AWA

B419 MUSIC CENTRE

WITH AM FM FM-MPX RECEIVER
STEREO CASSETTE RECORDER
AND AUTO CHANGER

SERVICE MANUAL

572048

Specifications

F.M. RADIO RECEIVER

Frequency range	:	88 MHz - 108 MHz
Tuning	:	Variable condensor
Aerial	:	External 75 ohm impedance co-axial socket
Sensitivity	:	15 μV for signal to noise ratio of 30 dB (30% modulation)
Intermediate frequency	:	10.7 MHz
Channel separation	:	26 dB at 1 KHz
Stereodecoder	:	I.C.

A.M. RADIO RECEIVER

Frequency range	:	AM 530 - 1610 KHz
Tuning	:	Variable condensor
Aerial	:	Internal ferrite rod aerial for AM.
Sensitivity	:	At the internal aerial for S/N -20 dB AM 600 μV/M

AMPLIFIER

Power output	:	5 W RMS music power at 1 KHz
Frequency response	:	40 KHz - 20 KHz ±6 dBs
Signal to noise Ratio	:	50 dB
Crosstalk	:	40 dB
Tone controls	:	Bass ±10 dB at 100 Treble +10 dB and -15 dBs at 10 KHz
Inputs	:	Microphone jacks/Aux socket
Outputs	:	4 x D.I.N. speaker socket 8 ohms impedance (2 x A system, 2 x B system) 1 x Headphone socket 1 x Aux socket

CASSETTE RECORDER

Type		
Number of tracks	:	4 tracks (2 x 2 stereo)
Function	:	Record, fast forward, rewind, play, stop, eject
Speed	:	4.75 cm/s = $1^7/8$ p/s
Wow and Flutter	:	0.3%
Record and playback		
Frequency response	:	80 Hz - 10 KHz

ALIGNMENT INSTRUCTIONS (I)

AM

Alignment on	Equipment	Connection	Step	Generator Freq.	Dial Setting	Adjustment	Adjust for
IF	• IF Sweep Gen. • Loop Ant.	FIG-1	1	455 KHz	Tuning Gang Closed	IT-6, IT-7 IT-8	Maximum Output
			2	Repeat step 1 until no further improvement can be made.			
Band	• AM Signal Gen. • Loop Ant. • AC V.T.V.M. • 8 Ohm Load	FIG-2	3	525 KHz	Tuning Gang Closed	AO-1	Maximum Output
			4	1650 KHz	Tuning Gang Open	CT-4	Maximum Output
			5	Repeat steps 3 and 4 until tuning range covers exactly from 525 KHz to 1640 KHz.			
Tracking	Same as Above	FIG-2	6	600 KHz	Tune to Signal	AL-1	Maximum Output
			7	1400 KHz	Tune to Signal	CT-3	Maximum Output
			8	Repeat steps 6 and 7 until no further improvement can be made.			

FM

Alignment on	Equipment	Connection	Step	Generator Freq.	Dial Setting	Adjustment	Adjust for
IFT	IF Sweep Gen.	FIG-3	1	10.7 MHz	Tuning Gang Closed	IT-1, IT-2 IT-3, IT-4	Maximum Output
Ratio Det	IF Sweep Gen.	FIG-3	2	10.7 MHz	Tuning Gang Closed	IT-4	Symmetrical figure of "S" curve on oscilloscope
			3	Repeat steps 1 and 2 until best "S" curve is obtained			
Band	• FM Signal Gen. • Dummy Ant. • AC V.T.V.M. • 8 Ohm Load	FIG-4	4	87.5 MHz	Tuning Gang Closed	FL-4	Maximum Output
			5	109 MHz	Tuning Gang Open	CT-2	Maximum Output
			6	Repeat steps 4 and 5 until range covers exactly from 87.5 MHz to 109 MHz.			
Tracking	Same as Above	FIG-4	7	90 MHz	Tune to Signal	FL-1, FL-2	Maximum Output
			8	106 MHz	Tune to Signal	CT-1	Maximum Output
			9	Repeat steps 7 and 8 until no further improvement can be made.			

ALIGNMENT INSTRUCTIONS (2)

FM STEREO

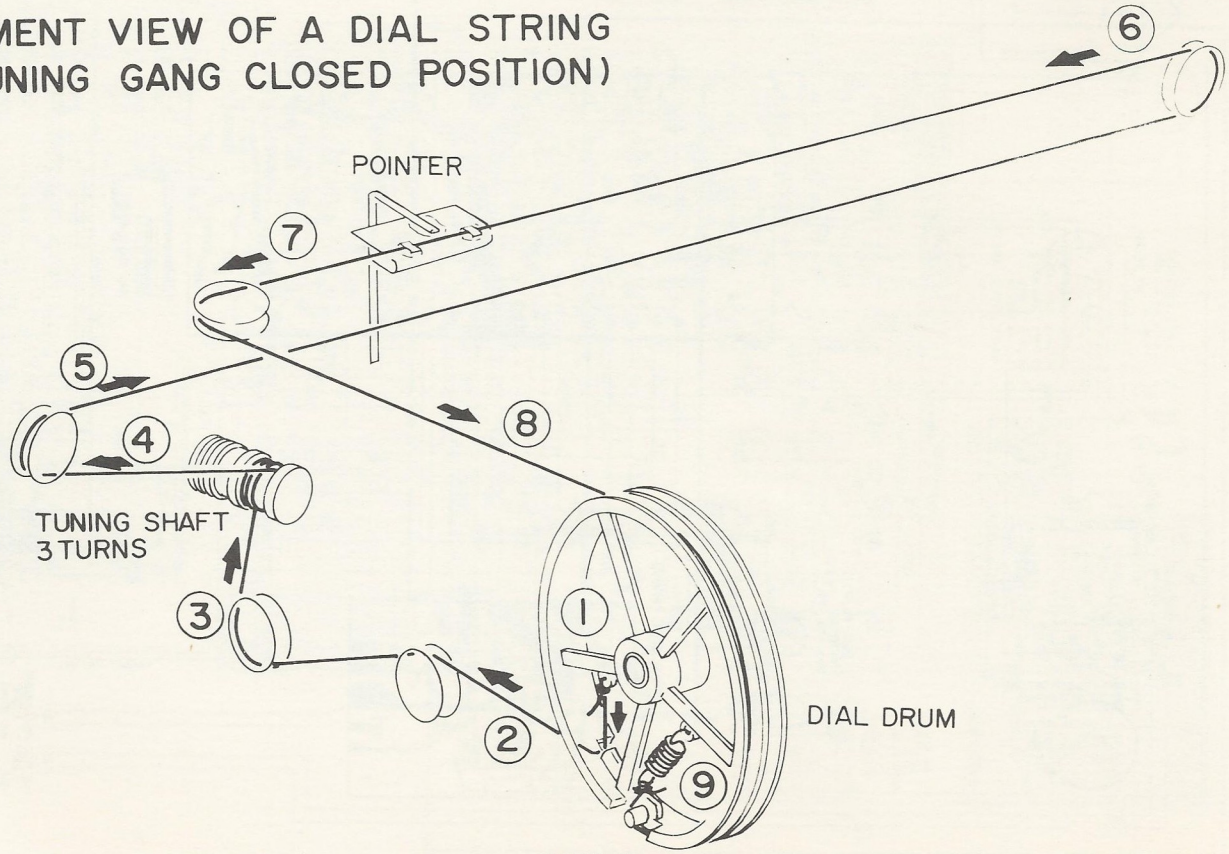
Alignment on	Equipment	Connection	Step	Generator Freq.	Dial Setting	Stereo Gen. Setting	Adjust-ment	Adjust for
19 KHz Pilot	• Stereo Signal Gen. • FM Sig. Gen. • Oscilloscope • Dummy Ant. • AC V.T.V.M.	FIG-5	1	98 MHz	Tune to Signal	Pilot on	MT-1	Maximum Output
Separation Right	Same as Above	FIG-6	2	98 MHz	Tune to Signal	Pilot on Left	MT-2	Minimum Output
Separation Left	Same as Above	FIG-6	3	98 MHz	Tune to Signal	Pilot on Right	MT-2	Minimum Output
			4	Repeat steps 2 and 3 to obtain best separation.				

