

SERVICE BULLETIN



Northern Electric RADIO

MODEL 5300

5-Tube Mantel Model

AC Universal Superheterodyne

SERVICE INFORMATION



SPECIFICATIONS

GENERAL

5-Tube Superheterodyne A.C. Universal Radio Receiver housed in table model wooden cabinet.

1. FREQUENCY RANGE

Broadcast band--530 to 1600 KC

2. INTERMEDIATE FREQUENCY

455 K.C.

3. TUBES

Type	Function
12SA7	Converter
12SK7	I.F. Amplifier
12SQ7	Detector, A. V. C. and Audio Amplifier
50L6	Audio Output Amplifier
35Z5	Rectifier

4. A. V. C.

On 12SA7 Mixer and 12SK7 I.F. Amplifier

5. POWER SUPPLY

110-125 Volts, 25-60 Cycles -- A.C.
110-125 Volts D.C. (Reverse plug if set does not operate when plug is connected.)

6. POWER CONSUMPTION

30 Watts

7. AUDIO POWER OUTPUT

2.1 Watts

8. ANTENNA

Built-in loop renders an external antenna unnecessary in most installations. Should one be required, connect it to the red wire at the rear of the set.

9. GROUND

No ground is necessary for operation of this set.

10. AUDIO SYSTEM

Audio portion of 12SQ7 resistance -- capacity coupled to 50L6.

