in 109.5 MHz signal	FM osc trimmer CT105 FM osc trimmer CT106	
AIR Frequency Coverage	Circle	107 MHz	Fully left	AIR osc coil L107	BAND SELECTOR : AIR Adjust for maximum meter reading.
		135 KHz	Fully right	AIR osc trimmer CT106	
AIR Tracking		107 MHz	Tune in 107 KHz signal	AIR osc coil L107 AIR osc coil L108	
		137.5 MHz	Tune in 137.5 MHz signal	AIR osc trimmer CT106 AIR osc trimmer CT107	
MW Frequency Coverage	Loop antenna (See Fig. 3-7)	150 KHz	Fully left	MW osc coil L202	BAND SELECTOR : MW Adjust for maximum meter reading.
		1680 KHz	Fully right	MW osc trimmer CT201	

SECTION 4

DIAGRAMS

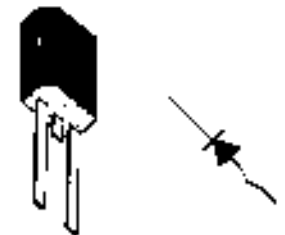
4-1. SCHEMATIC DIAGRAM



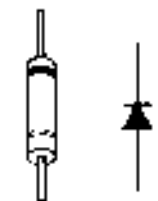
Notes:

1. All resistance values in Ω and all capacitance values in μ F unless otherwise stated.
2. All voltages measured to ground circuit with a hi-impedance with an signal received. Variations may be noted due to normal production tolerances.
3. The values in $\pm 1\%$ measured with hand calibration to FM, $\pm 0.5\%$ in $\pm 1\%$ AFS with SQI $\pm 11.11\%$ (highly context sensitive position and in $\pm 0.5\%$ with RFI) measured to $\pm 0.5\%$.
4. Capacitors marked with off to off from form and variance filter.

5501 : 11266



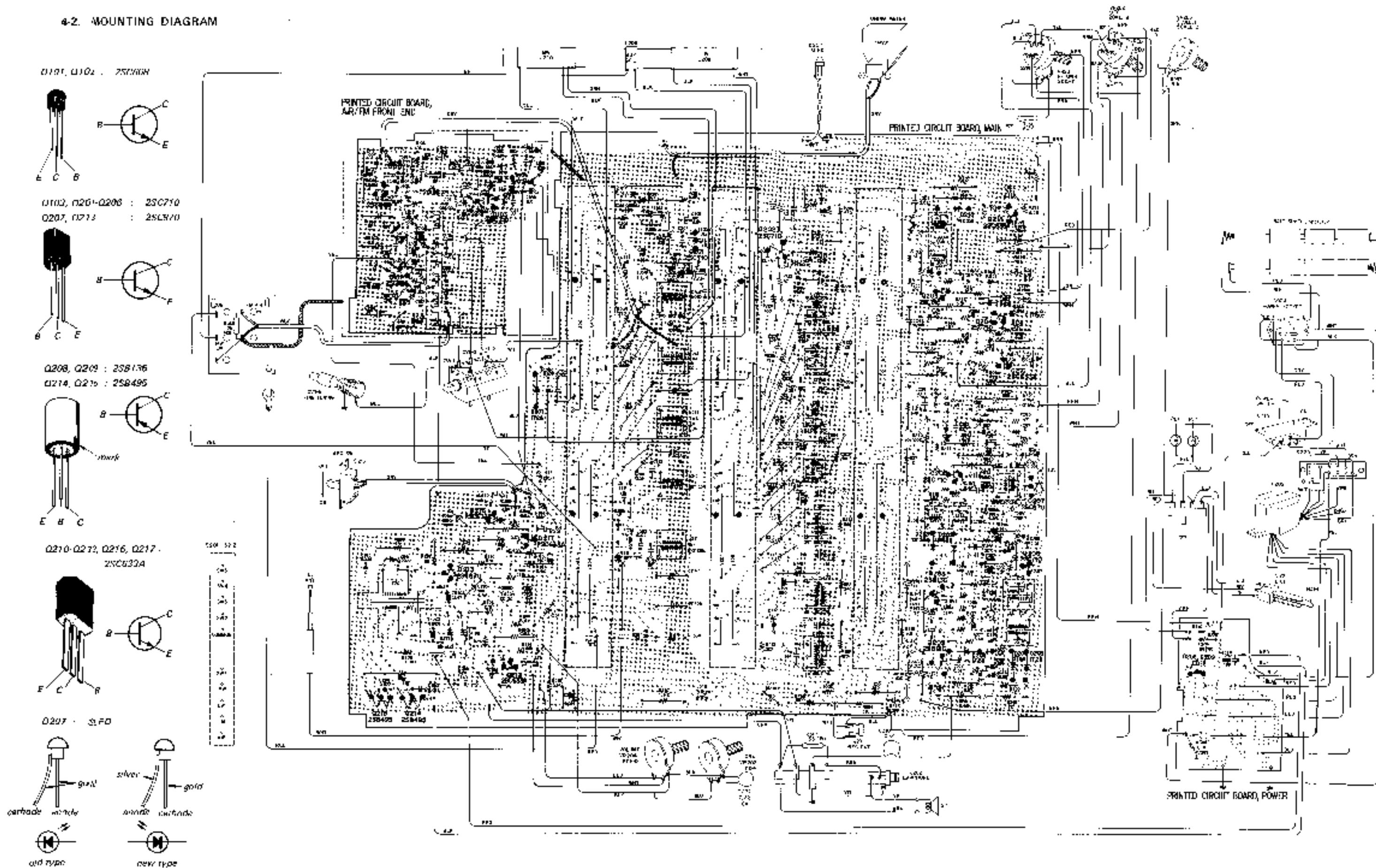
0201, 0204~0205, 0215 : 1126
0202, 0203 : 151555