Note Modulation 1000 Hz, Left or Right Channel Only
Main Carrier (L + R) : 20.25 KHz Dev. (30% Mod.)
Sub Carrier (L – R) : 20.25 KHz Dev. (30% Mod.)
19 KHz Pilot : 7.5 KHz Dev. (10% Mod.)

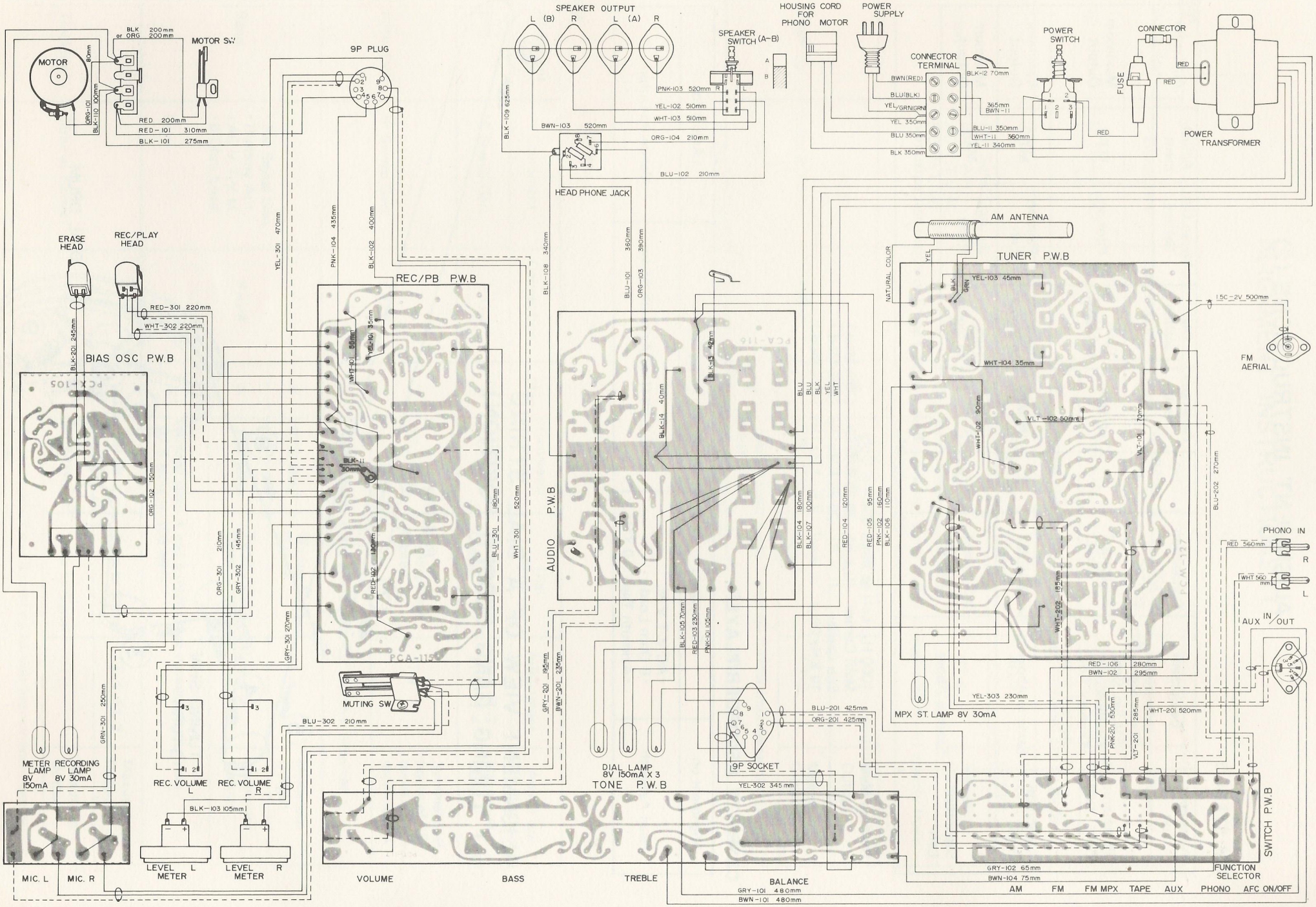
CASSETTE RECORDER/PLAYER

Alignment on	Equipment	Adjustment	Adjust for
Head Azimuth	• AC V.T.V.M. • 8 Ohm Load • Azimuth Tape 10 KHz	REC/PB Head Azimuth Screw	Maximum Output

