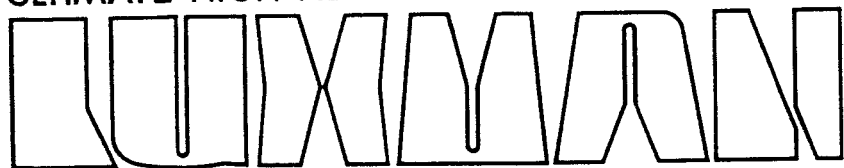


ULTIMATE HIGH FIDELITY STEREO COMPONENTS



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**R-1030/1035**

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**SERVICE MANUAL**

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ALIGNMENT PROCEDURE

Step	Signal Source Connected to	Set Signal to	Set Radio Dial to	Output Indicator Connected to	Adjust	Adjust for
1	Set selector switch to MW and the mains power switch to off					
2	Press Power switch to on.					
3				DCVTVM IF PCB13	check	13-14 DCVTVM reading
4	Output of sweep generator to IF PCB 15 and ground	+ 40kHz sweep centered at 455kHz generator output level 40dB - 50dB	Quiet point on band near 1600kHz	Oscilloscope IF PCB terminal 17	L110 & L111	Maximum symmetrical response.
5	Standard radiating loop antenna placed near AM built-in antenna	600kHz at 400Hz, 30% modulation field strength 50dB/m-80dB/m	600kHz	Oscilloscope ACVTVM Output terminal	L109 core	Dial pointer to be tuned at 600kHz
6		1400kHz at 400Hz, 30% modulation field strength 50dB/m-80dB/m	1400kHz		Bar Ant. Coil L1	Maximum ACVTVM reading - Slide coil bobbin.
7					Second Tc	Dial pointer to be tuned at 1400kHz.
8					First Tc	Maximum ACVTVM reading
9	Repeat steps 5 - 8 as necessary to obtain maximum sensitivity and exact point on dial scale.					
10	Fix by adhesive agent the core and bobbin aligned at step 5.					
11	Standard radiating loop antenna placed near AM built-in antenna.	1000kHz at 400Hz, 30% modulation field strength 126dB/m	1000kHz		HR102	Set pointer of signal strength meter to 80% of full scale.
12		600kHz at 400Hz, 30% modulation	600kHz	Oscilloscope ACVTVM Distortion Meter Output Terminal		IHF maximum usable sensitivity which is equivalent electric field strength at the loopstick antenna adjusted by at attenuator of AMSC so that noise and distortion can be -20dB of total output.
13		1400kHz at 400Hz, 30% modulation	1400kHz			
14	Set the function at FM Auto position and the muting switch at "OFF".					
15	Connect 27 and 28 on IF PCB.					
16	FM signal generator Across FM antenna terminals (300-ohm) through matching network.	Reduce the output level to zero. (interstation receiving condition)	Quiet point on band near 98MHz		L107 bottom core	Center indication of the tuning meter.

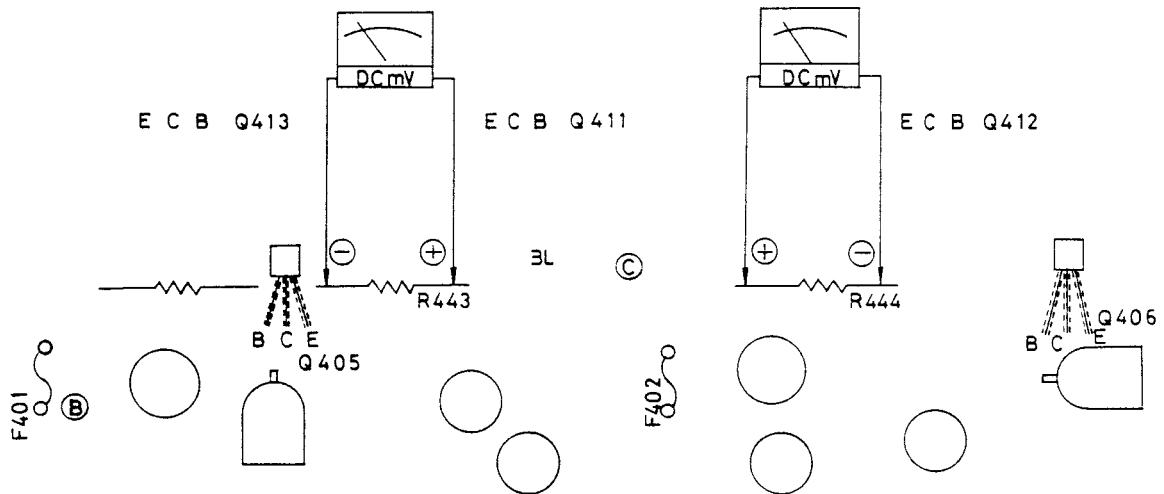
Step	Signal Source Connected to	Set Signal to	Set Radio Dial	Output Indicator Connected to	Adjust	Adjust for
17	FM signal generator Across FM antenna terminals (300-ohm) through matching network	98MHz at 400Hz, 100% modulation output level 1mV	Correct reception of 98MHz signals from FM SG at the center of tuning meter.	Oscilloscope Distortion meter ACVTVM Output terminals	L107 top core	Minimum distortion
18	Repeat steps 17, 18 so as to get distortion of less than 0.1 - 0.2%.					
19	FM signal generator Across FM antenna terminals (300-ohm) through matching network.	108MHz, at 400Hz, 100% modulation, generator output level 1.5-2uV	108MHz	Oscilloscope Distortion Meter ACVTVM Output terminals	First Tc Second Tc	Maximum output level (Hands Off: 3rd Tc)
20		98MHz at 400Hz, 100% modulation, generator output level 1.5-2uV	98MHz		IF core	Maximum output level.
21	Remove wiring at step 15.					
22	FM signal generator Across AM antenna terminals through 300-ohm matching network.	98MHz no modulation generator output level 1mV.	98MHz	Frequency Counter IF PCB TP-2	HR103	Adjust the frequency of P.L.L. VCO at 19kHz.
23		98MHz at 19kHz, 10% (Lch) 400Hz 90%	98MHz	15kHz L.P.F. ACVTVM Output terminals	HR104	Rch output level to minimum.
		98MHz at 19kHz, 10% (Rch) 400Hz 90%				Lch output level to minimum.