0208, 0209 CD2



4-2. MOUNTING DIAGRAM

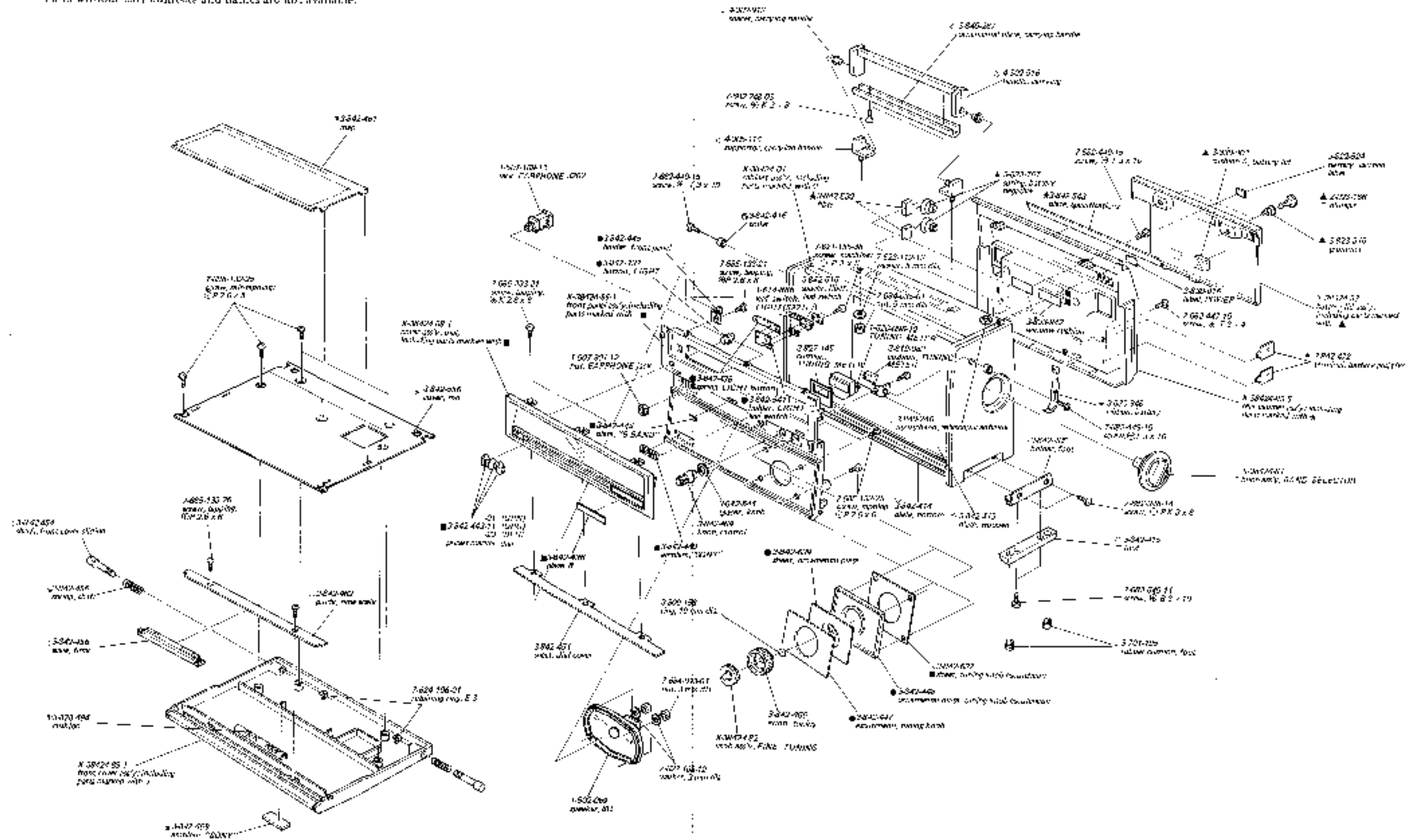


SECTION 5

EXPLODED VIEW AND PACKING

5-1. EXPLODED VIEW (1)

