

IMPORTANT

NOTES:

1. Set Bass and Treble controls to mid range.
2. Set Volume Control to Max.
3. With gang fully closed, dial scale pointer must always be set at LOG 0 position.
4. Do not attempt to adjust or align the marine or shortwave bands if adequate Frequency Generator or Crystal controlled oscillator calibrated equipment is not available.
5. SW whip antenna must be pushed down when connecting Signal Generator to Shortwave Antenna (Whip) Terminal, in series with a 5 pf capacitor.
6. FM whip Ant. must be fully extended when connecting Signal Generator in series with a 220 ohm Resistor to External FM antenna terminals.

CHART 1 SWEEP FM ALIGNMENT

STEP	PUSH BUTTON	SWEEP GENERATOR	MARKER GENERATOR	TUNING GANG	SCOPE CONNECTION	ADJUSTMENTS	NOTES
1	FM	Set 10.7MC set sweep width to approx. 1MC connect output to emitter of TR15 thru a 1 K Resistor.	10.7MC Unmodulated	Open	Series connection to collector of TR21. Connect a 1.5K Res. across R94.	T13, T14, T15, T16, T17 for Max. gain and symmetry (See Fig. 1).	Use Min. Output from Generator to achieve sweep response.
2	FM	SAME	SAME	Open	Series a 22K resistor to junction of R100 and C110 and ground. Disconnect 1.5K Res. to across R94.	T19 for center cross over at 10.7MC (See Fig. 4).	Use Min. Signal. Attenuate sweep input and observe symmetry of response for balance at marker frequency.
3	FM	SAME	SAME	Open	SAME	T18 for Max. gain and symmetry at 10.7MC (See Fig. 4)	
4	RECHECK STEPS 1 THRU 3 AS NECESSARY						
5	FM	Set at 108.5MC Connect output to Ext. Antenna Terminals series a 220 ohm resistor (See note 6).	108.5MC Unmodulated	Open	Series a 22K Resistor to collector of TR21. Connect a 1.5K Res. across R94.	Oscillator coil L4 until marker is at peak of curve. (See Fig. 3). L1, L2 for Max. Amp.	Use Min. Sig. to achieve response. AFC switch to off.
6	FM	Set at 87.5MC (As Step 5).	87.5MC Unmodulated	Closed	SAME	Bend C1F Rotor blade until marker is at peak of curve. (Fig. 3) Bend C1C, C1A Rotor blade for Max. Amp.	SAME
7	RECHECK STEPS 5 AND 6						

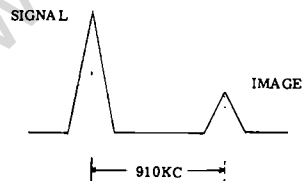


FIGURE 1

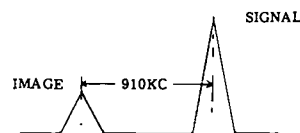


FIGURE 2

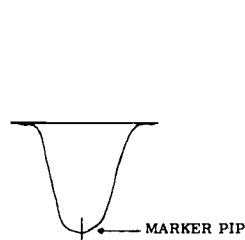


FIGURE 3

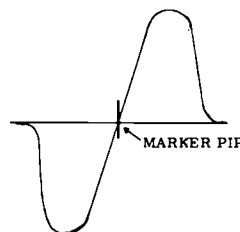


FIGURE 4

CHART 2 AM ALIGNMENT

STEP	PUSH BUTTON	SIGNAL GENERATOR	GENERATOR SETTING	TUNING GANG	CONNECT SCOPE OR OUTPUT METER	ADJUSTMENTS
1	BC	Radiate Output to L5.	455KC modu- lating 400 cycles at 30%	Open	Voice Coil	T9, T10, T11, T12 for Max. Amp.
2	REPEAT STEP 1 UNTIL NO FURTHER ADJUSTMENT IS REQUIRED.					
3	BC	Radiate Output to L5.	1630K	Open	Voice Coil	Oscillator Trimmer C42 for Max.
4	BC	SAME	580KC	580KC	SAME	AM Oscillator T6
5	BC	SAME	580KC	580KC	SAME	BC-RF, T4 for Max. while rocking gang.
6	BC	SAME	1400KC	1400KC	SAME	Peak C3 while rocking gang and C13 RF Trimmer.
7	REPEAT STEPS 1 THRU 6 AS NECESSARY					