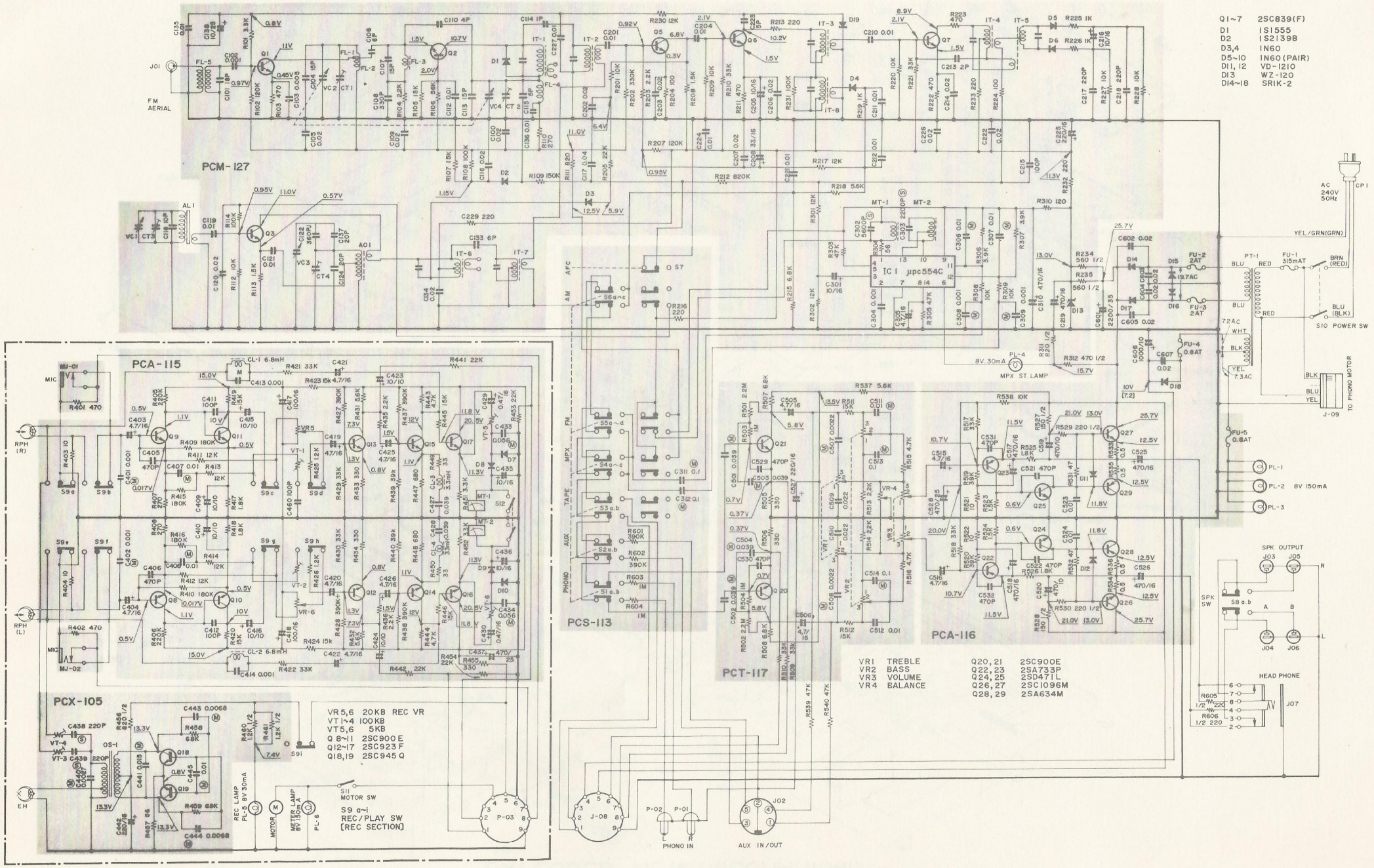
ALIGNMENT VIEW OF A DIAL STRING (AT TUNING GANG CLOSED POSITION)