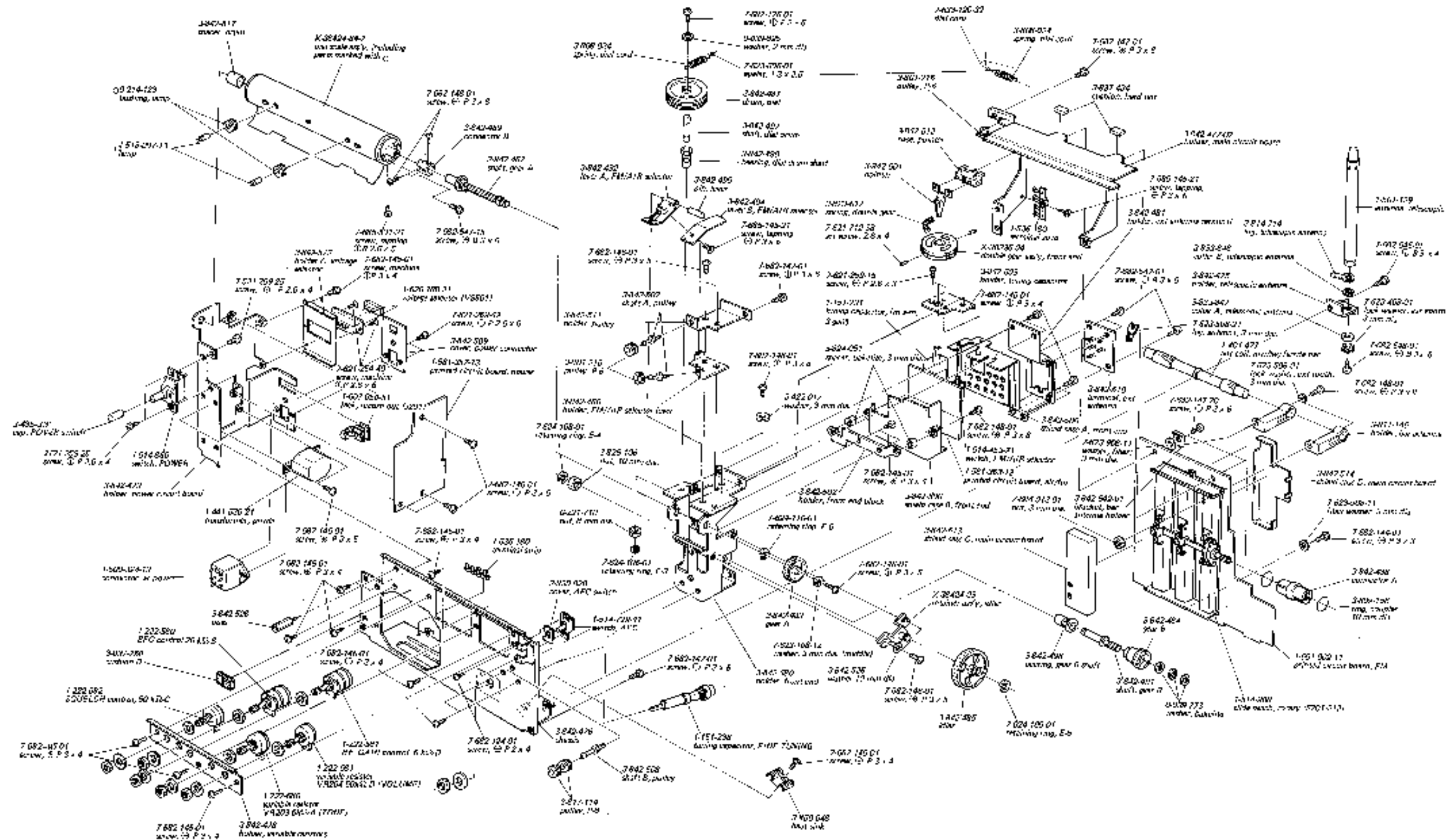
Parts without part numbers and names are not available.



