

SPARTON RADIO SERVICE MANUAL

Effective Oct. 1st, 1935

Bulletin 3F

Model 951 and 954—Battery Operated Chassis

WAVE RANGE 530-1600 K.C., Broadcast 2100-6300 Short Wave

P.M. Dynamic Speaker

VOLTAGE ANALYSIS AND RESISTANCE CHART

Tube	Location	Plate Mils	Plate Volts	Screen Volts	Control Grid Volts	RESISTANCE TO GROUND (3)		
						Plate	Grid	Screen
1C6	Converter	.1	80	45	(1)	12	1,000,000	50,000
34	1st I.F.	1	80	50	"	12	"	"
34	2nd I.F.	1	75	50	"	5000	"	"
1C6	2nd. Det.	.1	45	40	"	150,000	2,000,000	"
33	Output	8	130	130	1 (2)	500	—	—

Volume control on full, no signal. All readings for + or — 10%.

(1) Grid bias supplied by signal cannot be read by analyzer.

(2) As read on 10 volt scale of 1000 ohm per volt meter not true voltage.

(3) All resistance readings taken with battery wires disconnected and grounded.

ALIGNMENT PROCEDURE

NOTE—Before commencing alignment make sure that the dial is set so that with the selector plates in flush, the pointer points to the last division on the dial.

See bulletin 2F for full instructions.

1. INTERMEDIATE FREQUENCY AMPLIFIER—Set service oscillator at 345 K. C. and with test lead attached to 1C6 (converter) grid cap adjust the six condensers C8 for maximum reading on output meter.

2. OSCILLATOR TRIMMER—Set service oscillator at 1500 K. C. and connect test lead to yellow aerial lead, adjust trimmer C6 (on selector) until with signal tuned in dial points to 150.

3. OSCILLATOR PADDER—Set service oscillator at 600 K. C. and adjust padder (C7) until with signal tuned in dial points to 60. Re-check at 1500 as in section No. 2 above.

4. R. F. TRIMMERS—With service oscillator at 1500, adjust trimmers C4 and C5 for maximum output.

NOTE—In some cases better results will be obtained if C4 (the antenna trimmer) is adjusted with a station tuned in at 1400 K. C., when the set is connected to the aerial upon which it is to operate.

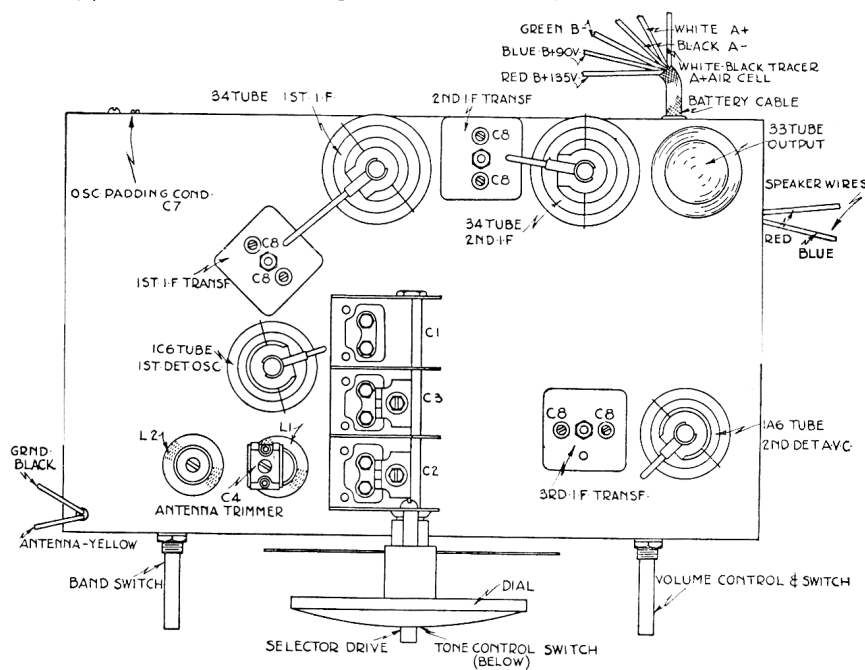
WHAT TO LOOK FOR IN CASE OF TROUBLE:

A—Audio Howl—check chassis mounting screws, these should be loose enough so that chassis is able to rest freely on rubber cushion washers. Also check for microphonic tube.