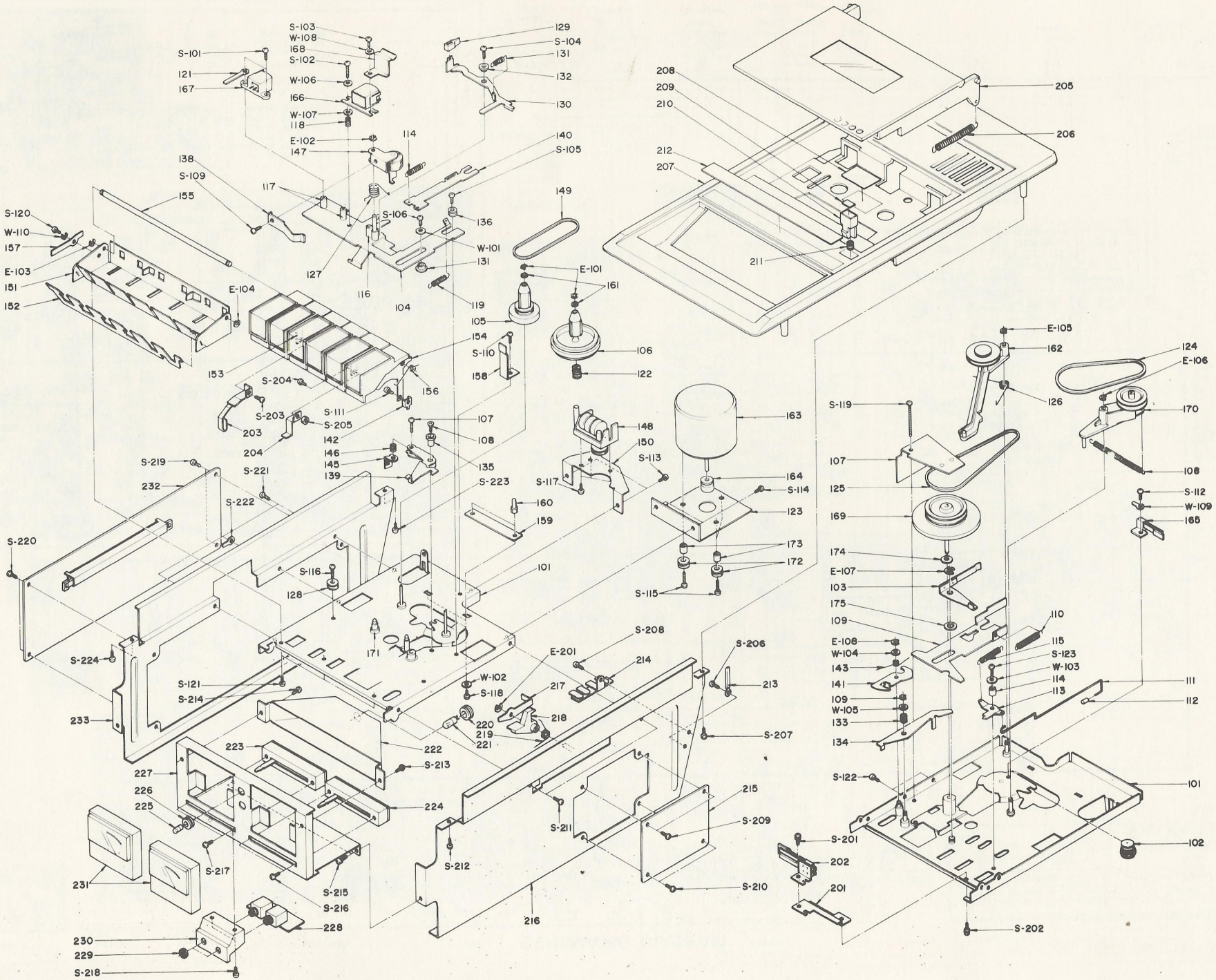
WIRING DIAGRAM



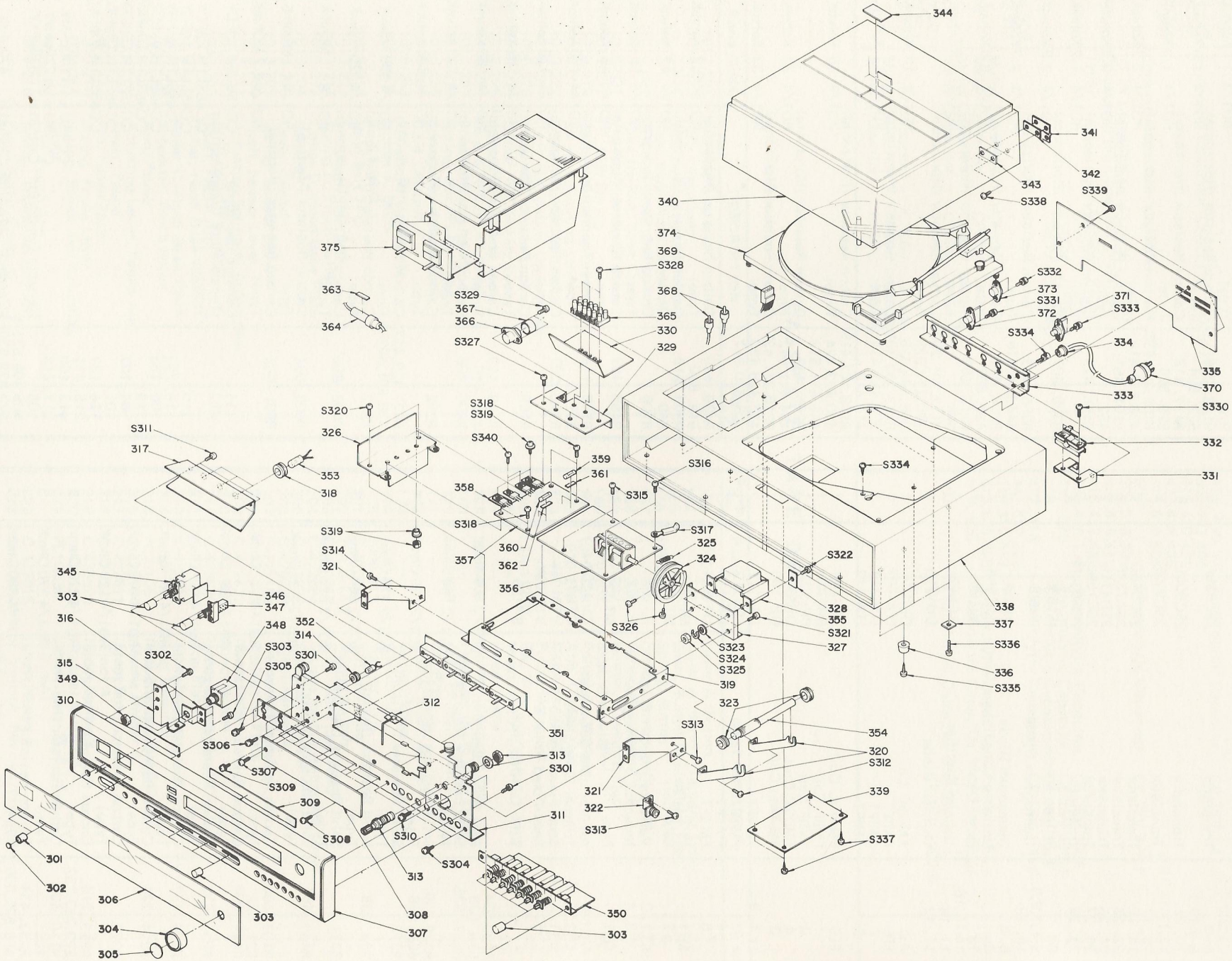
SCHEMATIC DIAGRAM



EXPLODED VIEW (MECHANISM)



EXPLODED VIEW (CABINET)



ELECTRICAL PARTS

SYMBOL No.	DESCRIPTION		Q'ty
IC	IC	uPC554C	1
Q1,2,3,4,5, 6, 7	Transistor	2SC839F	6
B 9,10,11, 20, 21	Transistor	2SC900E	6
12,13,14,15, 16, 17	Transistor	2SC923F	6
18, 19	Transistor	2SC945Q	2
22, 23	Transistor	2SA733P	2
24, 25	Transistor	2SD471L	2
26, 27	Transistor	2SC1096M	2
28, 29	Transistor	2SA634M	2
D1	Silicon Diode	IS1555	1
3,4,7,8,9, 10, 19	Germanium Diode	IN60	7
5, 6	Germanium Diode	IN60P	2
2	Variable Capacitance Diode	IS2139B	1
13	Zener Diode	WZ120	1
14,15,16, 17, 18	Silicon Rectifier	SR1KZ	5
11, 12	Varistor Diode	VD1210	2
AO	AMOSC Coil	OL-104	1
IT6	AMIFT	ITA-101	1
7	AMIFT	ITA-111	1
8	AMIFT	ITA-112	1
FL5	FM Ant. Coil	AH-102	1
1	FMRF Coil	RH-S01	1
2	FMRF Coil	RH-S02	1
4	FMDSC Coil	OH-S01	1
3	FM Trap Coil	QH-100	1
IT 1, 2	FM IFT	ITF-111	2
3	FM IFT	ITF-112	1
4	FM IFT	ITF-113	1
5	FM IFT	ITF-114	1
MT1	MPX Coil	MT-901	1
2	MPX Coil	MT-301	1
CL1, 2	Variable Inductor 6.8MH	IL-102	2
3, 4	Inductor 3.3mH, ±5%	IL-101	2
OS1	Bias OSC Coil	MT-573	1
VC1-4	Air-Variable Condenser	CVA202-1	1
CT2, 3, 4	Trimmer Condenser	CTI-01	3
VT1,2,3,4	Semi-Fixed Volume	VTB104Y	4
5, 6	Semi-Fixed Volume	VIB502Y	2
—	WIRE CONNECTOR	B-1.25	1
R533,534, 535, 536	Wire Wound Resistor	RM1/2 0,50hmK	4
R527, 528	Solid Resistor (Horizontal Type)	RC1/2 150 OhmK	2
R529,530, 605, 606	Solid Resistor (Horizontal Type)	RC1/2 220 OhmK	4
R312	Solid Resistor (Horizontal Type)	RC1/2 470 OhmK	1
234, 235	Solid Resistor (Horizontal Type)	RC1/2 560 OhmK	2
R311	Solid Resistor (Horizontal Type)	RC1/2 820 OhmK	2
R460, 461	Solid Resistor (Horizontal Type)	RC1/2 1.2KOhmK	2
R403, 404, 521, 522	Carbon Resistor (Horizontal Type)	RD1/4 10 OhmK	4
R449, 450	Carbon Resistor (Horizontal Type)	RD1/4 33 OhmK	2
R531, 532	Carbon Resistor (Horizontal Type)	RD1/4 47 OhmK	2
R304, 457	Carbon Resistor (Horizontal Type)	RD1/4 56 OhmK	2
R204, 224	Carbon Resistor (Horizontal Type)	RD1/4 100 OhmK	2
R310	Carbon Resistor (Horizontal Type)	RD1/4 120 OhmK	1
R213, 216, 229,233,232	Carbon Resistor (Horizontal Type)	RD1/4 220 OhmK	5
R110, 407 408	Carbon Resistor (Horizontal Type)	RD1/4 270 OhmK	3
R433, 434 455,505,506	Carbon Resistor (Horizontal Type)	RD1/4 330 OhmK	5
R103,211,222 223,401,402	Carbon Resistor (Horizontal Type)	RD1/4 470 OhmK	6
R447, 448	Carbon Resistor (Horizontal Type)	RD1/4 680 OhmK	2
R111	Carbon Resistor (Horizontal Type)	RD1/4 820 OhmK	1