CRF-5090 CRF-5090

5-2. EXPLODED VIEW (2)

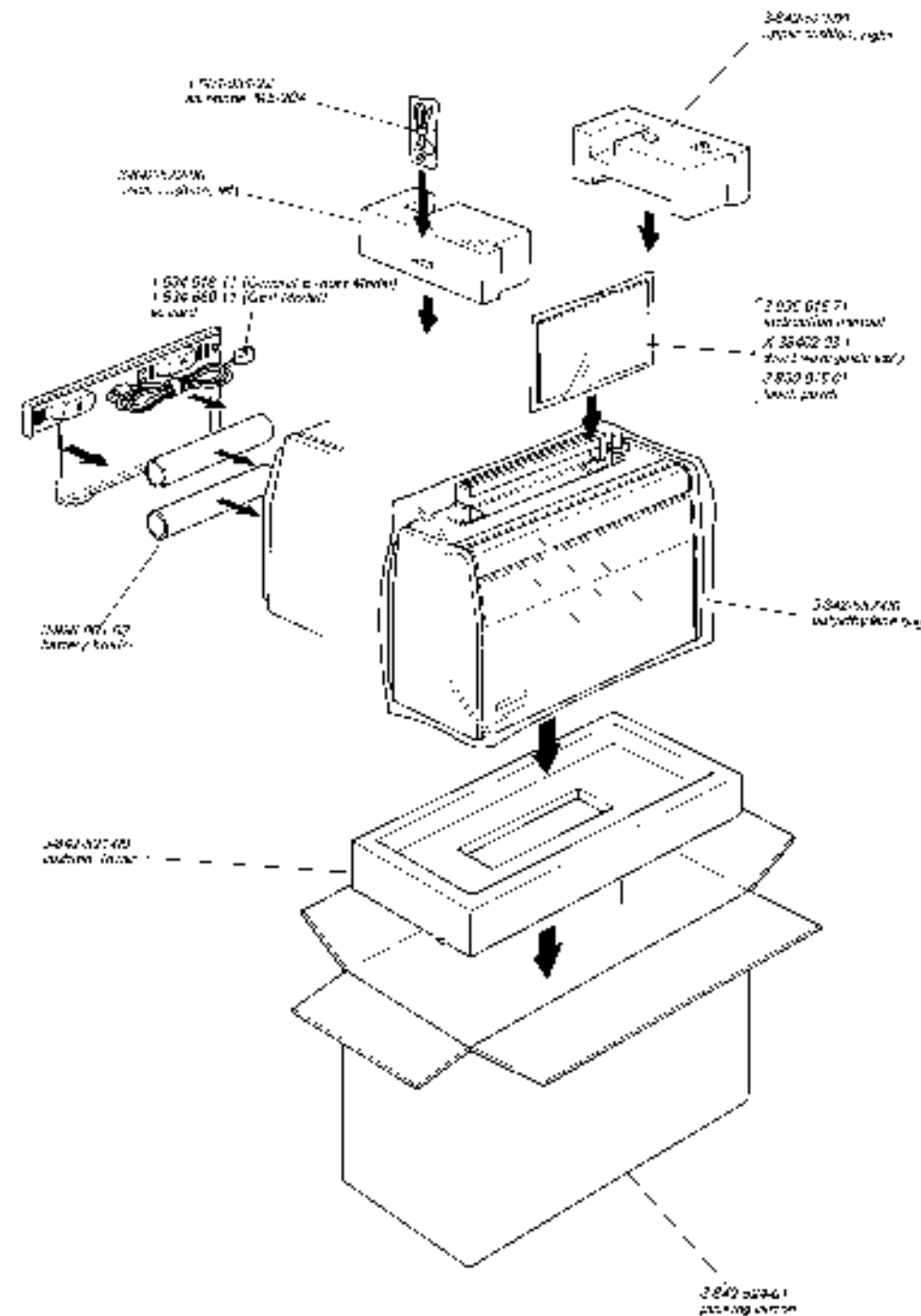
Parts without part numbers and names are not available.