R-1035 Alignment Procedure

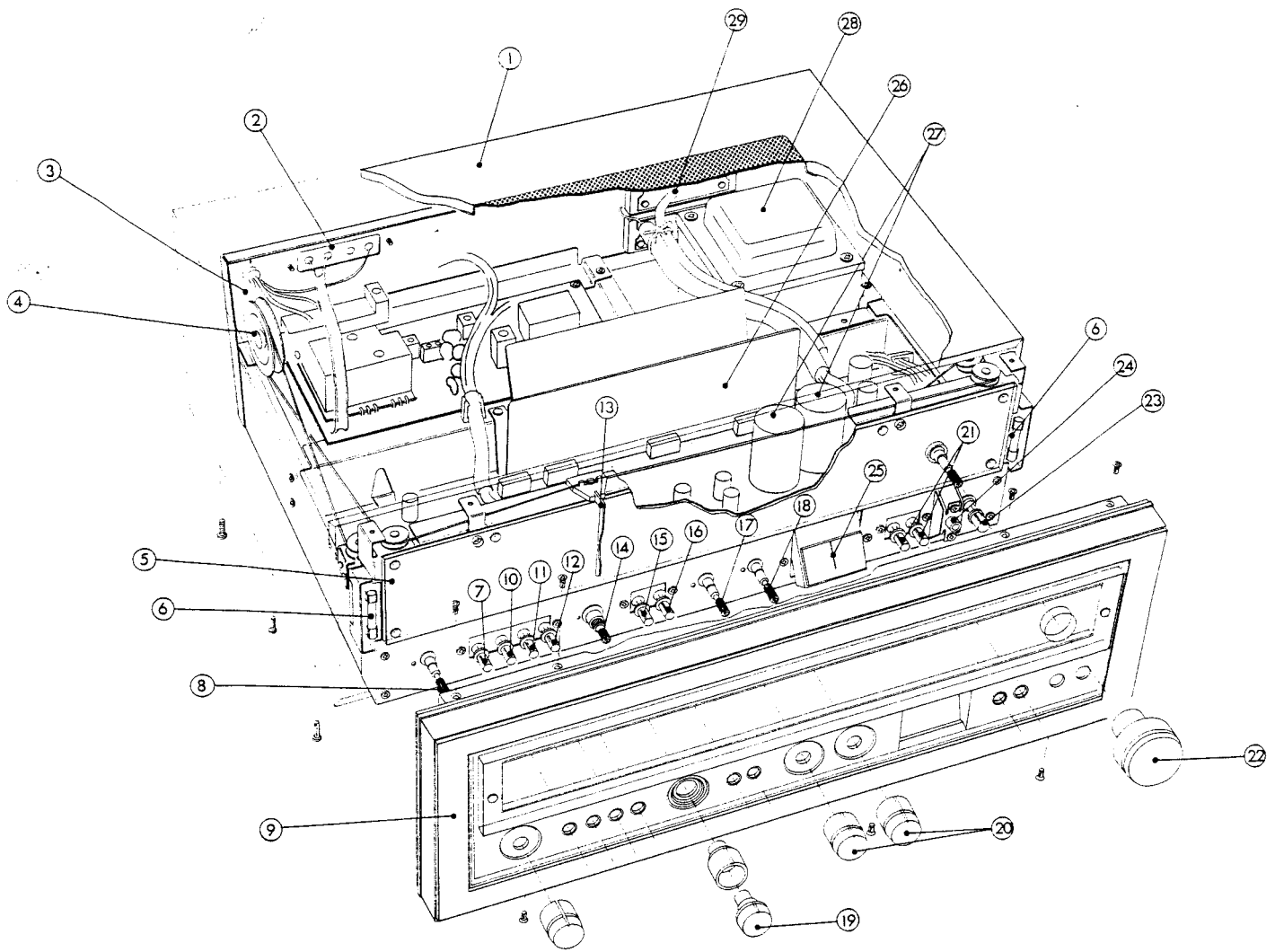
1	Set selector switch to MW and the mains power switch to off.								
2	Press power switch for on.								
3					DCVTVM IF PCB 13		check		13-14 DCVTVM reading.
4	Output of sweep generator to 215-100080 4 and ground	+40kHz sweep centered at 455kHz generator output level 40dB-50dB	Quiet point on band near 1600kHz		Oscilloscope IF PCB terminal 17		L110 & L111		Maximum symmetrical response.
5	Standard radiating loop antenna placed near AM built-in antenna		LW:180kHz MW:600kHz		Oscilloscope ACVTVM output terminal		LW:T902 core MW:T901 core		Dial pointer to be tuned at LW:180kHz, MW:600kHz
6							Bar antenna coil L1		Maximum ACVTVM reading- Slide coil bobbin
7	Standard radiating loop antenna placed near AM built-in antenna		LW:320kHz MW:1400kHz				LW:TC904 MW:TC903		Dial pointer to be tuned at LW:320kHz, MW:1400kHz
8							LW:TC901 MW:TC902		Maximum ACVTVM reading- slide coil bobbin
9	Repeat steps 5 - 8 as necessary to obtain maximum sensitivity and exact tuning point on dial scale.								
10	Fix by adhesive agent the coil and bobbin aligned at step 5.								
11	Proceed to the same alignment step 14 - 23 described in the R-1030 Alignment Procedure.								

IDLE ADJUSTMENT

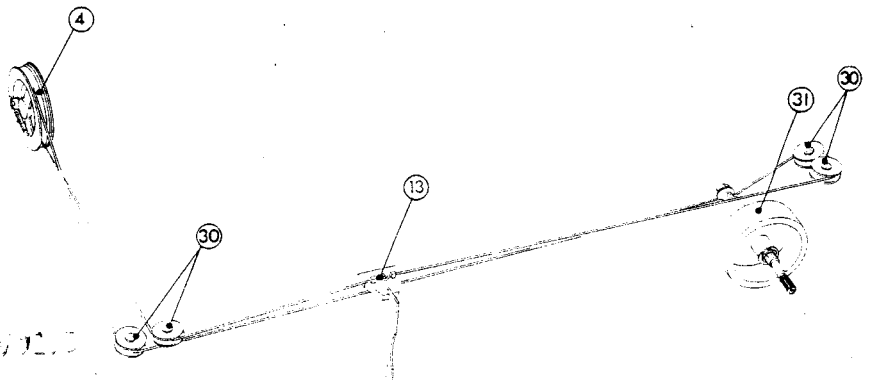
215-120020



Prior to adjustment of the Idle Current, check the DC offset voltage is within  $\pm 50\text{mV}$ . (The R-1030 and the R-1035 is free from the DC offset adjustment.) Connect DC millivoltmeter across R443 (0.33 ohms for the LEFT channel) and R444 (0.33 ohms for the RIGHT channel) on printed circuit board 215-120020 respectively, then adjust R435 (Lch) and R436(Rch) to obtain 6.5mV reading on the meter.



1. Wood Case
2. ANT. Terminal
3. Rear Panel
4. Dial Drum
5. Dial Scale Ass'y
6. Dial Lamp
7. Monitor Switch
8. Function Switch *SP00107*
9. Front Panel
10. Mode Switch
11. Low Cut Filter
12. High Cut Filter
13. Dial Pointer
14. Main Volume
15. Loudness Switch
16. FM Muting Off Sw.
17. Bass Control
18. Treble Control
19. Main Volume Knob set
20. Tone Control Knob
21. Speaker Switch
22. Tuning Knob
23. Power Switch *SP0090*
24. Headphone Jack
25. AM/EM Tuning Meter
26. Heat Sink
27. Electrolytic Capacitor
28. Power Transformer
29. Speaker Terminal
30. Plastic Pulley
31. Flywheel



PARTS LIST

PB-215-110020

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R114	100	Z2	R139	3.9k	Z4
115	560	Z2	140	3.9k	Z5
116	1.8k	Z2	141	100k	Z5
117	10k	Z2	142	3.3k	Z5
118	1k or 470 ohm	Z2	143	15k	Y5
119	330	Z3	144	4.7k	Y5
120	100 flame proof	Z2	145	100k	Y5
121	47 flame proof	Z2	146	1M	Y5
122	100k	Z3,Y2	147	100k	Z5
123	330	Z3	148	4.7k	Z5
124	12k	Z3	149	4.7k	Z5
125	12k	Z4	150	4.7k	Y4
126	2.2k	Z4	151	4.7k	Y4
127	150	Z3	152	560k	Y5
128	8.2k	Z3	153	560k	Y4
129	2.2k	Y4	154	82k	Y5
130	47k	Z3	155	82k	Y4
131	1.5k (R-1030)	Y2	156	6.8k	Y5
132	150 flame proof	Y3	157	6.8k	Y4
133	270(R-1030), 220(R-1035)	Y3	158	470	Y5
134	10k	Y3	159	470	Y5
135	10k	Y3	160	100k	Y5
136	1k	Y3	161	100k	Y4
137	100k	Y3	162	680	Z5
138	100 flame proof	Z4	163	15k	Y4