CHART 3 LW ALIGNMENT

STEP	PUSH BUTTON	SIGNAL GENERATOR	GENERATOR SETTING	TUNING GANG	CONNECT SCOPE OR OUTPUT METER	ADJUSTMENTS
1	LW	Radiate Output to L5.	380KC	Open	Voice Coil	C44 for Max. Amp.
2	LW	SAME	380KC	380KC	SAME	C5, C18 for Max. Amp.
3	LW	SAME	167KC	167KC	SAME	T7, T5 for Max. Amp.
4	REPEAT ABOVE STEPS AS REQUIRED.					

CHART 4 MARINE AND SW ALIGNMENT

[illegible]

General Electric P2900A

TRANSISTOR SUBSTITUTION CHART

<u>TR2, 9</u>	<u>TR3, 13</u>	<u>TR4</u>	<u>TR5, 12</u>	<u>TR6, 16</u>	<u>TR7, 8, 11</u>	<u>TR10, 17</u>	
RS7128	RS7129	RS7127	RS7216	RS7219	RS7217	RS7122	
TR14	TR15	TR18	R73	TR19	R85	TR20	R90
RS7215	RS7218	RS7123	68K	RS7122	47K	RS7123	68K
RS7210	RS7205	RS7124	68K	RS7123	56K	RS7124	82K
RS7211	RS7206	RS7125	82K	RS7124, 25	68K	RS7125	82K
TR21	R95	TR23	GR.	TR25	R117	TR26, 27	
RS7122	15K	RS7516, 7517	1	RS6843, 44	100	RS5788	
RS7123	15K		2	RS6843	100	RS5789	
RS7124	15K		3	RS6844	120	RS5789	
RS7125	18K	TR24	R112	RS6843	82	RS5786	
		RS7515	180K	RS6844	100	RS5786	
TR22		RS7516	220K	RS6843	100	RS5787	
RS7514		RS7517	270K	RS6844	100	RS5787	

This chart will identify various groups used in production. For stock and replacement purposes, select any one group. EXAMPLE: Select any TR2 thru TR24, TR25 - RS5281, R117 - 100, TR26, 27 - RS5788.

For substituting transistors use chart as follows: (unit for repair contains EXAMPLE shown above) TR26-RS5 88 is found defective and not available from stock, replace with TR26 & TR27 - RS5789 (GR2). If RS5788 or RS5789 (GR2) is not available for substitution, use one of the remaining groups and substitute components specified only on underlined groups.

SEMICONDUCTORS

ITEM	PART NO./TYPE
D1	RT1667
D2	RT1667
D3	RT1108
D4	RT2451
D5	RT2451
D6	RS6471
D7	RS6471
TR2-27	See Chart

ELECTROLYTIC/VARIABLE CAPS

ITEM	PART NO.	VALUE
C1	RT2997	Tuning Gang
C3	RS6172	Trimmer
C5	RS6172	Trimmer
C6	RT1327	2mfd 15V
C13	RS6172	Trimmer
C18	RS6172	Trimmer
C31	RS2984	3mfd 12V
C38	RS3960	2mfd 12V
C40	RS6172	Trimmer
C42	RS6172	Trimmer
C44	RS6172	Trimmer
C46	RS6172	Trimmer
C48	RS6172	Trimmer
C50	RS6172	Trimmer
C52	RS6172	Trimmer
C54	RS6172	Trimmer
C56	RS6172	Trimmer
C89	RS2984	3mfd 12V
C115	RS4474	.5mfd 10V
C117	RS4474	.5mfd 10V
C120	RT3016	750mfd 10V
C121	RT3489	1mfd 12V
C126	RS6477	1000mfd 25V
C135	RS3967	50mfd 10V

