

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer turn tuning cap. fully closed and set pointer to last reference mark at low freq. end of dial.

Use insulated alignment screwdriver for adjusting.

Dummy antenna consists of a 200 MFD cap. in series with a 20 Microhenry choke, the choke being shunted by a 400 MFD cap. in series with a 100Ω carbon resistor.

AM ALIGNMENT

Loop should be maintained in same relative position to chassis as when receiver is in cabinet. Volume control should be at maximum position, output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1 .02 MFD	High side to Pin 7 (grid) of 6BE6. Low side to chassis.	456KC	AM (Center position)	Tuning cap. fully open.	Across voice coil	A1, A2, A3, A4	Adjust for maximum output
2 Dummy Ant.	High side to ext. AM Ant. lead. Low side to chassis.	1500KC	"	1500KC	"	A5	" " " "
3 "	"	"	"	Tune for maximum output.	"	A6	Adjust for maximum output. Check calibration at 600KC, 1000KC and 1500KC.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60% modulation and 450KC sweep. Connect the synchronized sweep voltage from the signal generator to the horizontal input of scope. This voltage may be taken from the power line if signal generator does not have a sync. voltage output. There may be some phase shift encountered between signal generator and scope horizontal sweep. If provision is made for this in the scope, rotate phase control until a single trace pattern is obtained. If no provision is made for this, the same thing may be accomplished by shunting a .05 MFD capacitor from scope horizontal input to ground and inserting a 250KΩ potentiometer in series with the horizontal input. Adjustment of this potentiometer should produce coincidence of the two curves.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
4 .05 MFD	High side to Pin 1 (grid) of 6BA6 FM Driver Tube (4). Low side to chassis.	10.7MC (Freq. Mod.)	FM (Clockwise)	Tuning cap. fully open.	Vertical input in series with .1 MFD cap. to Point Ⓢ. Ground to chassis	A7, A8	Alternately adjust A7 for maximum amplitude and straightness of diagonal line and A8 for placement of center of diagonal line on horizontal sweep line per figure 1.
5 .05 MFD	High side to Pin 1 (grid) of 6BA6 1st IF Tube (3). Low side to chassis.	"	"	"	"	A9, A10	Adjust for maximum amplitude and straightness of diagonal line of pattern per Fig. 1.
6 .05 MFD	High side to Pin 8 (grid) of 7F8. (Pin 2 of 12AT7) Low side to chassis.	"	"	"	"	A11, A12	Adjust for maximum amplitude and straightness of diagonal line of pattern per Fig. 1. Continue with FM-RF Alignment in Step 8.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND

Use low range output meter and attenuate output of signal generator to maintain approximately maximum reading on meter.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
4 .02 MFD	High side to Pin 1 (grid) of 6BA6 FM Driver Tube (4). Low side to chassis.	10.7MC (400% Amp. Mod.)	FM (Clockwise)	Tuning cap. fully open.	Across voice coil	A7, A8	Adjust for maximum output
5 .02 MFD	High side to Pin 1 (grid) of 6BA6 1st IF Tube (3). Low side to chassis.	"	"	"	"	A9, A10	" " " "
6 .02 MFD	High side to Pin 8 (grid) of 7F8. (Pin 2 of 12AT7) Low side to chassis.	"	"	"	"	A11, A12	" " " "
7 .02 MFD	"	"	"	"	"	A8	Adjust for minimum output. Continue with FM-RF Alignment in Step 8.

FM RF ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
8 300Ω carbon res.	High side to center FM Ant. terminal. Low side to chassis.	106MC (Unmodulated)	FM	106MC	DC probe to Point Ⓢ. Common to chassis	A13	Adjust for maximum deflection.
9 "	"	"	"	Tune for maximum deflection.	"	A14	Rock tuning cap. and adjust for maximum deflection. Check calibration at 98MC.