SYMBOL No.	DESCRIPTION		Q'ty
R219, 225, 226	Carbon Resistor (Horizontal Type)	RD1/4 1 KohmK	3
R113, 208, 523, 524	Carbon Resistor (Horizontal Type)	RD1/4 1.5 KohmK	4
R417, 418 525, 526	Carbon Resistor (Horizontal Type)	RD1/4 1.8 KohmK	4
R104,203,435 436,513,514	Carbon Resistor (Horizontal Type)	RD1/4 2.2 KohmK	6
R101, 451, 452	Carbon Resistor (Horizontal Type)	RD1/4 3.3 KohmK	3
R425, 426	Carbon Resistor (Horizontal Type)	RD1/4 1.2 KohmK	2
R306, 307	Carbon Resistor (Horizontal Type)	RD1/4 3.9 KohmK	2
R305, 443 444,515,516	Carbon Resistor (Horizontal Type)	RD1/4 4.7 KohmK	5
R218, 431, 432, 597	Carbon Resistor (Horizontal Type)	RD1/4 5.6 KohmK	4
R215, 507 508	Carbon Resistor (Horizontal Type)	RD1/4 6.8 KohmK	3
R112,201,209 220,227,228, 308,309,538	Carbon Resistor (Horizontal Type)	RD1/4 10 KohmK	9
R217,230,301 302,413,414, 411,412	Carbon Resistor (Horizontal Type)	RD1/4 12 KohmK	8
R105,107,419 420,423,424, 445,511,512	Carbon Resistor (Horizontal Type)	RD1/4 15 KohmK	10
R205, 453, 454,441,442	Carbon Resistor (Horizontal Type)	RD1/4 22 KohmK	5
R210,221,421 422,429,430, 509,510,517, 518	Carbon Resistor (Horizontal Type)	RD1/4 33 KohmK	10
R439, 440, 519, 520	Carbon Resistor (Horizontal Type)	RD1/4 39 KohmK	4
R303, 519, 540	Carbon Resistor (Horizontal Type)	RD1/4 47 KohmK	3
R106	Carbon Resistor (Horizontal Type	RD1/4 56 KohmK	1
R458, 459	Carbon Resistor (Horizontal Type)	RD1/4 68 KohmK	2
R108, 114, 231	Carbon Resistor (Horizontal Type)	RD1/4 100 KohmK	3
R102, 207	Carbon Resistor (Horizontal Type)	RD1/4 120 KohmK	2
R109	Carbon Resistor (Horizontal Type)	RD1/4 150 KohmK	1
R409, 410, 415, 416	Carbon Resistor (Horizontal Type)	RD1/4 180 KohmK	4
R405, 406	Carbon Resistor (Horizontal Type)	RD1/4 220 KohmK	2
R202	Carbon Resistor (Horizontal Type)	RD1/4 330 KohmK	1
R427,428,437 438,601,602	Carbon Resistor (Horizontal Type)	RD1/4 390 KohmK	6
R212	Carbon Resistor (Horizontal Type)	RD1/4 820 KohmK	1
R603, 604	Carbon Resistor (Horizontal Type)	RD1/4 1 MohmK	2
R503, 504	Carbon Resistor (Vertical Type)	RD1/4 1 MOhmK	2
R501, 502	Carbon Resistor (Vertical Type)	RD1/4 2.2 MOhmK	2
C114	Ceramic Capacitor	CC45SL1H 1pFCY	1
213	(Temperature Compensating Type)	CC45SL1H 2pFCY	1
110	,, ,,	CC45SL1H 4pFCY	1
115, 223	,, ,,	CC45SL1H 5pFDY	2
106, 133	,, ,,	CC45SL1H 6pFDY	2
118	,, ,,	CC45SL1H 10pFKY	1
104, 107	,, ,,	CC45SL1H 15pFKY	2
101	,, ,,	CC45SL1H 18pFKY	1
124, 137	,, ,,	CC45SL1H 20pFKY	2
215, 411, 412, 460	,, ,,	CC45U x 1H 100pFMY	4
217, 218	,, ,,	CC45U x 1H 220pFMY	2
108	Ceramic Capacitor	CK45B1H 330pFKY	1
405,406,521 522,529,530 531,532	Ceramic Capacitor	CK45B1H 470pFKX	8
102	Ceramic Capacitor	CK45B1H .001uFKY	1
103	Ceramic Capacitor	CK45B1H .005uFKY	1

SYMBOL No.	DESCRIPTION	Q'ty
112,119,121 135,201,204 210,211,212 221,224,227	Ceramic Capacitor CK45F1H .01uFPZ	13
100,105,109 116,120,134 202,203,206 207,214,222 226,602,603 604,605,607	Ceramic Capacitor CK45F1H .02uFPZ	18
117	Ceramic Capacitor CK45F1H .04uFPZ	1
113	MICA Capacitor CU50V 15pFK	1
438, 439	Polystyre Film Capacitor (Vertical Type) CS50V 220pFJ	2
122	,, ,, CS50V 360pFJ	1
303	,, ,, CS50V 2200pFJ	1
302	,, ,, CS50V 5600pFJ	1
304,308,309 401,402,413 414	Myler Capacitor CP50V .001uFK	7
507, 508	Myler Capacitor CP50V .002uFK	2
440	Myler Capacitor CP50V .0027uFK	1
443, 444	Myler Capacitor CP50V .0068uFK	2
306,307,407 408,445,511 512,523,524	Myler Capacitor CP50V .01uFK	9
441	Myler Capacitor CP50V .015uFK	1
509, 510	Myler Capacitor CP50V .022uFK	2

SYMBOL No.	DESCRIPTION	Q'ty.
427,428,501 502,503,504	Myler Capacitor CP50V .039uFK	6
433, 434	Myler Capacitor CP50V .056uFK	2
312,311, 513,514	Myler Capacitor CP50V .1 uFK	4
429, 430	Electrolytic Capacitor CE 25VO.47uF	2
305,403,404 419,420,421 422,425,426 515,516,505 506	Electrolytic Capacitor CE 25V 4.7uF	13
205,216,301 409,410,415 416,423,424 435,436,138	Electrolytic Capacitor CE 25V 10uF	12
437, 528	Electrolytic Capacitor CE 25V 470uF	2
208	Electrolytic Capacitor CE 16V 33uF	1
417, 418	Electrolytic Capacitor CE 16V 100uF	2
442,527,225 219,310,517 518,525,526	Electrolytic Capacitor CE 16V 470uF	6
519, 520	Electrolytic Capacitor CE 10V 470uF	2
606	Electrolytic Capacitor (Horizontal Type) CE 10V 1000uF	1