SYMBOL NO.	DESCRIPTION	LOCATION
C119	0.001uF +80-20% 50V ceramic	Z2
120	0.022uF " 50V ceramic	Z2
121	0.01uF " 50V ceramic	Z2
122	0.01uF " 50V ceramic	Z2
123	0.01uF " 50V ceramic	Z2
124	0.047uF " 50V ceramic	Z3
125	4.7uF +75-10% 25V electrolytic	Z3
126	100pF +10-10% 50V ceramic	Z3
127	3.3uF +75-10% 50V electrolytic	Z4
128	0.47uF +75-10% 50V electrolytic	Z3
129	0.047uF +80-10% 50V ceramic	Z3
130	0.047uF +80-10% 50V ceramic	Z3
131	0.047uF +80-10% 50V ceramic	Z3
132	0.047uF +80-10% 50V ceramic	T3
133	1uF +75-10% 50V electrolytic	Y4
134	15pF +10-10% 50V ceramic (R-1030)	Y2
135	360pF +5-5% 50V polystyrol (R-1030)	Y2
136	0.01uF +80-20% 50V ceramic (R-1030)	Y2
137	0.01uF +80-20% 50V ceramic (R-1030)	Y2
138	0.01uF +80-20% 50V ceramic (R-1030)	Y2
139	10uF +50-10% 16V electrolytic(R-1030), 47uF 16V(R-1035)	Y2
140	0.01uF +80-20% 50V ceramic	Y3
141	0.01uF +80-20% 50V ceramic	Y3
142	10uF +50-10% 16V electrolytic(R-1030), 47uF 16V(R-1035)	Y3
143	0.001uF +80-20% 50V ceramic	Y3
144	3.3uF +75-10% 50V electrolytic	Y3
145	4.7uF +75-10% 25V electrolytic	Y3
146	0.1uF +80-20% 50V ceramic	Y3
147	0.047uF +80-20% 50V ceramic	Y3
148	100uF +50-10% 16V electrolytic	Z4
149	0.047 +10-10% 50V polyester	Z5
150	3.3uF +75-10% 50V electrolytic	Z5
151	0.018uF +10-10% 50V polyester	Z4
152	0.018uF +10-10% 50V polyester	Z4
153	-----	--

SYMBOL NO.	DESCRIPTION	LOCATION
C154	0.47uF +75%-10% 50V electrolytic	Z5
155	0.47uF +20%-20% 35V solid tantalum or electrolytic	Z5
156	3.3uF +20%-20% 20V solid tantalum or electrolytic	Z5
157	510pF +5%-5% 50V polystyrol	Z5
158	0.01uF +80%-20% 50V ceramic	Y5
159	3.3uF +50%-10% 50V electrolytic	Z5
160	3.3uF +50%-10% 50V electrolytic	Z5
161	0.0022uF +10%-10% 50V polyester	Y4
162	0.0022uF " 50V polyester	Y4
164	0.22uF +20%-20% 35V solid tantalum or electrolytic	Y5
165	0.22uF +20%-20% 35V solid tantalum or electrolytic	Y4
166	0.22uF +20%-20% 35V solid tantalum or electrolytic	Y5
167	0.22uF +20%-20% 35V solid tantalum or electrolytic	Y4
171	0.001uF +80%-20% 50V ceramic (R1030)	Y3
172	0.047uF +80%-20% 50V ceramic (R1030)	Y3
174	100uF +50%-10% 16V electrolytic	Y4

TRANSISTORS, IC's & DIODES

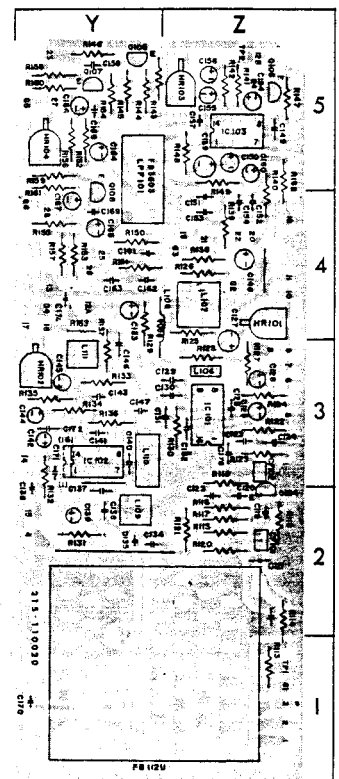
SYMBOL NO.	DESCRIPTION	LOCATION
Q104	2SC1675(M)(L) FM IF amp.	Z2
105	2SC945 (P)(Q)	Y5
106	2SC945 (P)(Q) FM Muting sw.	Z5
107	2SC945 (P)(Q) FM output amp.	Y5
108	2SC945 (P)(Q) FM output amp.	Y4
IC101	HA-1137W FM IF amp & detector	Z3
102	HA-1197 AM OSC, MIX, IF amp & detector (R-1030)	Y3
102	HA-1151 AM IF amp & detector (R1035)	Z3
103	HA1156 FM P.L.L. & MPX.	Z5
D101	RD3.9EC voltage stabilizer	Y3

SEMI-FIXED POTENTIOMETERS

SYMBOL NO.	DESCRIPTION	LOCATION
HR102	10k-B AM signal meter setting	Y3
103	5k-B FM 19kHz setting	Z5
104	50k-B FM stereo separation	Y5

TRANSFORMERS & FILTERS

SYMBOL NO.	DESCRIPTION	LOCATION
L106	18uH 1441Z180J FM peaking coil	Z3
107	V4FCC20857E FM discriminator trans	Z4
108	2.2uH A-455220 FM peaking coil	Z4
109	PWR-151208NZ AM oscillator trans	Y2
110	CFT-455D3 AM IF ceramic filter	Y3
111	RMC-21563XB AM detector trans	Y3
LPF101	FB3603 FM low pass filter	Y5
CF101	FM IF ceramic filter	Z2
102	FM IF ceramic filter	Z3
Variable Capacitor Tuned FM Tuner FB112U38		Y1, Z1



PB-215-120020

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R201	56k	X2	R206	1M noiseless	X2
202	56k	X2	207	470k noiseless	X2
203	2.2k	X1	208	470k noiseless	X2
204	2.2k	X2	209	1.8k	X2
205	1M noiseless	X1	210	1.8k	X2



SYMBOL NO.	DESCRIPTION	LOCATION
C154	0.47uF +75%-10% 50V electrolytic	Z5
155	0.47uF +20%-20% 35V solid tantalum or electrolytic	Z5
156	3.3uF +20%-20% 20V solid tantalum or electrolytic	Z5
157	510pF +5%-5% 50V polystyrol	Z5
158	0.01uF +80%-20% 50V ceramic	Y5
159	3.3uF +50%-10% 50V electrolytic	Z5
160	3.3uF +50%-10% 50V electrolytic	Z5
161	0.0022uF +10%-10% 50V polyester	Y4
162	0.0022uF " 50V polyester	Y4
164	0.22uF +20%-20% 35V solid tantalum or electrolytic	Y5
165	0.22uF +20%-20% 35V solid tantalum or electrolytic	Y4
166	0.22uF +20%-20% 35V solid tantalum or electrolytic	Y5
167	0.22uF +20%-20% 35V solid tantalum or electrolytic	Y4
171	0.001uF +80%-20% 50V ceramic (R1030)	Y3
172	0.047uF +80%-20% 50V ceramic (R1030)	Y3
174	100uF +50%-10% 16V electrolytic	Y4