CONTROLS/SPECIAL RESISTORS

ITEM	PART NO.	DESCRIPTION
R102a	RT3031	Bass
R102b		Treble
R105	RT3032	50K Volume

COILS/TRANSFORMERS

ITEM	PART NO.
L1	RT3024
L2	RT3025
L3	RS3796
L4	RS1510
L5	RT3026
L8	RT3027
L9	RT3028
L10	RT3029
L11	RT3030
L12	RT3023
L13	RT3022
L14	RT3021
L15	RT3020
L16	RT3019

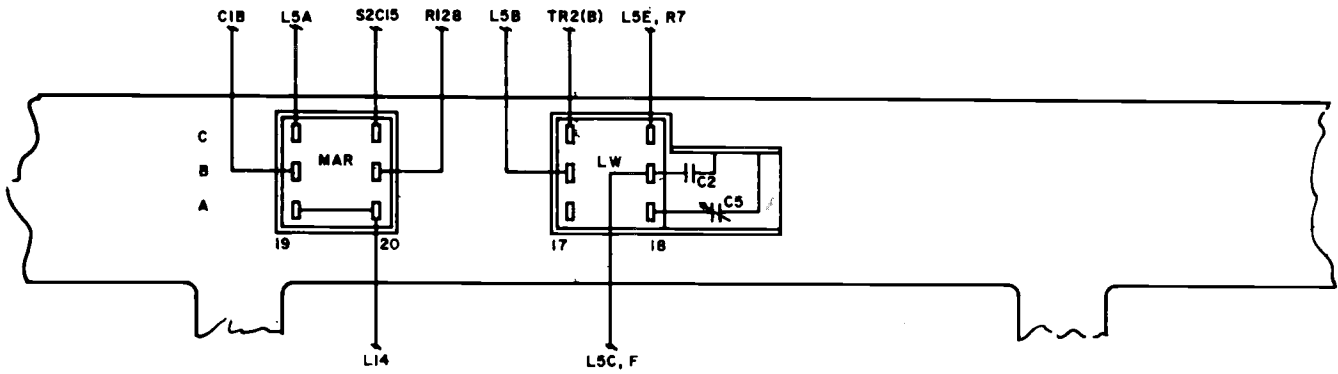
T1	RT3034
T2	RT3035
T3	RT3036
T4	RT3037
T5	RT3038
T6	RT3039
T7	RT3040
T8	RT3041
T9	RT3042
T10	RS2978
T11	RT3043
T12	RS2979
T13	RS6381
T14	RT1620
T15	RT1620
T16	RT1620
T17	RT1620
T18	RT1620
T19	RS3545
T20	RT3044
T21	RT3045
T22	RT3046

MISCELLANEOUS

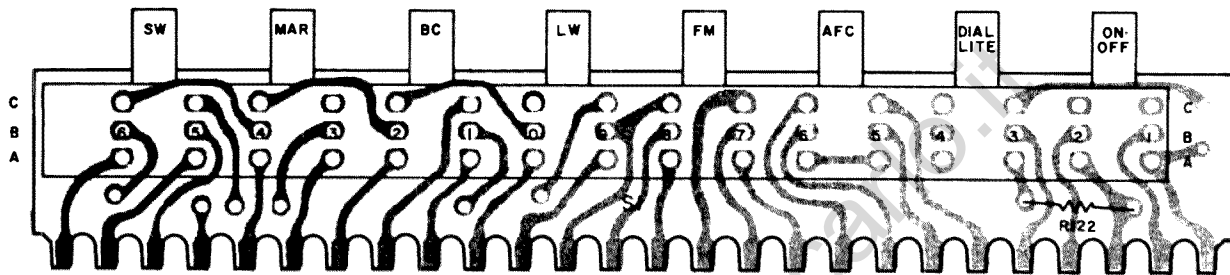
ITEM	NAME	PART NO.
M1	Meter, Tuning	RT2983
S1	Switch, Push	RT3048
S2	Switch, Rotor	RT3049
S3	Switch, AC-DC	RS6597
	Earphone (15 ohms)	RS4520
	FM Antenna, Telescopic	RT2992
	SW Antenna, Telescopic	RT2993
	Speaker (5" x 7")	RB2241
	Headphone (11 ohms)	RT9251
	P.C. Board, Main	RT9471
	P.C. Board, Switch	RT9472