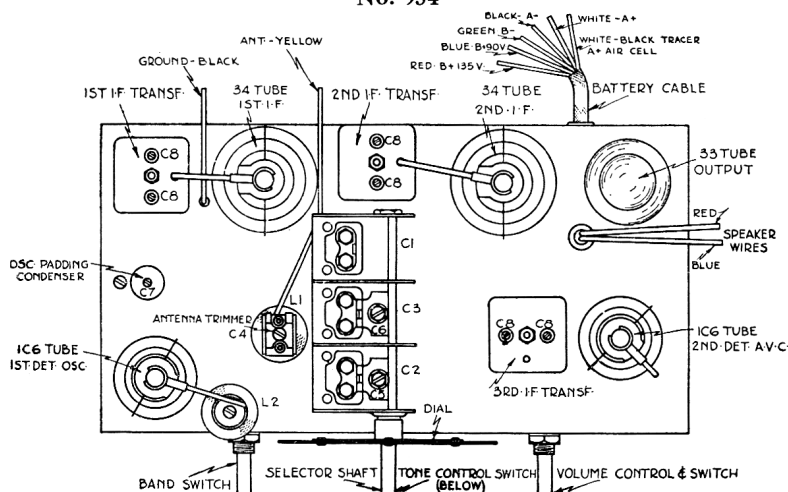
B—Poor selectivity—check alignment as above.

C—Excessive noise—check alignment, check aerial, too short an aerial will sometimes result in the picking up of too large a proportion of noise. A ground should ALWAYS be used.

NOTE—Models 951 and 954 are identical as far as the circuit is concerned. Model 951 has a disc dial and is mounted on a small chassis. Model 954 has an aeroplane dial and is mounted on a larger chassis.