CASSETTE TAPE DECK

Symb. No.	Parts Code	DESCRIPTION	Q'ty
101	1012-201	Chassis Ass'ty	1
102	1010-023	FWD Idler Comp.	1
103	-025	RWD Actuating Lever Comp.	1
104	1013-	Head Base Plate Comp. H	1
105	1010-029	REW Reel Base Comp.	1
106	1013-	Take Up Reel Base Comp.	1
107	1010-031	Flywheel Holder D Comp.	1
108	1010-217	FF. REW Spring	1
109	1010-218	Switch Actuating Lever	1
110	1010-219	Spring Actuating Lever	1
111	1010-222	Spoke, Rec Safety Lock	1
112	1010-254	CAP, REC Safety Lock Spoke	1
113	1010-223	Plate, REC Safety Lock	1
114	1010-224	Collar, REC Safety Lock	1
115	1010-225	Spring, REC Safety Lock	1
116	1010-227	Stud A REC/PLAY Head	1
117	1010-227	Stud F REC/PLAY Head	2
118	1010-233	Spring, REC/PLAY Head	1
119	1010-235	Spring, Head Base Plate	1
121	1010-261	Cord Clamper E	1
122	1010-263	Spring, Back Tension	1
123	1010-031	Holder F, Motor	1
124	—	Belt S 53 ϕ	1
125	1010-318	Main Belt 74 ϕ	1
126	1013-223	Spring, Clutch Arm	1
127	1013-212	Spring D, Pinch Roller	1
128	1010-272	Collar D, Head Base Plate	1
129	1013-204	Sensing	1
130	1013-205	Lever, Sensor	1
131	1013-209	Spring, Sensor Lever	1
132	1013-206	Shaft, Sensor Lever	1
133	1013-211	Actuating Spring B, Auto Lever	1
134	1012-213	Auto Actuating Lever	1
135	1040-203	Shaft, Pause Arm	1
136	—	Collar, Head Base Plate	1
137	1012-209	Collar C, Head Base Plate	1
138	970-208	Supporter, Pinch Roller	1
139	•970-209	Arm, Pause	1
140	970-210	Actuating Lever, Pause Arm	1
141	970-211	Lever, Pause	1
142	970-212	Pin, Pause Lever	1
143	970-213	Spring, Pause Lever	1
144	970-214	Spring, Pause Arm Actuating Lever	1
145	970-215	Sub, Pause Arm	1
146	970-216	Spring, Timing Adjustment	1
147	—	Pinch Roller Comp. G	1
148	—	Tape Counter	1
149	5210-210	Belt, Tape Counter 42.4 ϕ	1
150	5210-405	Holder C, Tape Counter	1
151	1040-204	Case, Push Button (6 Sirieses Type)	1
152	1040-217	Plate, Push Lock	1

Symb. No.	Parts Code	DESCRIPTION	Q'ty
153	1010-241	Lever A, Button	5
154	-241	Lever A, Button (Tapping Type)	1
155	—	Shaft, Button (6 Sirieses Type)	1
156	1010-242	Spring, Button	6
157	-245	Spring, Button Lock plate	1
158	-302	Spring, Cassette Pack	1
159	5210-202	Holder, Cassette Stud	1
160	5210-203	Stud, Cassette	2
161	1010-329	Polyslider Washer	2
162	970-218	Arm, Clutch Comp.	1
163	—	Motor Mot-073L	1*
164	—	Pully, Motor	(1)*
165	LSA-1127C	Sw, Motor	1*
166	—	Head, REC/PLAY	1*
167	—	Head, Erase	1*
168	5210-408	Holder, Cassette Pack	1
169	—	Flywheel (Auto Stop Type)	1
170	1010-039	Arm, FF RWD Shaft Comp.	1
171	—	STOPPER	1
172	—	Rubber Bush, Motor	3
173	—	Collar, Motor	3
174	200-270	Washer -J	1
175	2000-319	Washer -G	1
201	C-422683	Switch Holder	1
202	2SA-3-14-2	Muting Switch	1*
203	C-422613	REC. Sub Plate Assy	1
204	C-422684	Muting Switch Actuating Lever	1
205	C-331232	Cassette Case B	1
206	C-425628	Eject-Spring A	1
207	C-221162	Cassette Case A	1
208	C-432719	Reflection Plate	1
209	C-432622	Eject Plate	1
210	C-431620	Eject Button	1
211	C-425630	Eject Spring C	1
212	C-432623	Top Plate	1
213	C-421619	Cord Stopper	1
214	IL-3P	Lug Terminal	1*
215	PCX-105	P.W.B. Assy (BIAS OSC)	1*
216	C-222160	Mecha Holder R	1
217	C-422611	Eject B	1
218	C-321231	Eject A	1
219	C-425629	Eject Spring B	1
220	C-421132	Rubber Bush 5ϕ	1
221	PL10A30	Meter Lamp PL-6 (10 ϕ, 8 V, 150 mA)	1*
222	C-422615	Lamp House B	1
223	SV-203B03P4	Volume, Rec. Level Control VR-5	1*
224	SV-203B03P4	Volume, Rec. Level Control VR-6	1*
225	PL5C30	Rec. Indication Lamp PL-5 (5 ϕ, 8 V, 30 mA)	1*
226	C-421132	Rubber Bush 5 ϕ	1

*Electrical Parts

Symb. No.	Parts Code	DESCRIPTION	Q'ty
227	C-322228	Meter Chassis	1
228	—	P.W.B. Assy with Mic Jack (MJ-002) MJ-1, MJ-2.	1*
229	—	NUT (Mic Jack)	(2)*
230	C-421618	Mic. Jack Holder	1

Symb. No.	Parts Code	DESCRIPTION	Q'ty
231	MTU-109	Level Meter	2*
232	PCA-115	P.W.B. Assy with Push switch (SP10C2PSO) S-9	1*
233	C-222161	Mecha. Holder L	1

*Electrical Parts

Symbol No.	Description	Q'ty
S-101	Pan Head Screw M2 x 12 ⊕	2
102	Pan Head Screw M2 x 12 ⊕	1
103	Pan Head Screw M2 x 12 ⊕	1
104	Flat Head Screw M2 x 5 ⊕	1
105	Pan Head Tapping Screw (Type-3) M2.6 x 10 ⊕	1
106	Pan Head Tapping Screw M3 x 8 ⊕	1
107	Pan Head Screw M2 x 10 ⊕	1
108	Flat Head Tapping Screw (Type-3) M2.6 x 10 ⊕	1
109	Pan Head Screw M2.6 x 4 ⊕	1
110	Pan Head Tapping Screw (Type-3) M2.6 x 6 ⊕	1
111	Pan Head Screw M2 x 3 ⊕	1
112	Pan Head Screw M2 x 5 ⊕	1
113	Pan Head Tapping Screw (Type-3) M3 x 6 ⊕	2
114	Pan Head Tapping Screw M3 x 6 ⊕	2
115	Truss Head Screw M2.6 x 8 ⊕	3
116	Pan Head Tapping Screw (Type-3) M2.6 x 8 ⊕	1
117	Pan Head Screw M3 x 5 ⊕	3
118	Pan Head Screw M2.6 x 6 ⊕	2
119	Pan Head Screw M3 x 30 ⊕	1
120	Pan Head Tapping Screw (Type-3) M2.6 x 6 ⊕	1
121	Pan Head Screw M2.6 x 6 ⊕	3
122	Pan Head Screw M3 x 5 ⊕	2
123	Pan Head Tapping Screw (Type-3) M2.6 x 6 ⊕	1
E-101	E- Ring (BLACK) 1.2 ϕ	2
102	E- Ring 2 ϕ	1
103	E- Ring 3.2 ϕ	1
104	E- Ring 3.2 ϕ	1
105	E- Ring 2.3 ϕ	1
106	E- Ring 2.3 ϕ	1
107	E- Ring 4 ϕ	1
108	E- Ring 2.3 ϕ	1
109	E- Ring 2.3 ϕ	1
W-101	Flat Washer M3	1
102	Flat Washer M2.6	2
103	Flat Washer M2.6	1
104	Flat Washer M3	1
105	Flat Washer M3	1
106	Flat Washer M2	1
107	Flat Washer M2	1
108	Flat Washer M2	1
109	Lug Plate M2.6	1
110	Spring Washer M2.6	1