TRANSISTORS, IC's & DIODES

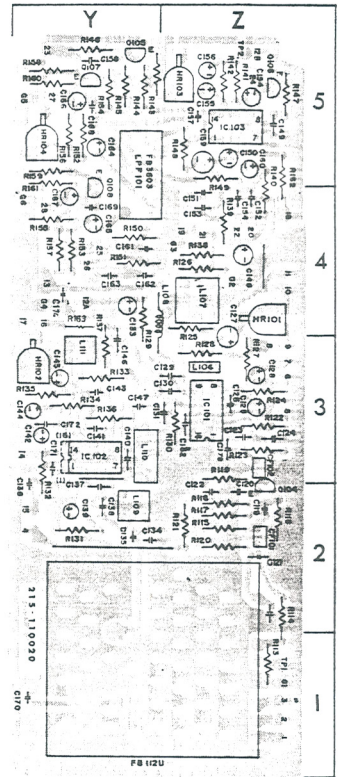
SYMBOL NO.	DESCRIPTION	LOCATION
Q104	2SC1675(M)(L) FM IF amp.	Z2
105	2SC945 (P)(Q)	Y5
106	2SC945 (P)(Q) FM Muting sw.	Z5
107	2SC945 (P)(Q) FM output amp.	Y5
108	2SC945 (P)(Q) FM output amp.	Y4
IC101	HA-1137W FM IF amp & detector	Z3
102	HA-1197 AM OSC, MIX, IF amp & detector (R-1030)	Y3
102	HA-1151 AM IF amp & detector (R1035)	Z3
103	HA1156 FM P.L.L. & MPX.	Z5
D101	RD3.9EC voltage stabilizer	Y3

SEMI-FIXED POTENTIOMETERS

SYMBOL NO.	DESCRIPTION	LOCATION
HR102	10k-B AM signal meter setting	Y3
103	5k-B FM 19kHz setting	Z5
104	50k-B FM stereo separation	Y5

TRANSFORMERS & FILTERS

SYMBOL NO.	DESCRIPTION	LOCATION
L106	18uH 1441Z180J FM peaking coil	Z3
107	V4FCC20857E FM discriminator trans	Z4
108	2.2uH A-455220 FM peaking coil	Z4
109	PWR-151208NZ AM oscillator trans	Y2
110	CFT-455D3 AM IF ceramic filter	Y3
111	RMC-21563XB AM detector trans	Y3
LPF101	FB3603 FM low pass filter	Y5
CF101	FM IF ceramic filter	Z2
102	FM IF ceramic filter	Z3
Variable Capacitor Tuned FM Tuner FB112U38		Y1, Z1

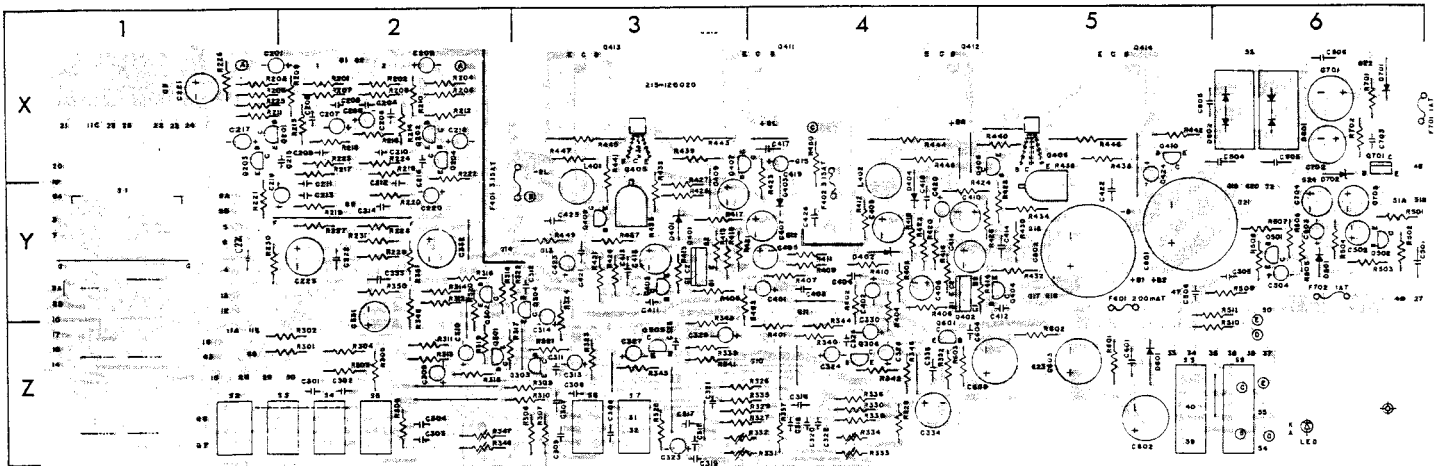


PB-215-120020

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R201	56k	X2	R206	1M noiseless	X2
202	56k	X2	207	470k noiseless	X2
203	2.2k	X1	208	470k noiseless	X2
204	2.2k	X2	209	1.8k	X2
205	1M noiseless	X1	210	1.8k	X2

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R501	100	Y6	R507	47k	Y6
502	100k	Y6	508	1k	Y6
503	10k	Y6	509	10k	Y6
504	100k	Y6	510	27k	Z6
505	4.7k	Y6	511	27k	Y6
506	33k	Y6			

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R601	100 1/2W F.P.	Z5	R701	270 <sup>-10%</sup> 1W M.O.	X6
602	10k	Z5	702	270	X6
603	39k	Z4			



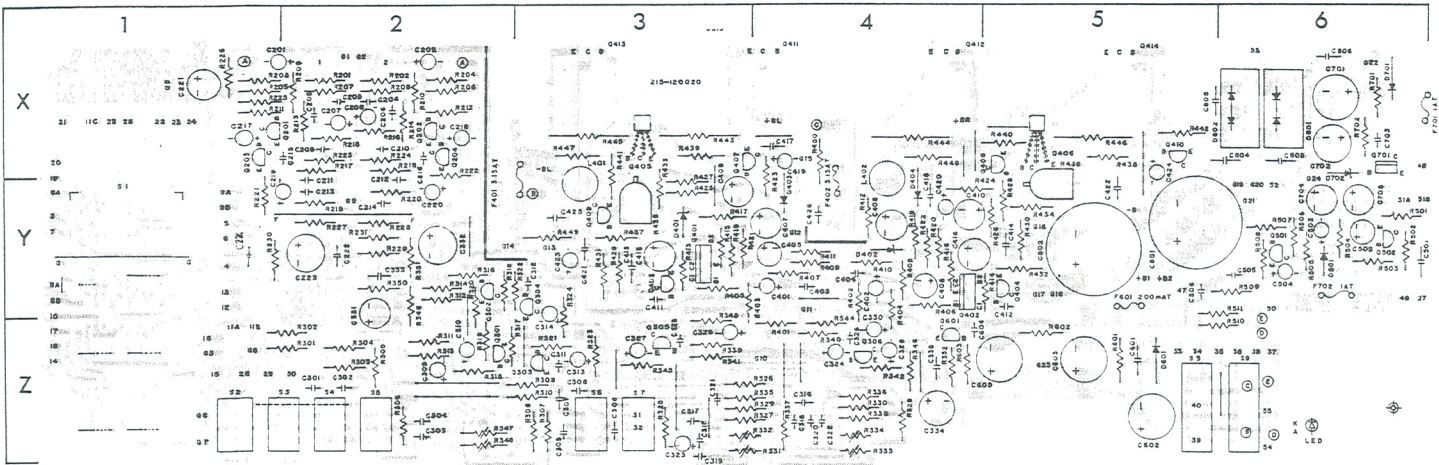
SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
C201	3.3uF <sup>+20%</sup> 25V	T X1	C213	0.0068uF <sup>+5%</sup> 50V	P Y2
202	3.3uF " 25V	T X2	214	0.0068uF <sup>+5%</sup> 50V	P Y2
203	33pF <sup>+10%</sup> 10V	C X2	215	4.7pF <sup>-0.25pF</sup> 50V	C X2
204	33pF " 50V	C X2	216	4.7pF <sup>-0.25pF</sup> 50V	C X2
205	150pF " 50V	C X2	217	47uF <sup>+50%-10%</sup> 10V	E X1
206	150pF " 50V	C X2	218	47uF <sup>+50%-10%</sup> 10V	E X2
207	10uF <sup>+50-10%</sup> 16V	E X2	219	0.47uF <sup>+20%</sup> 35V	T or E Y2
208	10uF <sup>+50-10%</sup> 16V	E X2	220	0.47uF <sup>+20%</sup> 35V	T or E Y2
209	0.001uF <sup>+5%</sup> 50V	P X2	221	220uF <sup>+50-10%</sup> 16V	E X1
210	0.001uF " 50V	P X2	222	0.047uF <sup>+80-20%</sup> 35V	C Y2
211	0.001uF " 50V	P Y2	223	100uF <sup>+50-10%</sup> 35V	E Y2
212	0.001uF " 50V	P Y2	224	0.0022uF <sup>+80-20%</sup> 50V	C Y1