CABINET PARTS

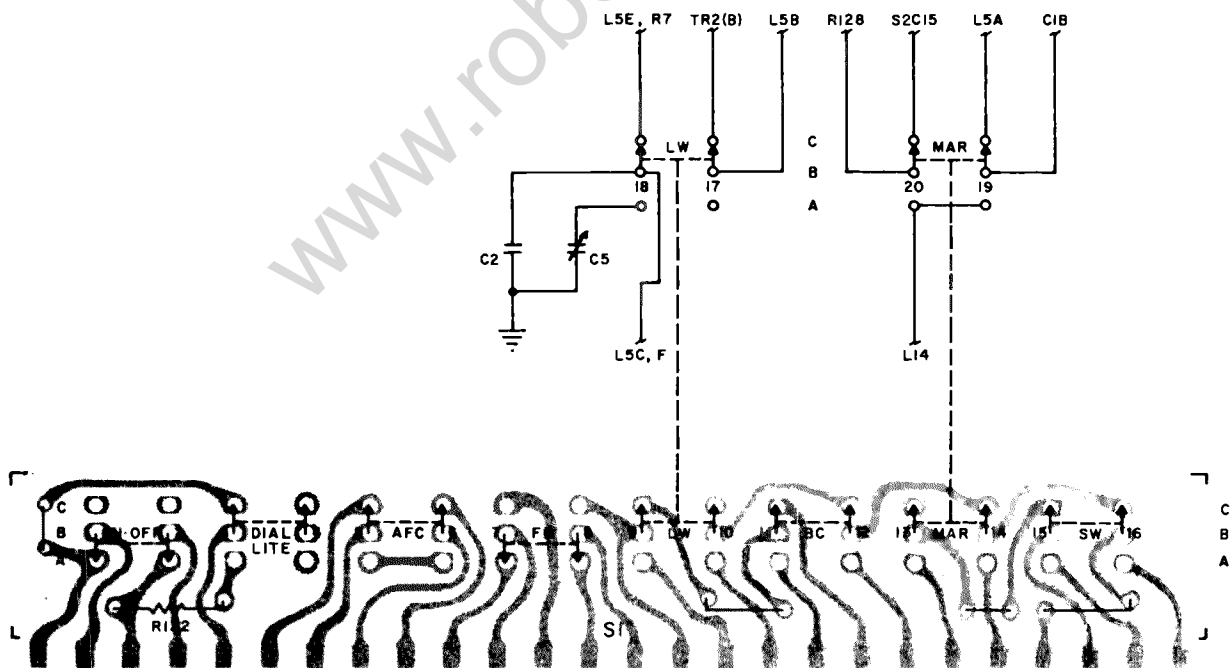
NAME	PART NO.
Cabinet, Front	RB2237
Cabinet, Back	RB2238
Door, Left	RB2239
Door, Right	RB2240
Dial Crystal	RT2965
Battery Cover	RT2968
Dial Pointer	RT2971
Knob, Band	RT2973
Knob, Tone	RS6266
Knob, Volume	RS5942
Knob, Tuning	RS5943
Knob, Tone	RT2974
Knob, On-Off	RT2975
Knob, Lamp	RT2976
Knob, AFC	RT2977
Knob, FM	RT2978
Knob, LW	RT2979
Knob, BC	RT2980
Knob, Marine	RT2981
Knob, SW	RT2982