SECTION 6

ELECTRICAL PARTS LIST

5-3. PACKING



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
SEMICONDUCTORS			L205	1-405-499	var. coil, SW3
			L206	1-405-500	var. coil, SW4
Q101	transistor	2SC668	L207	1-405-501	var. coil, SW5
Q102	transistor	2SC668	L208		
Q103	transistor	2SC710	L209	1-401-477	ant. coil, 1 WCMW; ferrite bar
Q201	transistor	2SC710	L210		
Q202	transistor	2SC710	L211	1-401-477	ant. coil, SW1
Q203	transistor	2SC710	L212	1-401-478	ant. coil, SW2
Q204	transistor	2SC710	L213	1-401-479	ant. coil, SW3
Q205	transistor	2SC710	L214	1-401-480	ant. coil, SW4
Q206	transistor	2SC710	L215	1-401-481	ant. coil, SW5
Q207	transistor	2SC870	L216	1-407-171	150 pF, micro-inductor
Q208	transistor	2SD136	L217	1-407-172	470 pF, micro-inductor
Q209	transistor	2SD136	L218	1-407-173	330 pF, micro-inductor
Q210	transistor	2SD136	L219	1-407-177	470 pF, micro-inductor
Q211	transistor	2SC632A	L220	1-405-502	var. coil, SW1
Q212	transistor	2SC632A	L221	1-407-177	470 pF, micro-inductor
Q213	transistor	2SC870	L222	1-407-177	470 pF, micro-inductor
Q214	transistor	2SD492	L223	1-407-178	1 pF, micro-inductor
Q215	transistor	2S1495	L224	1-407-178	1 pF, micro-inductor
Q216	transistor	2SD632A	L225	1-407-182	2.2 pF, micro-inductor
Q217	transistor	2SC632A	L226	1-401-490	tap coil
D101	diode	1T240	D111-101	1-182-242-12	transformer, FM IF
D201	diode	1T26	D111-2	1-403-558	transformer, AM IF
D202	diode	1S1575	D111-3	1-182-287-12	transformer, FM discriminator; primary
D203	diode	1S1575	D111-4	1-403-287-22	transformer, FM discriminator; secondary
D204	diode	1T26	D111-A	1-403-174	transformer, AM IF
D205	diode	1T26	CL1	1-527-184-11	}
D206	diode	1T26			
D207	diode	517D		1-527-184-12	ceramic filter, FM IF
D208-0209	diode	CD-2	L22	1-527-184-11	}
D210	diode	1T26			
T11201	8-696-635	thermistor		1-527-184-15	ceramic filter, FM IF
T11202	8-691-073-1	thermistor	CL1	1-403-195-21	transformer, driver, AM IF
T11203	8-691-073-11	thermistor	L201	1-422-140	transformer, driver
T11204	8-691-601-1	thermistor	T102	1-42-136-21	transformer, power

COILS AND TRANSFORMERS

L101	1-425-350	air coil,	FM
L102	1-405-501	ant. coil,	AIR
L103	1-435-350	rt. coil,	FM
L104	1-405-503	rt. coil,	AIR
L105	1-405-182	2.2 M Ω ,	current indicator
L106	1-405-505	osc. coil,	FM
L107	1-405-503	osc. coil,	AIR
L108	1-407-171	100 μ H,	micro-inductor
L201	1-435-457	osc. coil,	FM
L202	1-435-199	osc. coil,	SW
L203	1-435-451	osc. coil,	SW
L204	1-405-498	osc. coil,	SW2

CAPACITORS

All fixed parameters are in Jk unless otherwise specified.

CV1-10A	1-151-231	tuning capacitor, FM/AM 3-gang
CV1-6	1-151-238	tuning capacitor, 1.5M Ω 1-LT/180
CT101	1-141-097-21	capacitor, trimmer
CT-32	1-141-097-21	capacitor, trimmer
CT130	1-141-097-21	capacitor, trimmer
CT104	1-141-097-21	capacitor, trimmer
CT105	1-141-097-21	capacitor, trimmer
CT106	1-141-097-2	capacitor, trimmer
CT1	1-102-935	4 pF ceramic
CT-32	1-102-937	4 pF ceramic
CT2	1-102-953	18 pF ceramic
CT-34	1-102-950	24 pF ceramic