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
C301	0.027uF <sup>+10%</sup> 50V	P Z2	319	0.001uF <sup>+10%</sup> 50V	P Z3
302	0.027uF " 50V	p Z2	320	0.001uF " 50V	P Z4
303	0.0033uF " 50V	P Z2	321	0.0027uF " 50V	P Z3
304	0.0035uF " 50V	P Z2	322	0.0027uF " 50V	P Z4
305	0.033uF " 50V	P Z3	323	3.3uF <sup>-20%</sup> 10V	T or E Z3
306	0.033uF " 50V	p Z3	324	3.3uF " 10V	T or E Z3
307	470pF " 50V	C Z3	325	4.7pF <sup>+0.25pF</sup> 50V	C Z3
308	470pF " 50V	C Z3	326	4.7pF " 50V	C Z4
309	1uF <sup>+20%</sup> 25V	T or E Z2	327	47uF <sup>+50-10%</sup> 10V	E Z3
310	1uF " 25V	T or E Z2	328	47uF " 10V	E Z4
311	4.7pF <sup>+0.25pF</sup> 50V	C Z3	329	3.3uF <sup>-20%</sup> 25V	T or E Z3
312	4.7pF " 50V	C Y3	330	3.3uF " 25V	T or E Z4
313	3.3uF <sup>+25%</sup> 25V	T or E Z3	331	100uF <sup>+50-10%</sup> 16V	E Y2
314	3.3uF " 25V	T or E Y3	332	100uF " 16V	E Y2
315	0.033uF <sup>+10%</sup> 50V	P Z3	333	0.047uF <sup>+80-20%</sup> 50V	C Y2
316	0.033uF " 50V	P Z4	334	220uF <sup>+50-10%</sup> 35V	E Z4
317	0.001uF " 50V	P Z3	335	0.047uF <sup>+80-20%</sup> 50V	C Z4
318	0.001uF " 50V	P Z4			

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R501	100	Y6	R507	47k	Y6
502	100k	Y6	508	1k	Y6
503	10k	Y6	509	10k	Y6
504	100k	Y6	510	27k	Z6
505	4.7k	Y6	511	27k	Y6
506	33k	Y6			

SYMBOL NO.	DESCRIPTION	LOCATION
R601	100 1/2W F.P.	Z5
602	10k	Z5
603	39k	Z4

SYMBOL NO.	DESCRIPTION	LOCATION
R701	270 <sup>+</sup> -10% 1W M.O.	X6
702	270	X6



SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
C201	3.3uF <sup>+</sup> -20% 25V	T X1	C213	0.0068uF <sup>+</sup> -5% 50V	P Y2
202	3.3uF " 25V	T X2	214	0.0068uF <sup>+</sup> -5% 50V	P Y2
203	33pF <sup>+</sup> -10% 10V	C X2	215	4.7pF <sup>+</sup> -0.25pF50V	C X2
204	33pF " 50V	C X2	216	4.7pF <sup>-</sup> -0.25pF50V	C X2
205	150pF " 50V	C X2	217	47uF <sup>+</sup> +50%-10%10V	E X1
206	150pF " 50V	C X2	218	47uF <sup>+</sup> +50%-10%10V	E X2
207	10uF <sup>+</sup> +50%-10% 16V	E X2	219	0.47uF <sup>-</sup> -20% 35V	T or E Y2
208	10uF <sup>+</sup> +50%-10% 16V	E X2	220	0.47uF <sup>+</sup> -20% 35V	T or E Y2
209	0.001uF <sup>+</sup> -5% 50V	P X2	221	220uF <sup>+</sup> +50%-10%16V	E X1
210	0.001uF " 50V	P X2	222	0.047uF <sup>+</sup> +80%-20%35V	C Y2
211	0.001uF " 50V	P Y2	223	100uF <sup>+</sup> +50%-10%35V	E Y2
212	0.001uF " 50V	P Y2	224	0.0022uF <sup>+</sup> +80%-20%50V	C Y1

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
C301	0.027uF <sup>+</sup> -10% 50V	P Z2	319	0.001uF <sup>+</sup> -10% 50V	P Z3
302	0.027uF " 50V	p Z2	320	0.001uF " 50V	P Z4
303	0.0033uF " 50V	P Z2	321	0.0027uF " 50V	P Z3
304	0.0033uF " 50V	P Z2	322	0.0027uF " 50V	P Z4
305	0.033uF " 50V	P Z3	323	3.3uF <sup>+</sup> -20% 10V	T or E Z3
306	0.033uF " 50V	p Z3	324	3.3uF " 10V	T or E Z4
307	470pF " 50V	C Z3	325	4.7pF <sup>+</sup> -0.25pF 50V	C Z3
308	470pF " 50V	C Z3	326	4.7pF " 50V	C Z4
309	1uF <sup>+</sup> -20% 25V	T or E Z2	327	47uF <sup>+</sup> +50%-10% 10V	E Z3
310	1uF " 25V	T or E Z2	328	47uF " 10V	E Z4
311	4.7pF <sup>-</sup> -0.25pF 50V	C Z3	329	3.3uF <sup>-</sup> -20% 25V	T or E Z3
312	4.7pF " 50V	C Y3	330	3.3uF " 25V	T or E Z4
313	3.3uF <sup>+</sup> -25% 25V	T or E Z3	331	100uF <sup>+</sup> +50%-10% 16V	E Y2
314	3.3uF " 25V	T or E Y3	332	100uF " 16V	E Y2
315	0.033uF <sup>+</sup> -10% 50V	P Z3	333	0.047uF <sup>+</sup> +80%-20% 50V	C Y2
316	0.033uF " 50V	P Z4	334	220uF <sup>+</sup> +50%-10% 35V	E Z4
317	0.001uF " 50V	P Z3	335	0.047uF <sup>+</sup> +80%-20% 50V	C Z4
318	0.001uF " 50V	P Z4			



SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R211	100k noiseless	X1	R222	1.2k	X2
212	100k noiseless	X2	223	6.8k	X2
213	820	X2	224	6.8k	X2
214	820	X2	225	39k	X1
215	39k	X2	226	15k	X1
216	39k	X2	227	330k	Y2
217	39k	X2	228	330k	Y2
218	39k	X2	229	220 F.P.	Y2
219	820k noiseless	Y2	230	470	Y1
220	820k noiseless	Y2	231	470	Y2
221	1.2k	Y1			

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R301	1M	Z2	R327	1.5k	Z3
302	1M	Z2	328	1.5k	Z4
303	6.8k	Z2	329	2.2k	Z3
304	6.8k	Z2	330	2.2k	Z4
305	1M	Z2	331	bass cont.	Z3
306	1M	Z2	332	bass cont.	Z3
307	12k	Z3	333	treble cont.	Z4
308	12k	Z3	334	treble cont.	Z4
309	27k	Z3	335	18k	Z3
310	27k	Z3	336	18k	Z4
311	1M	Z2	337	1.5k	Z4
312	1M	Y2	338	1.5k	Z4
313	470k	Z2	339	220k	Z3
314	470k	Y2	340	220k	Z4
315	2.7k	Z2	341	68k	Z3
316	2.7k	Y2	342	68k	Z4
317	18k	Z2	343	5.6k	Y3
318	18k	Y2	344	5.6k	Z4
319	1k	Z2	345	2.2k	Z3
320	1k	Y2	346	2.2k	Z4
321	4.7k	Z3	347	loud. cont.	Z2
322	4.7k	Y3	348	loud. cont.	Z2
323	330k	Z3	349	47k	Y2
324	330k	Y3	350	39k	Y2
325	18k	Z3	351	680 F.L.	Y2
326	18k	Z3	352	680 F.L.	Z4

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R401	330k	Z4	R426	3.9k	Y5
402	330k	Y4	427	47	Y3
403	3.3k	Y3	428	47	Y5
404	3.3k	Y4	429	47	Y3
405	1k	Y3	430	47	Y5
406	1k	Y4	431	100 1/2W F.P.	Y5
407	12k	Y4	432	100 " "	Y5
408	12k	Y4	433	1.8k	Y3
409	560	Y4	434	1.8k	Y5
410	560	Y4	435	Idle Current	Y3
411	39	Y4	436	Idle Current	Y5
412	39	Y4	437	560	Y3
413	1.2k	Y3	438	560	X5
414	1.2k	Y5	439	100 1/2W F.P.	X3
415	10k	Y3	440	100 1/2W F.P.	X5
416	10k	Y4	441	100 1/2W F.P.	X3
417	1.5k -10% 1W MO	Y3	442	100 1/2W F.P.	X5
418	1.5k " " "	Y4	443	0.33 -10% 3W cement	X3
419	470k	Y3	444	0.33 " " "	X4
R420	470k	Y4	445	0.33 " " "	X3
421	12k	Y3	446	0.33 " " "	X5
422	12k	Y4	447	4.7 " 1W M.O.	X3
423	1.8k -10% 1W M.O.	Y4	448	4.7 " " "	X4
424	1.8k " " "	Y4	449	15 " " "	Y3
425	3.9k	Y3	450	15 " " "	X4

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
C401	3.3uF <sup>+</sup> 20% 10V T or E	Y4	C414	0.047uF <sup>+</sup> 10% 50V P	Y5
402	3.3uF " 10V T or E	Y4	415	47uF +50-10% 50V E	Y3
403	330pF <sup>+</sup> 10% 50V C	Y4	416	47uF " 50V E	Y4
404	330pF " 50V C	Y4	417	0.047uF +80-20%50V C	X4
405	100uF +50-10% 10V E	Y4	418	0.047uF " 50V C	Y4
406	100uF +50-10% 10V E	Y4	419	1uF +75-10% 50V E	X4
407	47uF " 50V E	Y4	420	1uF " 50V E	Y4
408	47uF " 50V E	Y4	421	0.047uF +80-20%50V C	Y3
409	47uF " 50V E	Y3	422	0.047uF " 50V C	Y5
410	47uF " 50V E	Y4	423	1uF +75-10% 50V E	Y3
411	33pF <sup>+</sup> 10% 50V C	Y3	424	1uF +75-10% 50V E	X5
412	33pF " 50V C	Y5	425	0.022uF <sup>+</sup> 10% 50V P	Y3
413	0.047uF " 50V P	Y5	426	0.022uF " 50V P	Y4

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
C501	0.1uF +80-20% 50V C	Y6	C504	2.2uF +75-10% 50V E	Y6
502	47uF +50-10% 16V E	Y6	505	0.001uF +10-10%50V P	Y6
503	2.2uF +75-10% 50V E	Y6	506	0.001uF +10-10%50V P	Y5

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
C701	1000uF +50-10% 25V E	X6	C801	4700uF +50-10%35V E	Y5
702	220uF +50-10% 25V E	X6	802	4700uF +50-10%35V E	Y5
703	100pF +10-10% 50V C	X6	803	0.01uF +80-20%500V C	X6
704	220uF +50-10% 16V E	Y6	804	0.01uF +80-20%500V C	X6
705	220uF +50-10% 16V E	Y6	805	0.01uF +80-20%500V C	X5
			806	0.01uF +80-20%500V C	X6

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
Q201	2SA640(E) (F) phono amp	X1	Q301	2SA640(E) (F)	Z2
202	2SA640(E) (F) "	X2	302	2SA640(E) (F)	Y2
203	2SC1222(E) (F) "	X1	303	2SC1222(E) (F)	Z3
204	2SC1222(E) (F) "	X2	304	2SC1222(E) (F)	Y3
			305	2SA640(E) (F)	Z3
			306	2SA640(E) (F)	Z4

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
Q401	2SA798(G) (F) power amp	Y3	Q408	2SD667(B) (C) power amp	X5
402	2SA798(G) (F) "	Y4	409	2SB647(B) (C) "	Y3
403	2SD666(B) (C) "	Y3	410	2SB647(B) (C) "	X5
404	2SD666(B) (C) "	Y5	411	2SD587(S) (R) (Q) "	X4
405	2SC945 (P) (Q) "	X3	412	2SD587(S) (R) (Q) "	X4
406	2SC945 (P) (Q) "	X5	413	2SB617(S) (R) (Q) "	X3
407	2SD667(B) (C) "	X3	414	2SB617(S) (R) (Q) "	X5
Q601	2SA817 power supply	Z4	Q701	2SD235 voltage regulator	X6

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
D401	RD12EB power amp or WZ-120	Y3	D601	1S1886 rectifier	Z5
402	RD12EB " "	Y4	701	1S1886 rectifier	X6
403	1S1885 " "	Y4	702	RD15EB voltage regulator	X6
404	1S1885 " "	Y4		or WZ-120	
			801	S5267D rectifier	X6
			802	S5267D "	X6

SYMBOL NO.	DESCRIPTION	LOCATION
Q501	2SC945 (P) (Q) HIGH PASS FILTER	Y6
502	2SC945 (P) (Q) MUTING	Y6
D501	1N60 DETECTOR	Y6
S1a-1j	5-10-5 ROTARY SW. FUNCTION	X1

SYMBOL NO.	DESCRIPTION
R331, 332	100k ohms-B x 2 Bass Control
333, 334	50k ohms-B x 2 Treble Control
347, 348	200k ohms-B x 2 Main Volume Control
R435, 436	500 ohms-B Power Amp.