TOP VIEW OF FUNCTION SWITCH



BOTTOM VIEW OF FUNCTION SWITCH



STRINGING DIAGRAM

DRUM SHOWN FULL COUNTER-CLOCKWISE
WITH GANG FULLY OPEN

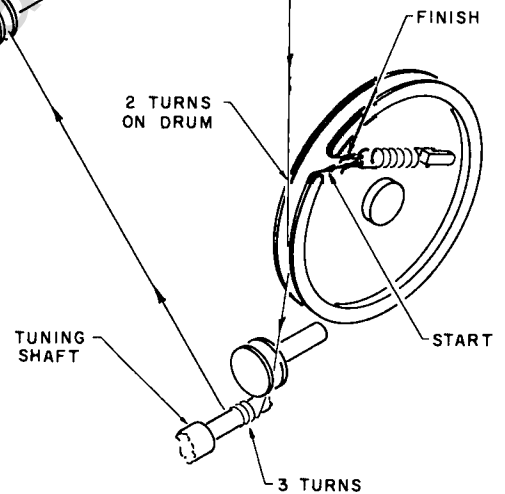
NOTE:
VOLTAGE AND CURRENT READINGS SHOWN
BELOW ARE AVERAGE READINGS.

TRANSISTOR VOLTAGES									
TR. NO.	E		B		C		SW		
	FM	AM	FM	AM	FM	AM			
TR2	0	.20	0	.75	0	7.3	0	0	7.8
TR3	0	0	0	.20	0	7.7	0	0	7.8
TR4	0	.28	0	.58	0	7.2	0	0	6.8
TR5	0	5.0	0	4.9	0	7.2	0	0	6.8
TR6	0	3.9	0	4.6	0	3.9	0	0	0
TR7	0	0	0	0	0	6.8	.46	1.0	6.9
TR8	0	0	0	0	0	0	.28	.84	2.6
TR9	0	.35	0	.98	0	4.9	.33	.98	4.9
TR10	0	0	0	.64	0	5.1	0	.64	5.1
TR11	0	0	0	0	0	0	0	.69	6.2
TR12	0	0	0	0	0	0	.23	.84	4.0
TR13	0	0	0	0	0	0	0	.67	3.4
TR14	.25	0	.95	0	2.6	0	0	0	0
TR15	.24	0	.92	0	2.6	0	0	0	0
TR16	.115	0	.88	0	1.2	0	0	0	0
TR17	0	0	.70	0	2.6	0	0	0	0
TR18	0	0	.65	0	2.0	0	0	0	0
TR19	0	0	.60	0	3.8	0	0	0	0
TR20	0	0	.60	0	2.8	0	0	0	0
TR21	0	0	.68	0	1.5	0	0	0	0
TR22	.05	.05	.6	.6	5.5	5.5	.05	.6	5.5
TR23	0	0	.63	.63	4.3	4.3	0	.63	4.3
TR24	0	0	.65	.65	7.9	7.9	0	.65	7.9
TR25	9.0	9.0	8.4	8.4	8.4	8.4	9.0	8.4	8.4
TR26	8.8	8.8	8.6	8.6	.13	.13	8.8	8.6	.13
TR27	8.7	8.7	8.6	8.6	.16	.16	8.7	8.6	.16