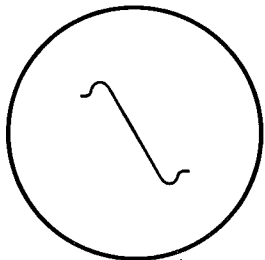
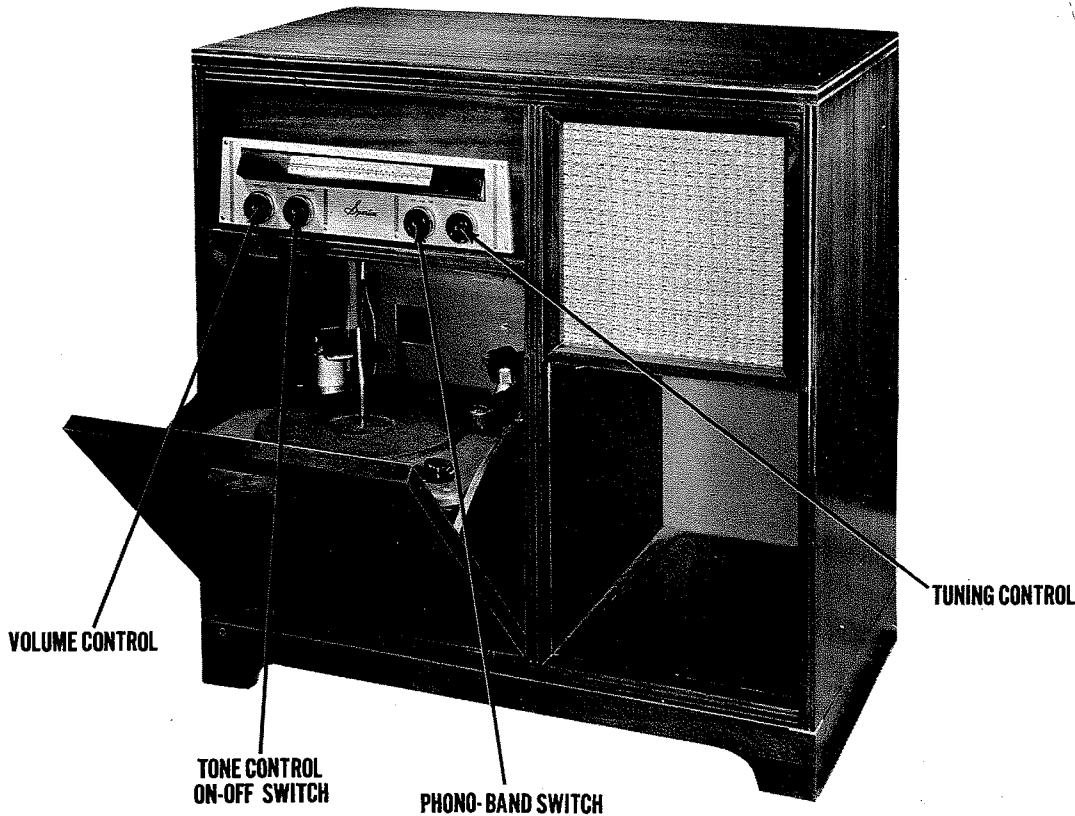


FIG. 1

SPARTON MODELS 121, 1058, 1059, 1060, 1061, 1064, 1072 (Ch. 8L9)



SPARTON MODEL 1059

TRADE NAME	Sparton, Models 121, 1058, 1059, 1060, 1061, 1064, 1072 (Ch. 8L9)	
MANUFACTURER	Sparks-Withington Co., Jackson, Michigan.	
TYPE SET	AC operated combination phono-radio, AM-FM superheterodyne receiver with loop antenna.	
TUBES (EIGHT)	Types 7F8 or 12AT7 FM RF-Mixer, 6BE6 AM Converter-FM Oscillator, 6BA6 1st IF Amp., 6BA6 2nd FM IF Amp., 6AL5 FM Detector, 6AT6 AM Det-AVC-AF., 6V6GT Power Output, 5Y3GT Rectifier.	
POWER SUPPLY	110-120 Volts AC	
RATING	.53 Amp. @ 117 Volts AC	
TUNING RANGE	BROADCAST 535-1610KC	FREQ. MOD. 88-108MC

DISASSEMBLY INSTRUCTIONS

1. Remove four push-on type control knobs.
2. Disconnect phono motor plug and remove phono pickup plug at rear of chassis.
3. Remove loop leads from clips on cabinet.
4. Remove speaker leads from clips on chassis.
5. Remove two 11/32" hex nuts holding speaker. Remove speaker.
6. Remove two screws from right angle mounting brackets at rear of chassis. Remove brackets, then remove chassis.