<i>Ref. No.</i>	<i>Part No.</i>	<i>Description</i>		<i>Ref. No.</i>	<i>Part No.</i>	<i>Description</i>	
C105	1-102-918	0.001	ceramic	C218	1-105-673-12	0.01	nylon
C106	1-102-918	0.001	ceramic	C219	1-105-683-12	0.008	nylon
C107	1-102-918	0.001	ceramic	C220	1-105-087	120 pF	silvered mica
C108	1-102-942	5 pF	ceramic	C221	1-105-182	50 pF	silvered mica
C109	1-102-955	18 pF	ceramic	C222	1-104-028	1000 pF	ceramic
C110	1-105-961	27 pF	ceramic	C223	1-105-733	250 pF	nylon
C111	1-105-651-12	0.01	nylon	C224	1-105-092	350 pF	silvered mica
C112	1-105-085	100 pF	mica	C225	1-105-388	100 pF	silvered mica
C113	1-105-924	0.022	ceramic	C226	1-105-180	62 pF	silvered mica
C114	1-102-924	0.01	ceramic	C227	1-102-940	5 pF	ceramic
C115	1-105-654	1 pF	ceramic	C228	1-105-665-12	0.0022	nylon
C116	1-105-510	12 pF	ceramic	C229	.....	.....	.....
C117	1-102-918	0.001	ceramic	C230	1-105-955	18 pF	ceramic
C118	1-105-864	5 pF	ceramic	C231	.....	.....	.....
C119	1-102-918	0.001	ceramic	C232	1-102-945	6 pF	ceramic
C120	1-102-880	5 pF	ceramic	C233	.....	.....	.....
C121	1-105-639	10 pF	ceramic	C234	.....	.....	.....
C122	1-105-661-12	0.001	nylon	C235	.....	.....	.....
C123	1-102-965	8 pF	ceramic	C236	.....	.....	.....
C124	1-105-661-12	0.001	nylon	C237	.....	.....	.....
C125	1-127-021	0.33	10 V electrolytic	C238	.....	.....	.....
C126	1-105-673-12	0.01	nylon	C239	.....	.....	.....
CT201	1-141-140	capacitor,	trimmer	C240	1-105-092	350 pF	silvered mica
CT202	1-141-140	capacitor,	trimmer	C241	1-105-088	30 pF	silvered mica
CT203	1-141-140	capacitor,	trimmer	C242	1-105-080	62 pF	silvered mica
CT204	1-141-140	capacitor,	trimmer	C243	1-105-677-12	0.022	nylon
CT205	1-141-140	capacitor,	trimmer	C244	1-105-679-12	0.022	nylon
CT206	1-141-140	capacitor,	trimmer	C245	1-105-679-12	0.033	nylon
CT207	1-141-140	capacitor,	trimmer	C246	1-105-188	470 pF	silvered mica
CT208	1-141-140	capacitor,	trimmer	C247	1-105-673-12	0.01	nylon
CT209	1-141-140	capacitor,	trimmer	C248	1-105-679-12	0.033	nylon
CT210	1-141-140	capacitor,	trimmer	C249	1-105-491	100	6.3 V electrolytic
CT211	.....	.....	.....	C250	1-105-673-12	0.01	nylon
CT212	1-141-140	capacitor,	trimmer	C251	1-105-068	20 pF	silvered mica
CT213	1-141-140	capacitor,	trimmer	C252	1-105-085	100 pF	silvered mica
CT214	1-141-140	capacitor,	trimmer	C253	1-105-679-12	0.033	nylon
C201	1-105-673-12	0.01	nylon	C254	1-105-677-12	0.022	nylon
C202	1-105-673-12	0.01	nylon	C255	1-121-491	100	6.3 V electrolytic
C203	1-101-924	0.022	ceramic	C256	1-105-675-12	0.015	nylon
C204	1-105-673-12	0.022	nylon	C257	1-105-673-12	0.01	nylon
C205	1-105-491	100	6.3 V electrolytic	C258	1-105-673-12	0.01	nylon
C206	1-101-924	0.022	ceramic	C259	1-105-673-12	0.01	nylon
C207	1-121-491	10	16 V electrolytic	C260	1-105-673-12	0.01	nylon
C208	1-105-673-12	0.01	nylon	C261	1-105-661-12	0.001	nylon
C209	1-105-673-12	0.01	nylon	C262	1-105-661-12	0.001	nylon
C210	1-105-673-12	0.022	nylon	C263	1-121-491	10	16 V electrolytic
C211	1-102-960	24 pF	ceramic	C264	1-105-673-12	0.01	nylon
C212	.....	.....	.....	C265	1-105-673-12	0.022	nylon
C213	1-102-964	36 pF	ceramic	C266	1-105-673-12	0.015	nylon
C214	1-102-947	10 pF	ceramic	C267	1-105-673-12	0.022	nylon
C215	1-102-959	22 pF	ceramic	C268	1-102-734	100 pF	ceramic
C216	1-102-960	24 pF	ceramic	C269	1-105-082	0.33	10 V electrolytic
C217	1-102-960	24 pF	ceramic	C270	1-121-442	1	50 V electrolytic