No. 954

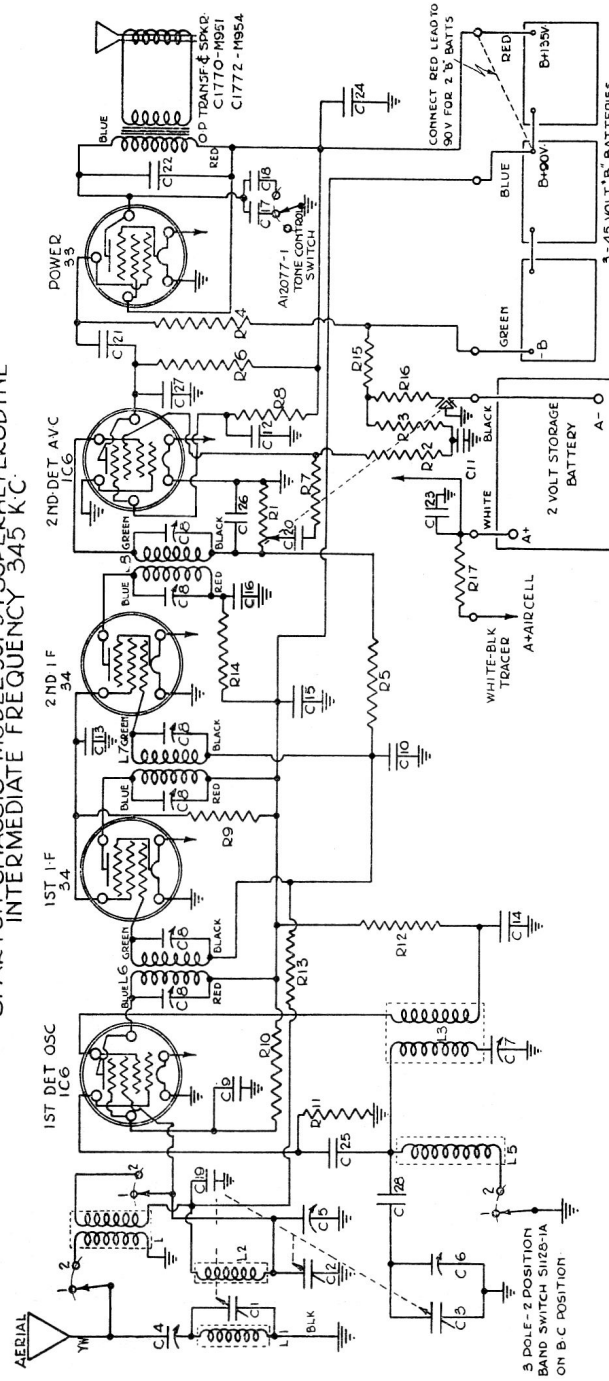


No. 951

All 2 volt tubes can be damaged by the application, even momentarily, of excessive filament voltage and even if it still lights it may not operate.

USE GENUINE SPARTON SERVICE PARTS

SCHEMATIC DIAGRAM SPARTON CHASSIS MODEL 951-54 SUPERHETERODYNE INTERMEDIATE FREQUENCY 345 KC.



C1	SELECTOR-RF PRIMARY SECTION	5100-2-B
C2	SELECTOR-RF SECONDARY	"
C3	SELECTOR-OSC SECTION	"
C4	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C5	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C6	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C7	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C8	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C9	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C10	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C11	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C12	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C13	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C14	OSC. TRIMMER (ON SELECTOR)	5100-2-A
C15	2 MFD-200V	"
C16	2 MFD-200V	"
C17	2 MFD-200V	"
C18	2 MFD-200V	"
C19	2 MFD-200V	"
C20	2 MFD-200V	"
C21	2 MFD-200V	"
C22	2 MFD-200V	"
C23	2 MFD-200V	"
C24	2 MFD-200V	"
C25	2 MFD-200V	"
C26	2 MFD-200V	"
C27	2 MFD-200V	"
C28	2 MFD-200V	"
C29	2 MFD-200V	"
C30	2 MFD-200V	"
C31	2 MFD-200V	"
C32	2 MFD-200V	"
C33	2 MFD-200V	"
C34	2 MFD-200V	"
C35	2 MFD-200V	"
C36	2 MFD-200V	"
C37	2 MFD-200V	"
C38	2 MFD-200V	"
C39	2 MFD-200V	"
C40	2 MFD-200V	"
C41	2 MFD-200V	"
C42	2 MFD-200V	"
C43	2 MFD-200V	"
C44	2 MFD-200V	"
C45	2 MFD-200V	"
C46	2 MFD-200V	"
C47	2 MFD-200V	"
C48	2 MFD-200V	"
C49	2 MFD-200V	"
C50	2 MFD-200V	"
C51	2 MFD-200V	"
C52	2 MFD-200V	"
C53	2 MFD-200V	"
C54	2 MFD-200V	"
C55	2 MFD-200V	"
C56	2 MFD-200V	"
C57	2 MFD-200V	"
C58	2 MFD-200V	"
C59	2 MFD-200V	"
C60	2 MFD-200V	"
C61	2 MFD-200V	"
C62	2 MFD-200V	"
C63	2 MFD-200V	"
C64	2 MFD-200V	"
C65	2 MFD-200V	"
C66	2 MFD-200V	"
C67	2 MFD-200V	"
C68	2 MFD-200V	"
C69	2 MFD-200V	"
C70	2 MFD-200V	"
C71	2 MFD-200V	"
C72	2 MFD-200V	"
C73	2 MFD-200V	"
C74	2 MFD-200V	"
C75	2 MFD-200V	"
C76	2 MFD-200V	"
C77	2 MFD-200V	"
C78	2 MFD-200V	"
C79	2 MFD-200V	"
C80	2 MFD-200V	"
C81	2 MFD-200V	"
C82	2 MFD-200V	"
C83	2 MFD-200V	"
C84	2 MFD-200V	"
C85	2 MFD-200V	"
C86	2 MFD-200V	"
C87	2 MFD-200V	"
C88	2 MFD-200V	"
C89	2 MFD-200V	"
C90	2 MFD-200V	"
C91	2 MFD-200V	"
C92	2 MFD-200V	"
C93	2 MFD-200V	"
C94	2 MFD-200V	"
C95	2 MFD-200V	"
C96	2 MFD-200V	"
C97	2 MFD-200V	"
C98	2 MFD-200V	"
C99	2 MFD-200V	"
C100	2 MFD-200V	"