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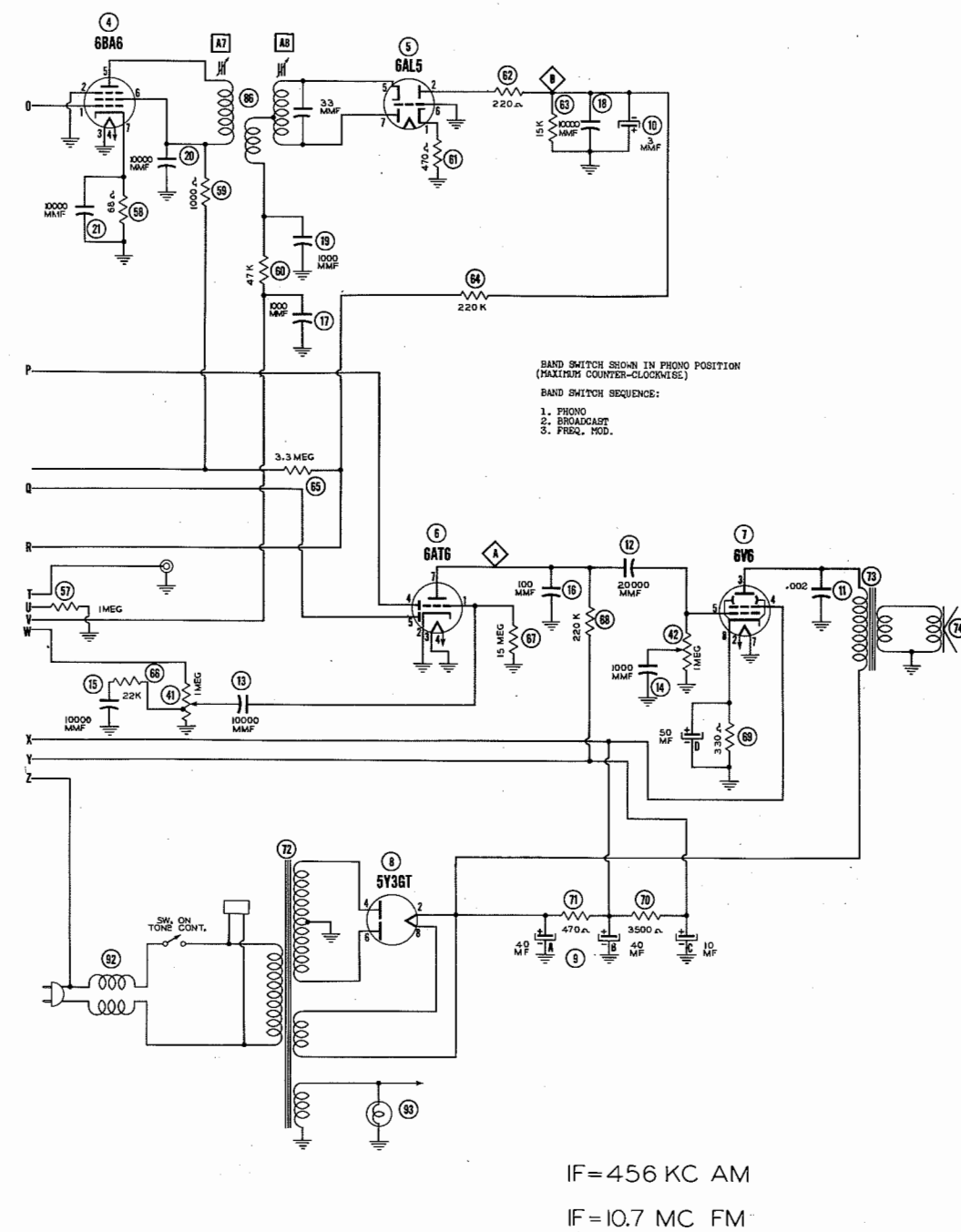