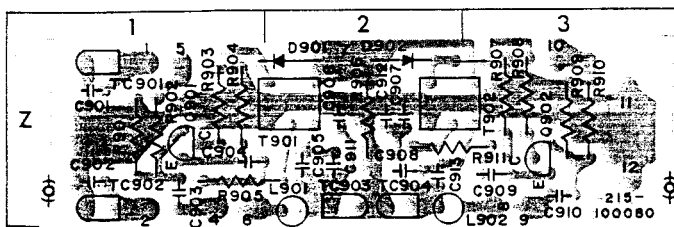
SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
S1a-S1f	3-6,4 rotary sw. FUNCTION	Z1	S6 /SR0106	2-2 push sw. LOUDNESS	Z3
2	2-2 push sw. MONITOR	Z1	7	2-2 push sw. FM MUTING	Z3
3	2-2 push sw. MODE	Z2	8	4-2 push sw. A. SPEAKER	Z5
4	2-2 push sw. LOW FILTER	Z2	9	4-2 push sw. B. SPEAKER	Z6
5	2-2 push sw. HIGH FILTER	Z2	L401	2.2uH	Y3
			402	2.2uH	X4

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
F401	T3.15A/250V "S" model 3A/125V	Y3	F601	T200mA/250V "S" model 0.5A/250V	Y5
402	T3.15A/250V "S" model 3A/125V	Y3	701	T1A/250V "S" model 1A/250V	X6
			702	T1A/250V "S" model 1A/250V	Y6

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SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R901	8.2k	Z1	R907	2.7k	Z3
902	33k	Z1	908	47k	Z3
903	47	Z1	909	8.2k	Z3
904	2.7k	Z1	910	47k	Z3
905	10	Z1	911	10	Z2
906	68k	Z1			

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
C901	18pF <sup>+5%</sup> 50V C	Z1	C908	150pF <sup>+5%</sup> 50V P	Z2
902	-----	--	909	0.01uF <sup>+80-20%</sup> 50V C	Z3
903	0.022uF <sup>+80-20%</sup> 50V C	Z1	910	0.022uF <sup>+80-20%</sup> 50V C	Z2
904	0.022uF <sup>+80-20%</sup> 50V C	Z1	911	18pF <sup>+5%</sup> 50V C	Z2
905	330pF <sup>+5%</sup> 50V P	Z2	912	33pF <sup>+5%</sup> 50V C	Z2
906	5pF <sup>+0.25pF</sup> 50V C	Z2	913	22pF <sup>+5%</sup> 50V C	Z2
907	47pF <sup>-5%</sup> 50V C	Z2			



SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
Q901	2SC1674(M) (L) MW OSC	Z1	D901	1N60	Z2
902	2SC1674(M) (L) LW OSC	Z3	902	1N60	Z2

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
TC901	10pF 2.8pF (MIN. CAP.)	Z1	TC903	10pF 2.8pF (MIN. CAP.)	Z2
902	10pF 2.8pF (MIN. CAP.)	Z1	904	10pF 2.8pF (MIN. CAP.)	Z2

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
L901	2.2uH MW PEAKING COIL	Z1	T901	RWR151308N MW. OSC COIL	Z2
902	2.2uH LW PEAKING COIL	Z1	902	RWR43209N LW. OSC COIL	Z2

SYMBOL NO.	DESCRIPTION
R331, 332	100k ohms-B x 2 Bass Control
333, 334	50k ohms-B x 2 Treble Control
347, 348	200k ohms-B x 2 Main Volume Control
R435, 436	500 ohms-B Power Amp.

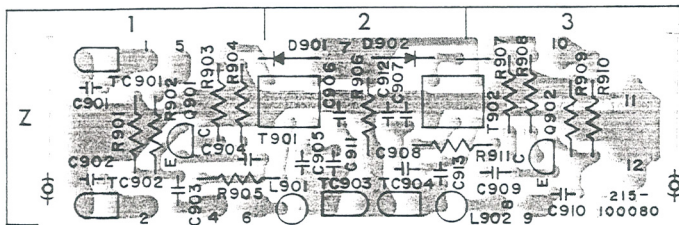
SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
S1a-S1f	3-6-4 rotary sw. FUNCTION	Z1	S6 / SR0106	2-2 push sw. LOUDNESS	Z3
2	2-2 push sw. MONITOR	Z1	7	2-2 push sw. FM MUTING	Z3
3	2-2 push sw. MODE	Z2	8	4-2 push sw. A. SPEAKER	Z5
4	2-2 push sw. LOW FILTER	Z2	9	4-2 push sw. B. SPEAKER	Z6
5	2-2 push sw. HIGH FILTER	Z2	L401	2.2uH	Y3
			402	2.2uH	X4

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
F401	T3.15A/250V "S" model 3A/125V	Y3	F601	T200mA/250V "S" model 0.5A/250V	Y5
402	T3.15A/250V "S" model 3A/125V	Y3	701	T1A/250V "S" model 1A/250V	X6
			702	T1A/250V "S" model 1A/250V	Y6

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SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
R901	8.2k	Z1	R907	2.7k	Z3
902	33k	Z1	908	47k	Z3
903	47	Z1	909	8.2k	Z3
904	2.7k	Z1	910	47k	Z3
905	10	Z1	911	10	Z2
906	68k	Z1			

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
C901	18pF $\pm 5\%$ 50V C	Z1	C908	150pF $\pm 5\%$ 50V P	Z2
902	-----	--	909	0.01uF $\pm 80-20\%$ 50V C	Z3
903	0.022uF $\pm 80-20\%$ 50V C	Z1	910	0.022uF $\pm 80-20\%$ 50V C	Z2
904	0.022uF $\pm 80-20\%$ 50V C	Z1	911	18pF $\pm 5\%$ 50V C	Z2
905	330pF $\pm 5\%$ 50V P	Z2	912	33pF $\pm 5\%$ 50V C	Z2
906	5pF $\pm 0.25pF$ 50V C	Z2	913	22pF $\pm 5\%$ 50V C	Z2
907	47pF $\pm 5\%$ 50V C	Z2			



SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
Q901	2SC1674(M) (L) MW OSC	Z1	D901	1N60	Z2
902	2SC1674(M) (L) LW OSC	Z3	902	1N60	Z2

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
TC901	10pF 2.8pF (MIN. CAP.)	Z1	TC903	10pF 2.8pF (MIN. CAP.)	Z2
902	10pF 2.8pF (MIN. CAP.)	Z1	904	10pF 2.8pF (MIN. CAP.)	Z2

SYMBOL NO.	DESCRIPTION	LOCATION	SYMBOL NO.	DESCRIPTION	LOCATION
L901	2.2uH MW PEAKING COIL	Z1	T901	RWR151308N MW. OSC COIL	Z2
902	2.2uH LW PEAKING COIL	Z1	902	RWR43209N LW. OSC COIL	Z2

CHASSIS UNIT

SYMBOL NO.	DESCRIPTION
R1	2.2M <sup>±</sup> 5% 1/2W deposite carbon R-1030 "C" model
2	150k " 1/4W " "
3	150k " 1/4W " "
4	150k " 1/4W " "
5	150k " 1/4W " "
6	560 <sup>±</sup> 10% 1W metal oxide
7	560 " 1W metal oxide
C3	0.01uF +80-20% 50V ceramic
4	0.01uF +80-20% 50V ceramic
5	0.01uF +80-20% 50V ceramic
LED 1	FM stereo indicator
Lamp	8V 0.3A dial illumination
Lamp	8V 0.3A dial illumination
Lamp	8V 0.075A meter illumination
Power sw.	SDG-5PE "S" & "E" model
Power Trans.	SDG-1P TV-5 "C" model
	Y-1741 "S" model AY0399 "E" model
	Y-1748 "C" model
Primary Fuse	2AT/250V "S" model
	3A/125V