<i>Ref. No.</i>	<i>Part No.</i>	<i>Description</i>		<i>Ref. No.</i>	<i>Part No.</i>	<i>Description</i>
C271	1-121-471-13	0.01	mylar	R101	1-244-734	360 Ω
C272	1-121-471	10	16 V electrolytic	R105	1-244-679	1 k
C273	1-105-677-12	0.022	mylar	R106	1-242-673	1 k
C274	1-121-484	40	35 V electrolytic	R107	1-242-721	100 k
C275	1-121-491	100	6.3 V electrolytic	R109	1-242-705	300 Ω
C276	1-105-677-13	0.01	mylar	R109	1-242-721	100 k
C277	1-127-046	0.22	10 V electrolytic (toler.)	R110	1-244-675	1.5 k
C278	1-127-045	0.1	10 V electrolytic (toler.)	R111	1-242-729	220 k
C280	1-127-045	0.1	10 V electrolytic (toler.)	R201	1-244-727	100 k
C281	1-121-421	220	16 V electrolytic	R202	1-241-715	50 Ω
C282	1-105-677-12	0.022	mylar	R203	1-244-709	33 k
C283	1-105-677-12	0.022	mylar	R205	1-244-673	1 k
C284	1-105-665-13	0.0022	mylar	R205	1-244-662	360
C285	1-121-491	10	6.3 V electrolytic	R206	1-244-669	500
C286	1-121-186	1000	16 V electrolytic	R207	1-244-635	270
C287	1-105-677-12	0.022	mylar	R208	1-244-673	1 k
C288	1-105-677-12	0.022	mylar	R209	1-244-627	220
C289	1-121-476	400	16 V electrolytic	R210	1-244-641	40
C290	1-121-451	100	6.3 V electrolytic	R211	1-244-725	220 k
C291	1-121-186	1000	16 V electrolytic	R212	1-244-673	1 k
C292	1-121-186	1000	16 V electrolytic	R213	1-244-657	220
C293	1-102-991	15 pF	ceramic	R214	1-244-669	680
C294	1-101-924	0.022	ceramic	R215	1-244-667	560
C295	1-101-924	0.022	ceramic	R216	1-244-665	470
C296	1-105-673-12	0.01	mylar	R217	1-244-639	270
C297	1-102-939	2 pF	ceramic	R218	1-244-645	75
C298	1-105-673-13	0.01	mylar	R219	1-244-639	15
C299	1-102-983	33 pF	ceramic	R220	1-241-657	100
C300	1-102-983	33 pF	ceramic	R221	1-244-633	240
C301	1-102-953	18 pF	ceramic	R222	1-244-667	500
C302	1-105-677-12	0.022	mylar	R223	1-244-656	200
C303	1-101-923	0.01	ceramic	R224	1-244-649	100
C304	1-101-923	0.01	ceramic	R225	1-244-651	120
C305	1-105-673-12	0.01	mylar	R226	1-244-647	82
C306	1-101-923	0.01	ceramic	R227	1-244-636	30
C307	1-102-942	3 pF	ceramic	R228	1-244-649	100
C308	1-102-947	10 pF	ceramic	R229	1-244-642	50
C309	1-105-677-12	0.022	mylar	R230	1-244-642	51
C310	1-101-923	0.01	ceramic	R231	1-244-721	100 k

RESISTORS

All fixed resistors are in Ω, 1/4W, 1% V, carbon film, type unless otherwise noted.

VR 201	1-222-581	R+ GATE control	5 kΩ D
VR 203	1-222-580	BLO control	20 kΩ D
VR 204	1-222-680	TRIM control	5 kΩ A
VR 204	1-222-681	VOLUME control	50 kΩ D
VR 205	1-222-682	30VDCU control	50 kΩ C
R101	1-242-673	1 k	
R102	1-242-713	45 k	
R103	1-244-653	180	

R104	1-244-734	360 Ω
R105	1-244-679	1 k
R106	1-242-673	1 k
R107	1-242-721	100 k
R109	1-242-705	300 Ω
R109	1-242-721	100 k
R110	1-244-675	1.5 k
R111	1-242-729	220 k
R201	1-244-727	100 k
R202	1-241-715	50 Ω
R203	1-244-709	33 k
R205	1-244-673	1 k
R205	1-244-662	360
R206	1-244-669	500
R207	1-244-635	270
R208	1-244-673	1 k
R209	1-244-627	220
R210	1-244-641	40
R211	1-244-725	220 k
R212	1-244-673	1 k
R213	1-244-657	220
R214	1-244-669	680
R215	1-244-667	560
R216	1-244-665	470
R217	1-244-639	270
R218	1-244-645	75
R219	1-244-639	15
R220	1-241-657	100
R221	1-244-633	240
R222	1-244-667	500
R223	1-244-656	200
R224	1-244-649	100
R225	1-244-651	120
R226	1-244-647	82
R227	1-244-636	30
R228	1-244-649	100
R229	1-244-642	50
R230	1-244-642	51
R231	1-244-721	100 k
R232	1-244-673	1 k
R233	1-244-697	10 k
R234	1-244-658	200
R235	1-244-666	310
R236	1-244-642	51
R237	1-244-697	10 k
R238	1-244-659	200
R239	1-244-673	1 k
R240	1-244-723	150 k
R241	1-241-652	51
R242	1-244-716	60 Ω
R243	1-244-663	570
R244	1-244-656	200
R245	1-244-723	120 k
R246	1-244-642	51
R247	1-244-656	200