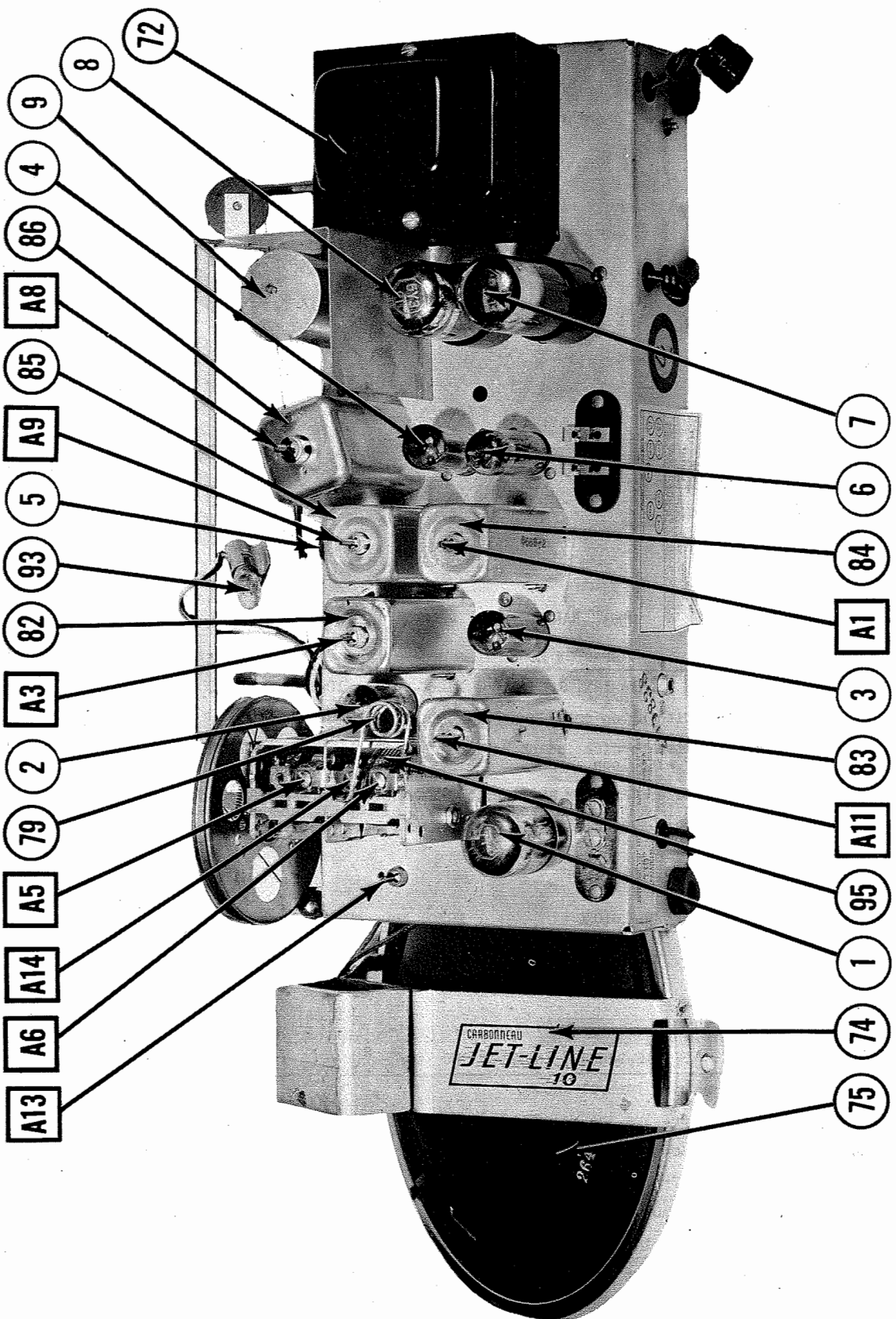
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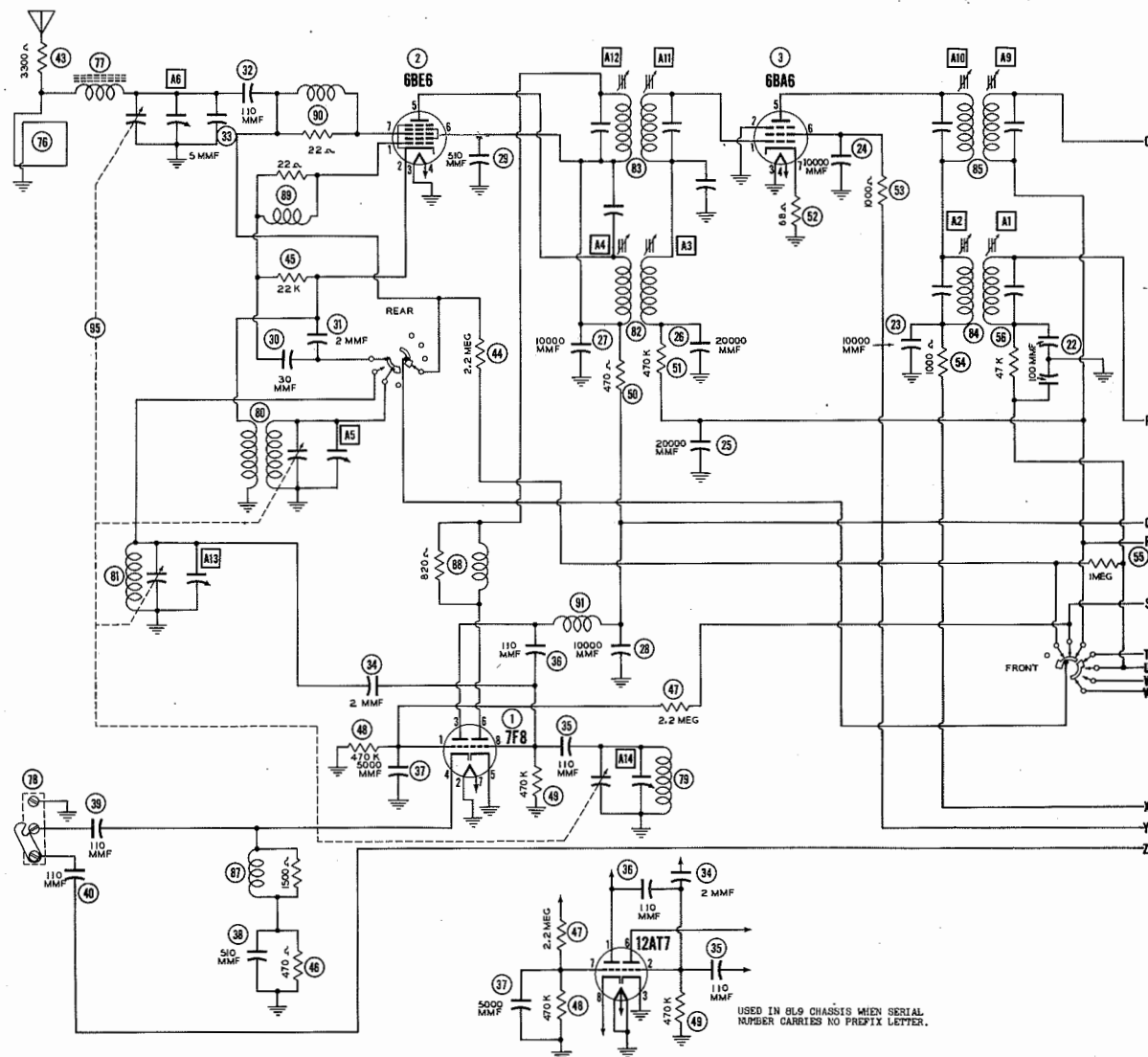
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DATE 3/49-495-19 SET #57 FOLDER #19