Symbol No.	Description	Q'ty
S-201	Pan Head Screw (with M2.6 Spring Washer) M2.6 x 5 ⊕	Each 1
202	Pan Head Screw (with M3 Spring Washer) M3 x 6 ⊕	Each 1
203	Pan Head Screw M2 x 5 ⊕	1
204	Pan Head Screw M2 x 5 ⊕	1
205	Nut M2	1
206	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	1
207	Round Head Tapping Screw (Type-2) M3 x 8 ⊕	1
208	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	1
209	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
210	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
211	Pan Head Tapping Screw (Type-3) M3 x 6 ⊕	2
212	Round Head Tapping Screw (Type-2) M3 x 8 ⊕	1
213	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	1
214	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	1
215	Pan Head Screw with M3 Spring Washer M3 x 6 ⊕	Each 2
216	Pan Head Screw M2.6 x 5 ⊕	2
217	Pan Head Screw M2.6 x 5 ⊕	2
218	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
219	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
220	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
221	Pan Head Tapping Screw (Type-3) M3 x 6 ⊕	3
222	Lug - Plate M3	1
223	Round Head Tapping Screw (Type-2) M3 x 8 ⊕	1
224	Round Head Tapping Screw (Type-2) M3 x 8 ⊕	1
E-201	E- Ring 2.5 ϕ	1

Symb. No.	Description	Q'ty
S-301	Round Head Tapping Screw (Type-2) M3 x 8 ⊕	5
2	Round Head Tapping Screw (Type-2) M3 x 8 ⊕	3
3	Round Head Tapping Screw M3 x 8 ⊕	2
4	Pan Head Screw with Spr. Washer M3 x 6 ⊕	Each 2
5	Pan Head Screw with Spr. Washer M3 x 6 ⊕	2
6	Pan Head Screw with Spr. Washer M3 x 6 ⊕	2
7	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	1
8	Pan Head Screw M2.6 x 5 ⊕	8
9	Pan Head Screw with Spring Washer M3 x 6 ⊕	Each 2
310	Pan Head Screw with Spring Washer M3 x 6 ⊕	Each 2
11	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
12	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
13	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	1
14	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
15	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
16	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
17	Cord Clamper M3	1
18	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	4

Symb. No.	Description	Q'ty
19	Pan Head Screw with Flat Washer and Attachment Washer M3 x 10 ⊕	Each 2
320	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
21	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
22	Binding Head Screw M4 x 10 ⊕	2
23	Flat Washer M4	2
24	Spr. Washer M4	2
25	Nut M4 Nut	2
26	Pan Head Screw M3 x 6 ⊕	2
27	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	4
28	Round Head Tapping Screw (Type-2) M3 x 15 ⊕	3
29	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2
330	Pan Head Screw M3 x 10 ⊕	2
31	Pan Head Screw with Spring Washer M3 x 6 ⊕	Each 2
32	Pan Head Screw with Spring Washer M3 x 6 ⊕	2
33	Pan Head Screw with Spring Washer M3 x 6 ⊕	2
34	Wood Screw M3.1 x 13 ⊕	1
35	Wood Screw M3.1 x 9 ⊕	4
36	Binding Head Screw M4 x 15 ⊕	13
37	Wood Screw M3.1 x 13 ⊕	4
38	Binding Head Screw M4 x 12 ⊕	4
39	Wood Screw M3.1 x 13 ⊕	4
340	Round Head Tapping Screw (Type-2) M3 x 6 ⊕	2

CABINET

Symb. No.	Parts Code	Description	Q'ty
301	C-431682	Slide Knob	2
302	C-432328	Decoration plate for slide knob (BLACK)	2
3	C-431430	Push Knob (A) with CAP (C-433431)	13
4	C-431568	Tuning Knob	1
5	C-432570	Decoration plate for Tuning Knob	1
6	C-134076	Front Plate	1
7	C-131074	Front Panel	1
		with Escutcheon (C-132077)	1
		and End Cap (C-432621)	2
8	C-334254-1	Dial Plate	1
9	C-422624	VR MASK A	1
310	C-422625	VR MASK B	1
311	C-222159	Front Chassis	1
12	C-435617	Tuning Pointer	1
13	C-423526	Tuning Shaft Assy (with Nut)	1
14	C-421132	Rubber Bush (5 ϕ)	1
15	C-422616	L-Type sub chassis	1
16	C-422607	HP Jack holder	1
17	C-322229	Lamp House - A	1
18	C-421131	Rubber Bush (10 ϕ)	3
19	C-222094	Main chassis	1
320	C-422315	Antenna Holder	2
21	C-422610	Frame	2
22	C-422612	Pulley Holder	1
23	C-421131	Rubber Bush (10 ϕ)	2
24	C-321072	Dial Drum	1
25	C-425044	Dial Spring	1
26	C-322233	Radiation Plate	1
27	C-422360	Transformer Holder	1
28	C-422074	Transformer Washer	2
29	C-422609	Terminal Sub Chassis	1
330	C-412709	Insulator (Fiber plate)	1
31	C-422608	Cord Stopper Holder	1
32	C-421619	Cord Stopper	1
33	C-3222230	Terminal Plate	1
34	—	Snap Bush (HEYCO SB-437-5)	1
35	C-232176	Rear Board	1
36	—	Rubber Cushion	4
37	C-422142	Washer (15 x 15 mm)	13
38	C-135091	Cabinet	1
39	C-422631	Mesh Board	1
340	—	Dust Cover	1
41	—	Hinge (SHS-F)	2