LINE VOLTAGE				
LINE	FM	AM	SW	LW
B+	9.0	9.0	9.0	9.0
B+1	7.6	8.4	7.8	8.4

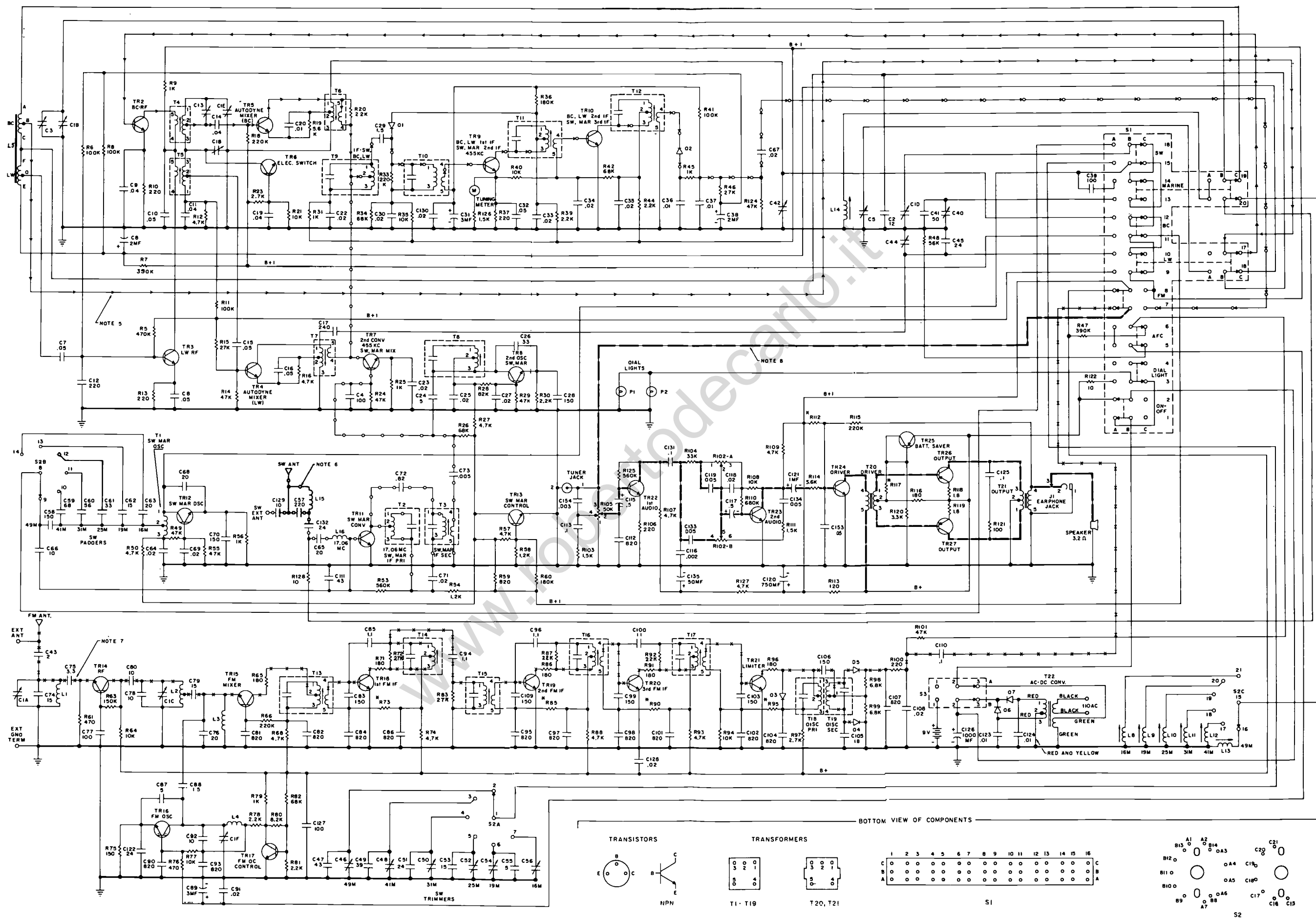
TRANSISTOR VOLTAGE			
TR NO.	E	B	C
TR3	.11	.66	7.8
TR4	4.6	5.0	7.3
TR6	0	0	.3