R-1030 "U" model

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SYMBOL NO.	DESCRIPTION	LOCATION
R118	470ohm	Z2
120	100 1/2W flame proof	Z2
121	47 1/2W flame proof	Z2
132	150 1/2W flame proof	Y3
138	100 1/2W flame proof	Z4

SYMBOL NO.	DESCRIPTION	LOCATION
R417	1.5K 1/2W flame proof	Y3
418	1.5K 1/2W flame proof	Y4
423	1.8K 1/2W flame proof	Y4
424	1.8K 1/2 flame proof	Y4
701	270 1/2W flame proof	X6
702	270 1/2W flame proof	X6

SYMBOL NO.	DESCRIPTION	LOCATION
C155	0.47uF +75-10% 50V E	Z5
156	3.3uF +50-10% 25V E	Z5
164	0.22uF +75-10% 50V E	Y5
165	0.22uF " E	Y4
166	0.22uF " E	Y5
167	0.22uF " E	Y4

SYMBOL NO.	DESCRIPTION	LOCATION
C219	0.47uF +75-10% 50V E	Y2
220	0.47uF " E	Y2
309	1uF +50-10% 50V E	Z2
310	1uF " E	Z2
313	3.3uF " E	Z3
314	3.3uF " E	Y3
323	3.3uF " E	Z3
324	3.3uF " E	Z4
329	3.3uF " E	Z3
330	3.3uF " E	Z4
401	3.3uF " E	Y4
402	3.3uF " E	Y4
407	220uF +50-10% 35V E	Y4
408	220uF +50-10% 35V E	Y4
801	6800uF +30-10% 50V E	Y5
802	6800uF +30-10% 50V E	Y5

PB-215-120020

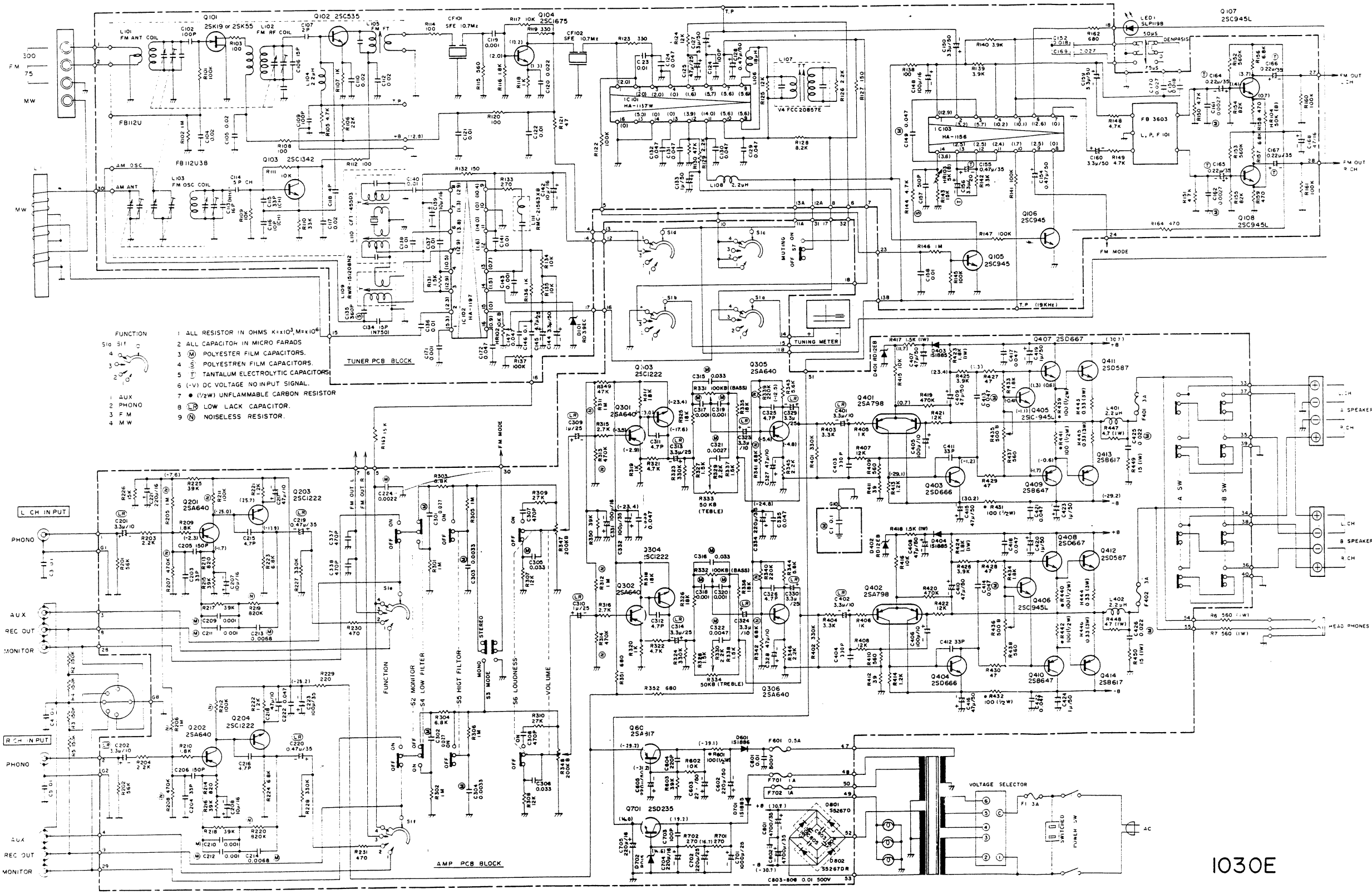
SYMBOL NO.	DESCRIPTION	LOCATION
R229	220 1/2W flame proof	Y2
339	270K	Z3
340	270K	Z4
341	82K	Z3
342	82K	Z4
343	3.9K	Y3
344	3.9K	Z4
345	1.2K	Z3
346	1.2K	Z4
351	680 1/2W flame proof	Y2
352	680 1/2W flame proof	Z4
413	680	Y3
414	680	Y5
415	8.2K	Y3
416	8.2K	Y4

SYMBOL NO.	DESCRIPTION	LOCATION
Q305	25A830 (B) TONE CONTROL	Z3
Q306	25A830 (B) TONE CONTROL	Z4
D401	WZ-192 POWER AMP	Y3
D402	WZ-192 POWER AMP	Y4
D702	WE-150 VOLTAGE REGULATOR	X6

CHASSIS UNIT (R1 2.2M 1/2W deposite carbon)

POWER SW	SDG-1P TV-5
POWER TRANS	P-2258





- FUNCTION
- 1 AUX
  - 2 PHONO
  - 3 FM
  - 4 MW
- 1 ALL RESISTOR IN OHMS  $K \times 10^3, M \times 10^6$
- 2 ALL CAPACITOR IN MICRO FARADS
- 3 POLYESTER FILM CAPACITORS
- 4 POLYSTYRENE FILM CAPACITORS
- 5 TANTALUM ELECTROLYTIC CAPACITORS
- 6 (-V) DC VOLTAGE NO INPUT SIGNAL
- 7 (1/2W) UNFLAMMABLE CARBON RESISTOR
- 8 LOW LEAK CAPACITOR
- 9 NOISELESS RESISTOR