*NOTE: M954-USE SELECTOR 5100-2-B

D1	500,000 Ω	VOLUME CONTROL	5100-2-A
D2	1 MEG	"	"
D3	1 MEG	"	"
D4	500,000 Ω	"	"
D5	500,000 Ω	"	"
D6	500,000 Ω	"	"
D7	500,000 Ω	"	"
D8	500,000 Ω	"	"
D9	500,000 Ω	"	"
D10	500,000 Ω	"	"
D11	500,000 Ω	"	"
D12	500,000 Ω	"	"
D13	500,000 Ω	"	"
D14	500,000 Ω	"	"
D15	500,000 Ω	"	"
D16	500,000 Ω	"	"
D17	500,000 Ω	"	"
D18	500,000 Ω	"	"
D19	500,000 Ω	"	"
D20	500,000 Ω	"	"
D21	500,000 Ω	"	"
D22	500,000 Ω	"	"
D23	500,000 Ω	"	"
D24	500,000 Ω	"	"
D25	500,000 Ω	"	"
D26	500,000 Ω	"	"
D27	500,000 Ω	"	"
D28	500,000 Ω	"	"
D29	500,000 Ω	"	"
D30	500,000 Ω	"	"
D31	500,000 Ω	"	"
D32	500,000 Ω	"	"
D33	500,000 Ω	"	"
D34	500,000 Ω	"	"
D35	500,000 Ω	"	"
D36	500,000 Ω	"	"
D37	500,000 Ω	"	"
D38	500,000 Ω	"	"
D39	500,000 Ω	"	"
D40	500,000 Ω	"	"
D41	500,000 Ω	"	"
D42	500,000 Ω	"	"
D43	500,000 Ω	"	"
D44	500,000 Ω	"	"
D45	500,000 Ω	"	"
D46	500,000 Ω	"	"
D47	500,000 Ω	"	"
D48	500,000 Ω	"	"
D49	500,000 Ω	"	"
D50	500,000 Ω	"	"
D51	500,000 Ω	"	"
D52	500,000 Ω	"	"
D53	500,000 Ω	"	"
D54	500,000 Ω	"	"
D55	500,000 Ω	"	"
D56	500,000 Ω	"	"
D57	500,000 Ω	"	"
D58	500,000 Ω	"	"
D59	500,000 Ω	"	"
D60	500,000 Ω	"	"
D61	500,000 Ω	"	"
D62	500,000 Ω	"	"
D63	500,000 Ω	"	"
D64	500,000 Ω	"	"
D65	500,000 Ω	"	"
D66	500,000 Ω	"	"
D67	500,000 Ω	"	"
D68	500,000 Ω	"	"
D69	500,000 Ω	"	"
D70	500,000 Ω	"	"
D71	500,000 Ω	"	"
D72	500,000 Ω	"	"
D73	500,000 Ω	"	"
D74	500,000 Ω	"	"
D75	500,000 Ω	"	"
D76	500,000 Ω	"	"
D77	500,000 Ω	"	"
D78	500,000 Ω	"	"
D79	500,000 Ω	"	"
D80	500,000 Ω	"	"
D81	500,000 Ω	"	"
D82	500,000 Ω	"	"
D83	500,000 Ω	"	"
D84	500,000 Ω	"	"
D85	500,000 Ω	"	"
D86	500,000 Ω	"	"
D87	500,000 Ω	"	"
D88	500,000 Ω	"	"
D89	500,000 Ω	"	"
D90	500,000 Ω	"	"
D91	500,000 Ω	"	"
D92	500,000 Ω	"	"
D93	500,000 Ω	"	"
D94	500,000 Ω	"	"
D95	500,000 Ω	"	"
D96	500,000 Ω	"	"
D97	500,000 Ω	"	"
D98	500,000 Ω	"	"
D99	500,000 Ω	"	"
D100	500,000 Ω	"	"

*NOTE: M954-USE SELECTOR 5100-2-B