CURRENT DRAIN (NO SIGNAL - MA)			
FM	AM	SW	LW
27	26	26	25

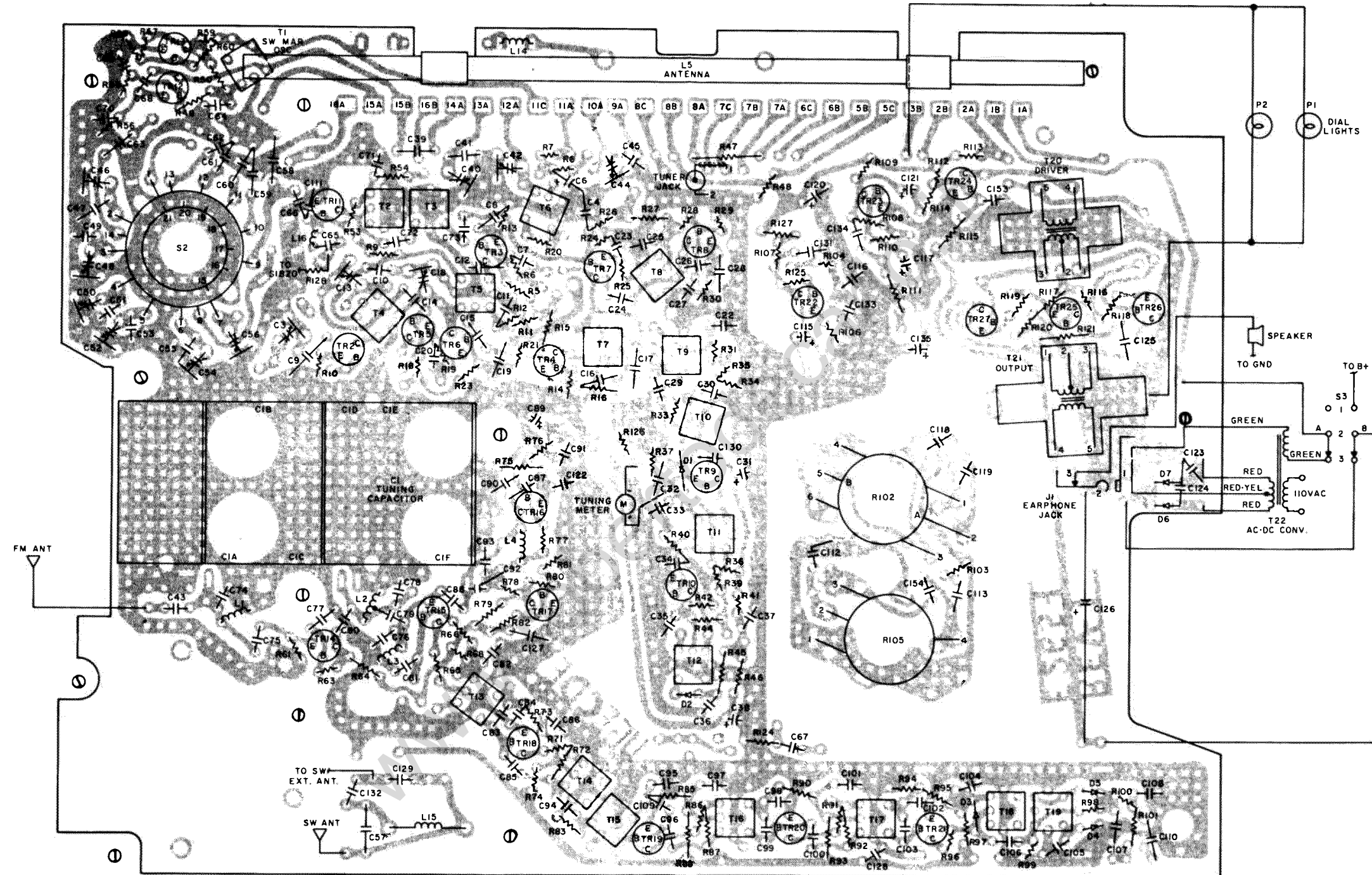


NOTES

- UNLESS OTHERWISE NOTED
CAPACITORS MORE THAN 1 = MMF
CAPACITORS LESS THAN 1 = MF
RESISTORS 1/2 WATT, K = 1000
- VOLTAGES ARE POSITIVE WITH RESPECT TO
GROUND UNDER NO SIGNAL CONDITIONS AND
VOLUME CONTROL MINIMUM.
- * 3. REPLACE PARTS WITH TYPE SHOWN IN PARTS
LIST OR TRANSISTOR SUBSTITUTION CHART.
- SI SHOWN IN FM POSITION.
- LINE SHOWN (→) IS BC SIGNAL PATH FROM
BC ANTENNA TO SPEAKER.
- LINE SHOWN (—○—) IS SW SIGNAL PATH FROM
SW ANTENNA TO SPEAKER.
- LINE SHOWN (—X—) IS FM SIGNAL PATH FROM
FM ANTENNA TO SPEAKER.
- LINE SHOWN (—■—) IS COMMON AUDIO PATH
FROM SI TO SPEAKER



General Electric P2900A



COMPONENT LAYOUT (TOP VIEW), MODEL P2900A