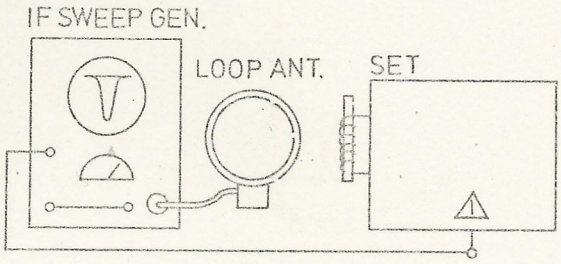
Symb. No.	Parts Code	Description	Q'ty
42	C-422710	Hinge Spacer	2
43	—	Hinge Sub Plate	2
44	C-432711	Dust Cover Plate	1
45	SP2C2PS-5	Power Switch (S10)	1*
46	XP-101	Switch Sub Plate	1
47	SP2C2PS	Speaker Switch (S8)	1*
48	HPJ-001	Headphone Jack (J07)	1*
49	—	Nut - Headphone Jack	(1)*
350	PCS-113	P.W.B. Assy (Function selector) with Push Switch (SP4C7PS-5) S1-S7	1*
51	PCT-117	P.W.B. Assy (Tone) with Slide VR (SV104AA3P2) VR1-3, (SV104WO3P4)	1*
52	PL5C30	ST. Indication Lamp PL-4 (5 ϕ, 8 V, 30 mA)	1*
53	PL10A30	Dial Lamp PL-1-3 (10 ϕ, 8 V, 150 mA)	3*
54	FL-401	AM Antenna Coil (AL-1)	1*
55	PT-6602A	Power Transformer (PT-1)	1*
56	PCM-127	P.W.B. Assy (Tuner)	1*
57	PCA-116	P.W.B. Assy (Audio)	1*
58	—	Micaceous Plate	(2)*
59	—	Fuse FU-4, FU-5 (800 mAT)	2*
360	—	Fuse FU-2, FU-3 (2 AT)	2*
61	C-445687	Fuse Label (800 mAT)	2
62	C-445687	Fuse Label (2 AT)	2
63	C-445687	Fuse Label (315 mAT)	1
64	HFU-001	Midget Fuse Holder with Fuse FU-1 (315 mAT)	1*
65	—	Power Terminal (2P-6S)	1*
66	—	Socket J-08 (MT-9P)	1*
67	—	Plug P-03 (MT-9P)	1*
68	—	Pin Plug	2*
69	—	Housing Connector	1*
370	PW-1	Power Cord (SAA-Safety)	1*
71	CS-220	2P DIN Jack J-03-06	4*
72	L-603	Antenna Socket J-01	1*
73	CS-250	5P DIN Jack J-02	1*
74	C141R1	Changer (BSR)	1*
375	—	Cassette Tape DECK Assy	1

*Electrical Parts

EQUIPMENT CONNECTIONS

Fig.1

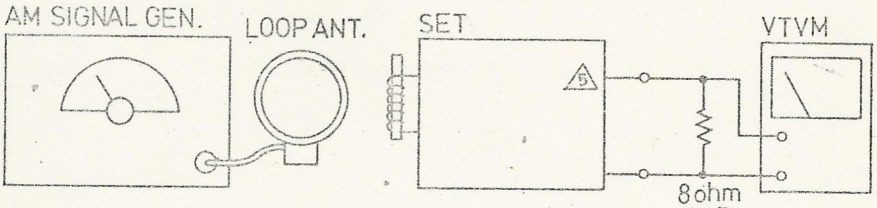
AM IF



1 CLOSED POINT BY C212 AND R219

Fig.2

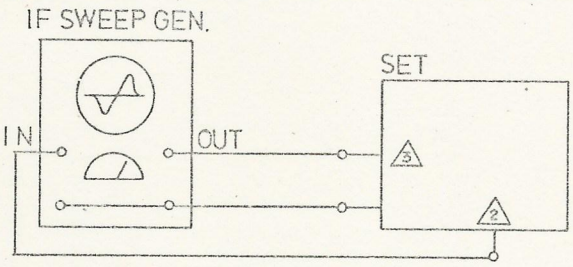
AM BAND TRACKING



5 SPK. OUT PUT

Fig.3

FM IF RATIO DET.

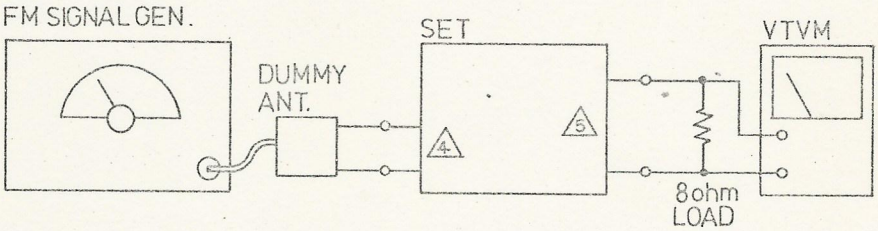


2 CLOSED POINT BY C215 AND R224

3 CLOSED POINT BY C107 AND C108

Fig. 4

FM BAND TRACKING

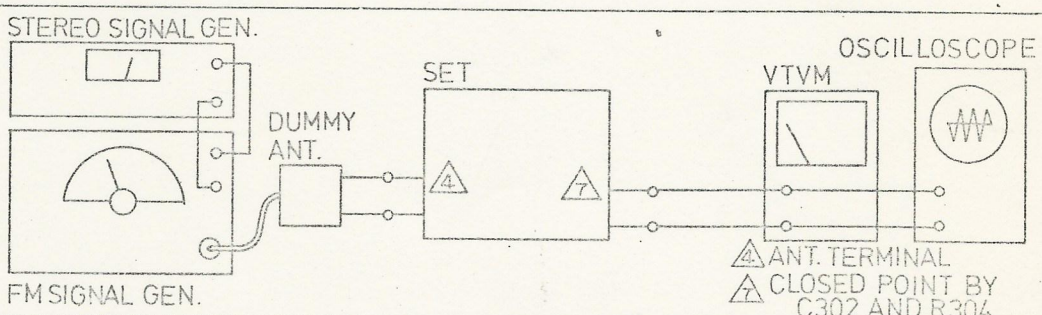


4 ANT. TERMINAL

5 SPK. OUTPUT

Fig. 5

19 KHz PILOT

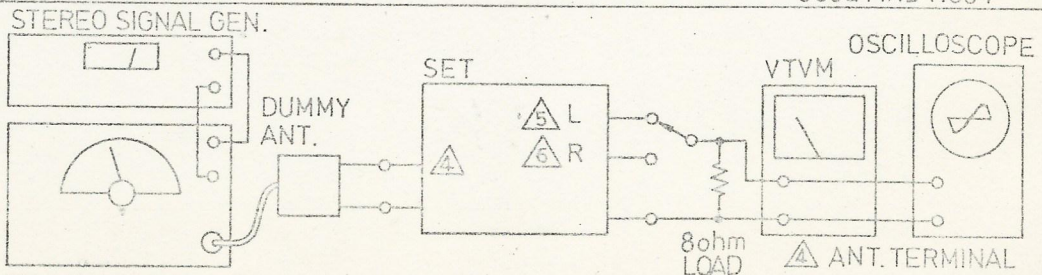


4 ANT. TERMINAL

7 CLOSED POINT BY C302 AND R304

Fig. 6

SEPARATION



4 ANT. TERMINAL

5 6 SPK. OUTPUT