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R248	1-244-629	180	%R298	1-244-677	1.5 k
R249	1-244-672	1 k		1-244-679	1.5 k
R250	1-244-673	1 k	%R299	1-244-675	1.5 k
R251	1-244-693	5.5 k		1-244-679	1.6 k
R252	1-244-697	6.5 k	R300	1-210-226	1 W carbon
R253	1-244-658	240	R301	1-210-226	1 W carbon
R254	1-244-673	1 k	R302	1-244-659	270
R255	1-244-651	120	R303	1-244-666	510
R256	1-244-701	15 k	R304	1-244-720	910
R257	1-244-714	51 k	%R305	1-244-667	560
R258	1-244-692	6.2 k		1-244-668	520
R259	1-244-688	4.3 k		1-244-669	560
R260	1-244-668	620		1-244-670	750
R261	1-244-678	1.6 k		1-244-671	620
R262	1-244-669	680	R306	1-244-687	3.9 k
R263	1-244-663	390	R307	1-244-667	550
R264	1-244-649	100	R308	1-202-647	1.2 M 1/2 W composition
R265	.....	.....	R309	1-202-763	65 1/2 W composition
R266	.....	.....	R310	1-202-525	10 1/2 W composition
R267	1-244-673	1 k	R311	1-202-547	1.2 M 1/2 W composition
%R268	1-244-662	450	R312	1-202-547	1.2 M 1/2 W composition
	1-244-663	390	R313	1-244-631	100 k
	1-244-664	450	R314	1-244-621	100 k
	1-244-665	470	R315	1-244-664	7.5 k
	1-244-666	510	R316	1-244-697	10 k
R269	1-244-694	3 k	R317	1-209-154	25 1/2 W composition
R270	1-244-717	68 k	R318	1-244-690	5.1 k
R271	1-244-673	1 k	R319	1-201-866	15 k 1/2 W composition
R272	1-244-681	7.2 k	R320	.....	.....
R273	1-244-667	3.9 k	R321	1-244-641	47
R274	1-244-697	10 k	R322	1-244-641	47
R275	1-244-701	15 k	MISCELLANEOUS		
R276	1-244-682	2.4 k	HE-1 ANTEN-501-129	antenna, telescopic	
R277	1-244-686	3.6 k	SP	1-502-069	speaker
R278	1-201-863	10 k 1/2 W composition	J201	1-507-030-31	jack, record out
R279	1-210-707	27 k	J202	1-507-169-13	jack, EARPHONE
R280	1-244-716	62 k		1-507-901-12	jack, EARPHONE jack
R281	1-244-683	1.0 k	TR201	1-520-085-12	TUNING METER
R282	1-244-706	24 k	PL1	1-518-097-13	lamp, LIGHT 3 V 30 mA
R283	1-244-692	6.2 k	PL2	1-518-097-13	lamp, LIGHT 3 V 30 mA
R284	1-244-673	1 k	S1	1-514-455-21	switch, FM/AM selector
R285	1-244-717	68 k	S201-212	1-514-922	switch, band selector
R286	1-244-673	1 k	S213	1-514-779-41	switch, A+B
R287	1-244-679	1.8 k	S215	1-509-324-13	connector, ac power
R288	.....	.....	S215-320	1-514-866-21	switch, POWER
R289	.....	.....	S221	1-514-883-09	leaf switch, LIGHT
R290	1-244-68	2.2 k		1-561-362-13	printed circuit board, main
R291	1-244-697	5.6 k		1-561-363-12	printed circuit board, AIR/TV front end
R292	1-244-742	820 k		1-561-357-12	printed circuit board, power
R293	1-244-649	100		1-526-180-00	terminal strip, 4-pin
R294	1-244-632	22		8-981-423-16	mounted circuit board, main
R295	1-244-665	470		8-981-423-30	mounted circuit board, AIR/TV front end
R296	1-244-673	1 k			mounted circuit board, power supply
R297	1-244-643	68	V3501	1-526-198-21	voltage selector

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