SPARTON MODELS 121, 1058, 1059, 1060, 1061, 1064, 1072 (Ch. 8L9)



A PHOTOFACT STANDARD NOTATION SCHEMATIC
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VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	7F8	0V	0V	105VDC	1VDC	0V	100VDC	5.6VAC	
2	6BE6	4-5.4VDC	0V	5.6VAC	0V	105VDC	100VDC	-5VDC	
3	6BE6	4-5.4VDC	0V	5.6VAC	0V	100VDC	100VDC	-7VDC	
4	6BA6	-1VDC	0V	5.6VAC	0V	20VDC	105VDC	1.1VDC	
5	6BA6	-4VDC	0V	5.6VAC	0V	100VDC	90VDC	1.1VDC	
6	6AL5	-2VDC	0V	5.6VAC	0V	-4VDC	0V	1.1VDC	
7	6AT6	-2VDC	0V	5.6VAC	0V	-1VDC	-1VDC	20VDC	
8	6V6GT	0V	6.6VAC	245VDC	235VDC	0V	105VDC	0V	12.5VDC
9	6V6GT	0V	280VDC	0V	250VAC	0V	250VAC	0V	250VDC

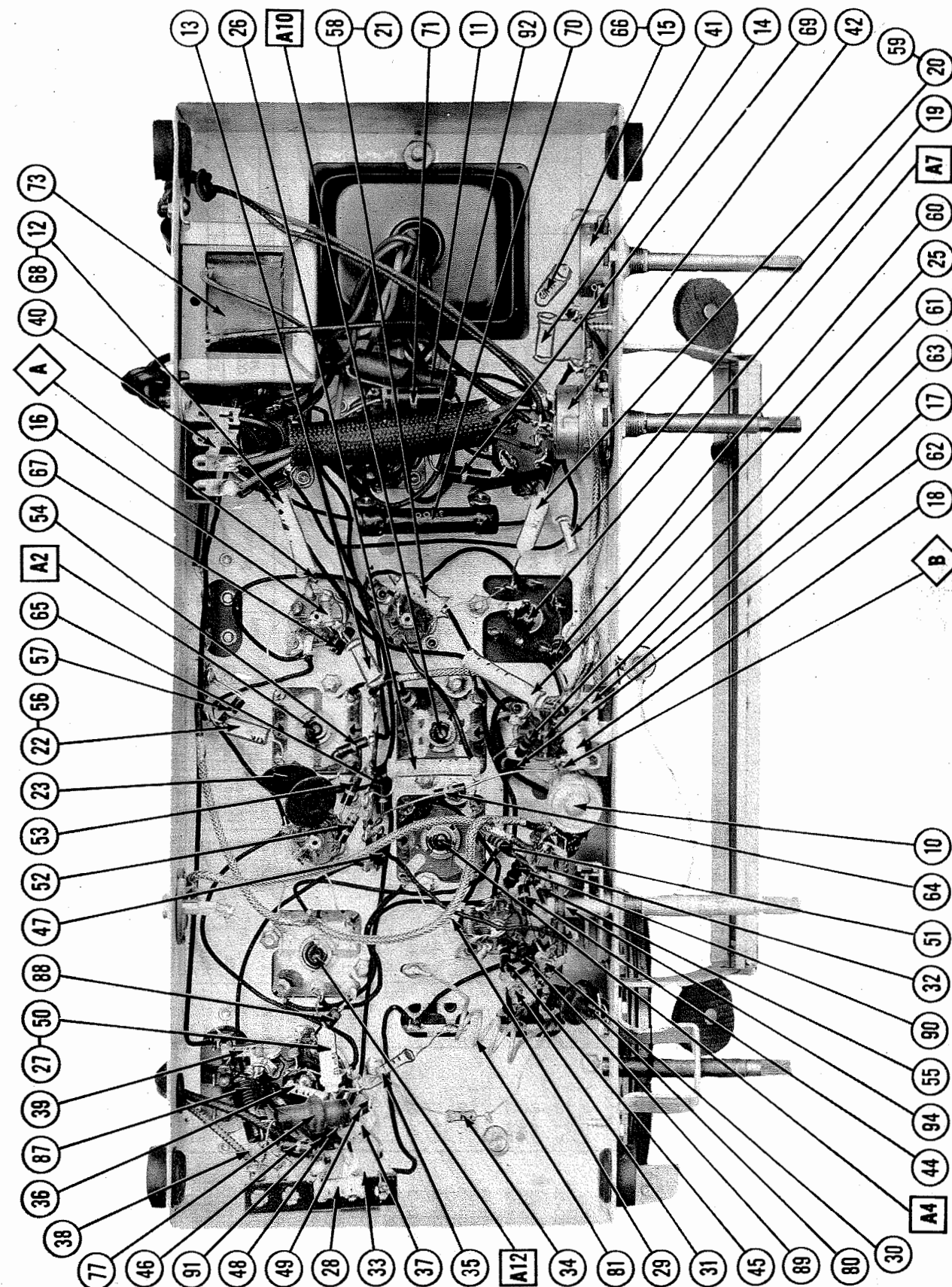
RESISTANCE READINGS IN THE B+ CIRCUITS MAY VARY WIDELY
ACCORDING TO THE CONDITION OF THE FILTER CAPACITORS

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	7F8	400KΩ	0Ω	250KΩ	25Ω	0Ω	250KΩ	1Ω	470KΩ
2	6BE6	22KΩ	5Ω	1Ω	0Ω	250KΩ	250KΩ	5.5 Meg	
3	6BE6	22KΩ	5Ω	1Ω	0Ω	250KΩ	250KΩ	4 Meg	
4	6BA6	3.1 Meg	0Ω	1Ω	0Ω	250KΩ	250KΩ	68Ω	
5	6BA6	210KΩ	0Ω	1Ω	0Ω	250KΩ	250KΩ	68Ω	
6	6AL5	470Ω	15KΩ	1Ω	0Ω	1.1 Meg	0Ω	1.1 Meg	
7	6AT6	15 Meg	0Ω	1Ω	0Ω	590KΩ	1.5 Meg	370KΩ	
8	6V6GT	0Ω	1Ω	250KΩ	250KΩ	1 Meg	250KΩ	0Ω	330Ω
9	6V6GT	Inf.	250KΩ	Inf.	95Ω	Inf.	88Ω	Inf.	250KΩ

THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

- DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common negative.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance on component values makes possible a variation of $\pm 10\%$ in voltage and resistance readings.
- Volume control at maximum, no signal applied for voltage measurements.



PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		INSTALLATION NOTES
		SPARTON PART No.	BMA BASE TYPE	
1A	FM RF Mixer	7P8	8BM	
2	AM Conv. Osc.	12AT7		
3	1st IF Amp.	6BE6	7CH	
4	FM 2nd IF	6BA6	7BK	
5	FM Detector	6AL5	6FT	
6	AM Det.-AVC-AF	6AT6	7BT	
7	Power Output	6V6GT	7AC	
8	Rectifier	5Y3GT		

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (OUTPUT)

ITEM No.	IMPEDANCE	RATING		REPLACEMENT DATA		INSTALLATION NOTES
		PRI. SEC.	DC RES.	SPARTON PART No.	THORDARIN PART No.	
73	500Ω	3.5Ω	38Ω	AB44061-1	A-3849	T22587 A-2902

SPEAKER

ITEM No.	RATINGS	REPLACEMENT DATA		INSTALLATION NOTES
		SPARTON PART No.	JENSEN PART No.	
74A	FIELD PM	VC IMP. 3.5Ω	ST-120† Mod. P10-S	Used in console models. †Drill new mounting holes. Replace output trans. to match 6-8Ω voice coil.
75	CONE DIA. VC DIA. 9 1/2" 1"			

§ Used in table models.

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		SPARTON PART No.	AEROVOX PART No.	
9A	40 450	PA4307-4	PAF62/4A*	EL-424*
B	40 450		BR255	TA-525
C	10 300			"
D	50 50			"
10	3 50	PA4308-1	PR8150/4	Cathode Bypass
11	.002 1000	PA4309-202	GT16D2	Stabilizing Cap.
12	20000 300	PA4330-12	GT452	Output Plate Bypass
13	10000 300	HK350-103	484-01	TC-12
14	10000 300	HK350-103	484-01	TC-11
15	10000 300	PA4330-14	GT451	TC-11
16	100 300	HK35F-101	1469-0001	TC-11
17	1000 300	HK350-102	1469-001	TC-11
18	10000 300	HK350-103	484-01	TC-11
19	1000 300	HK350-102	1469-001	TC-11
20	10000 300	PA4330-13	GT451	TC-11
21	10000 300	PA4330-11	484-01	TC-11
22A	100 300	PA4339-1	1469-0001	TC-11
B	100 300		1469-001	TC-11
23	10000 300	PA4334-2	484-01	TC-11
24	10000 300	HK350-203	GT451	TC-11
25	20000 300	HK350-203	484-02	TC-12
26	20000 300	HK350-203	484-02	TC-12
27	10000 300	PA4330-10	484-01	TC-11
28	10000 300	HK350-103	484-01	TC-11
29	510 300	HK350-511	1469-0005	TC-11
30	30 300	CC30H-300K	1468-0004	TC-11
31	2 300	CC30H-200K	1468-0004	TC-11
32	110 300	CC30H-111A	1468-0001	TC-11
33	5 300	CC30H-500K	1469-0005	TC-11
34	2 300	CC30H-111A	1469-0001	TC-11
35	110 300	CC30H-111A	1469-0001	TC-11
36	5000 300	HK350-502	GT451	TC-11
37	510 300	HK350-511	1469-0005	TC-11
38	110 300	CC30H-111A	1469-0001	TC-11
39	110 300	CC30H-111A	1469-0001	TC-11

*Parallel sections to obtain desired capacity.
Note 1-Item 12 and 68 are combined into one unit obtainable under manufacturers Part #PA4330-12.
Note 2-Item 15 and 68 are combined into one unit obtainable under manufacturers Part #PA4330-14.
Note 3-Item 15 and 68 are combined into one unit obtainable under manufacturers Part #PA4330-13.
Note 4-Item 21 and 59 are combined into one unit obtainable under manufacturers Part #PA4330-11.
Note 5-Item 22, 48B and 56 are combined into one unit obtainable under manufacturers Part #PA4329-1.
Note 6-Item 27 and 50 are combined into one unit obtainable under manufacturers Part #PA4330-10.

PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA		INSTALLATION NOTES
		SPARTON PART No.	CLAROSTAT PART No.	
41A	1 Meg.	PA4408-2	D13-137X	Volume Control tapped @ 100KΩ
B	5 Watt	Not Req.	AMS-3	Attach to 41A per instructions
42A	5 Watt	PA4400-10	D13-137	Tone Control
C	SWITCH	Ngc. Rgc.	AMS-3	Attach to 42A per instructions

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		SPARTON PART No.	IRC PART No.	
43	330Ω	BR128-332	BTS-3300	Or.-Or.-Red Series External Antenna
44	2 2 Meg.	BR128-225	BTS-225	Red-Red-Grn. AM Conv. Grid
45	22KΩ	BR128-225	BTS-22K	Red-Red-Or. Osc. Grid
46	470Ω	BR128-471	BTS-470	Yl.-Yl.-Br. FM RF Cathode
47	2 2 Meg.	BR128-225	BTS-225	Red-Red-Grn. FM RF Grid
48	470KΩ	BR128-474	BTS-470K	Yl.-Yl.-Yl. FM RF Grid
49	470KΩ	BR128-474	BTS-470K	Yl.-Yl.-Yl. FM Mixer Grid
50	470Ω	BR128-474	BTS-470K	Yl.-Yl.-Yl. Decoupling-See Note 6
51	470KΩ	BR128-680	BTS-1000	Blue-Gray-Blk. 1st IF Cathode
52	68Ω	BR12-102	BTS-1000	Br.-Blk.-Red 1st IF Screen
53	1000Ω	BR12-102	BTS-1000	Br.-Blk.-Red 1st IF Plate Decoupling
54	1000Ω	BR128-105	BTS-1 Meg.	Br.-Blk.-Grn. AVC Network
55	1 Meg.	BR128-105	BTS-1 Meg.	Diode Filter-See Note 5
56	47KΩ	BR12-105	BTS-1 Meg.	Br.-Blk.-Grn. Diode Load
57	1 Meg.			2nd IF Cathode-See Note 4
58	68Ω			2nd IF Decoupling-See Note 3
59	1000Ω	BR128-473	BTS-47K	Yl.-Yl.-Or. De-emphasis
60	47KΩ	BR128-471	BTS-470	Yl.-Yl.-Br. Balancing Resistor
61	470Ω	BR128-221	BTS-15K	Red-Red-Br.
62	220Ω	BR128-153	BTS-220K	Br.-Grn.-Or. Ratio Det. Diode Load
63	15KΩ	BR128-153	BTS-220K	Red-Red-Yl. AVC Network
64	220KΩ	BR128-224	BTS-5.3 Meg.	Br.-Or.-Grn. Bias
65	3.3 Meg.	BR128-335	BTS-22K	Tone Compensation-See Note 2
66	22KΩ			Br.-Grn.-Blue AF Grid
67	15 Meg.	BR128-156	BTS-220K	Or.-Or.-Br. Output Cathode
68	220KΩ	PA4200-8	AB-3500	Yl.-Yl.-Br.
69	220KΩ	BR128-331	BT-2-470	
70	330Ω	BR128-471		
71	47Ω			

Note 1-Item 68 & 12 are combined into one unit obtainable under manufacturers Part #PA4330-12.
Note 2-Item 68 & 15 are combined into one unit obtainable under manufacturers Part #PA4330-14.
Note 3-Item 59 & 21 are combined into one unit obtainable under manufacturers Part #PA4330-13.
Note 4-Item 59 & 21 are combined into one unit obtainable under manufacturers Part #PA4330-11.
Note 5-Item 59 & 21 are combined into one unit obtainable under manufacturers Part #PA4330-11.
Note 6-Item 50 and 27 are combined into one unit obtainable under manufacturers Part #PA4330-10.

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA		INSTALLATION NOTES
		SPARTON PART No.	THORDARSON PART No.	
72	117V AC 500V CT 4.8V AC 6.6V AC @ .55A @.08A DC @ 2.0A @ 2.5A	AB44013-1	P-6312#	T22R04# P-2952#

*Add series resistor to reduce plate voltage.
†Drill new mounting holes.