11. LOUDSPEAKER

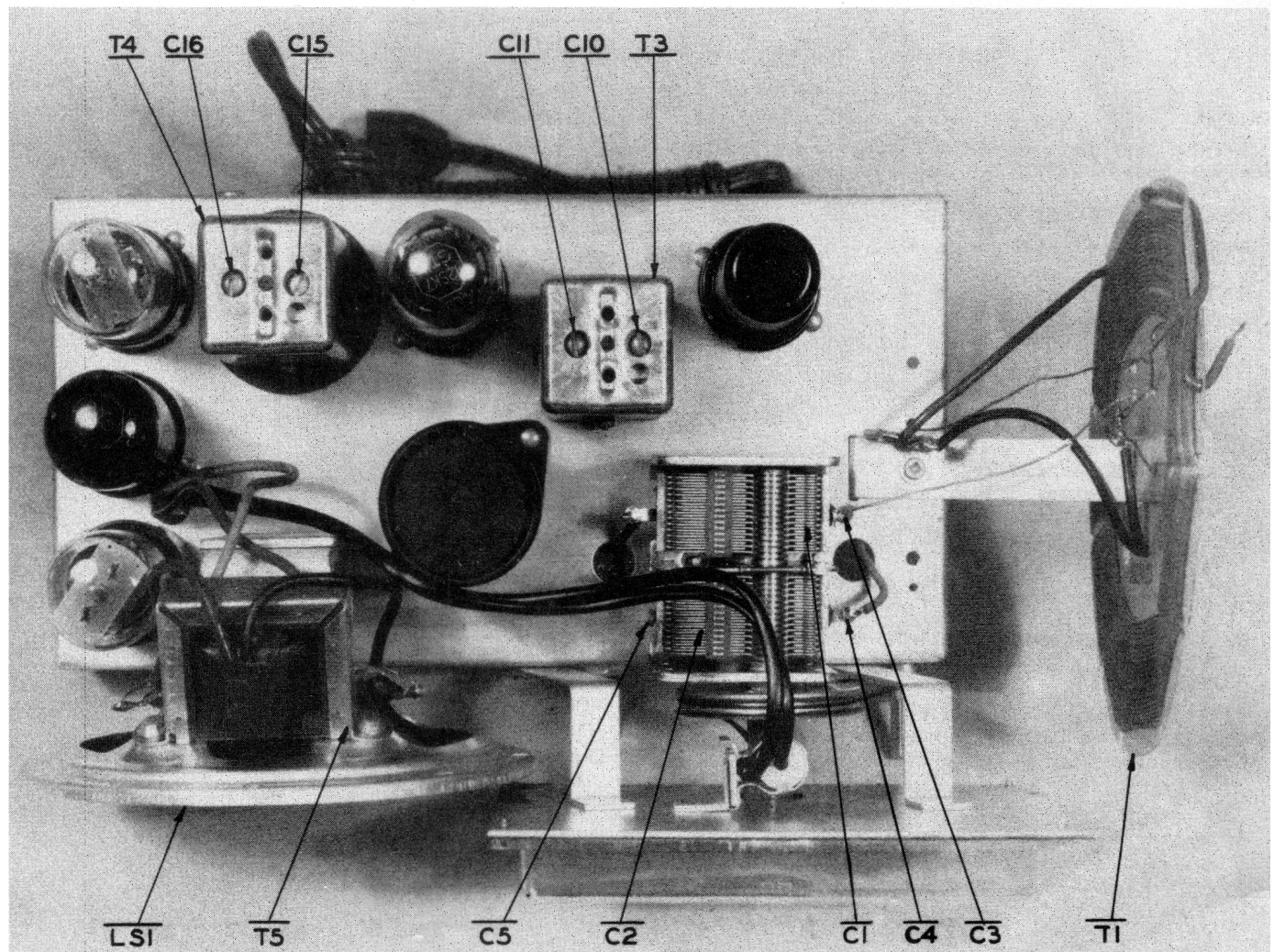
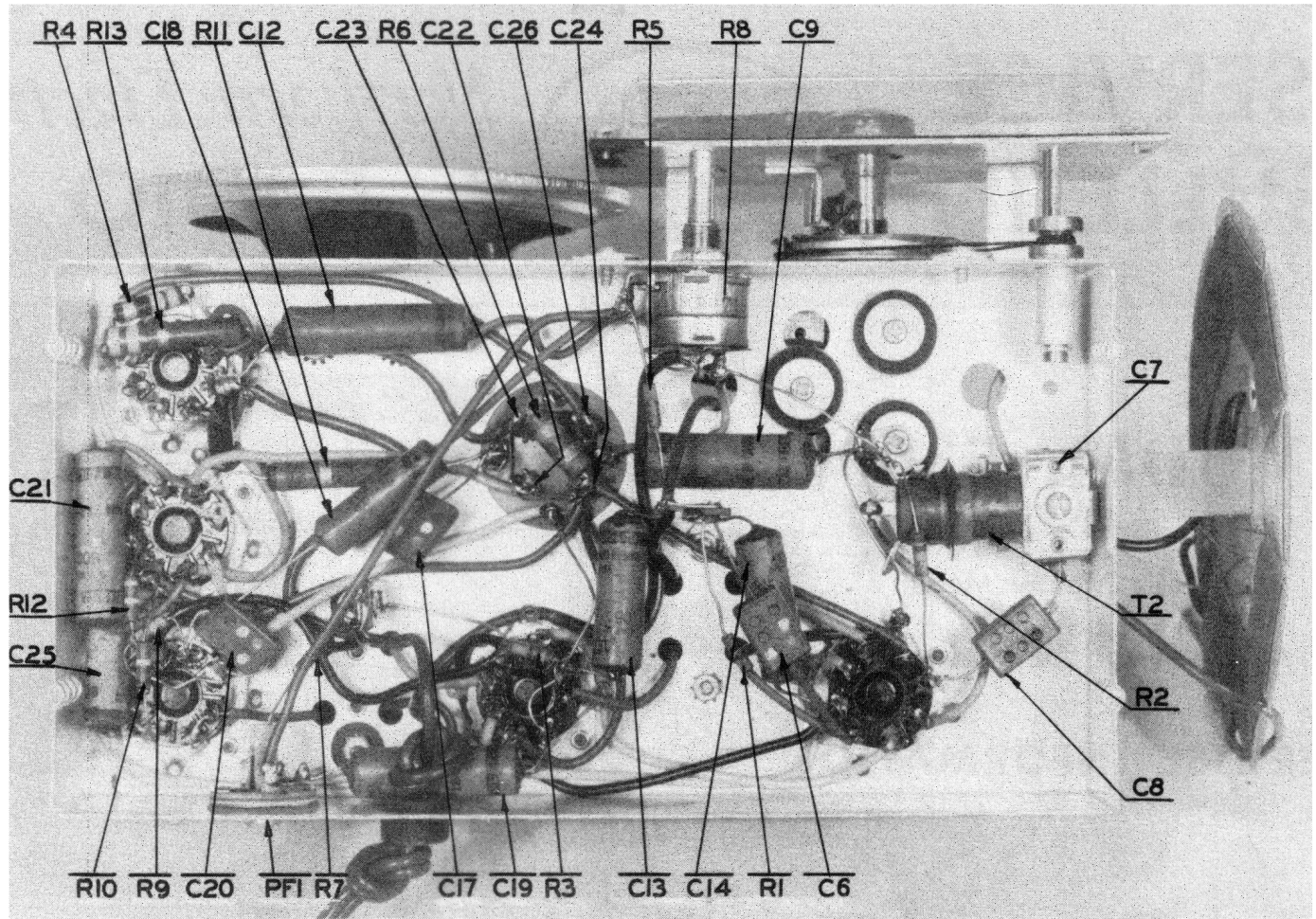
5" Permanent Magnet

12. CONTROLS

Left - Volume Control and ON-OFF Switch.
Right- Tuning Control.

13. DIMENSIONS

Chassis, Assembled (excluding shafts).
Length 11", Width 6 $\frac{3}{4}$ "
Height 6 $\frac{1}{2}$ "
Cabinet, Overall (including knobs)
Length 14 $\frac{1}{2}$ ", Width 9",
Height 8 $\frac{1}{2}$ ".



ALIGNMENT

Alignment procedure should be carried out according to the following table and in the order shown.

<i>Alignment Frequency</i>	<i>Dummy Antenna</i>	<i>Receiver Connection</i>	<i>Items to be adjusted for maximum output and their location.</i>
I. F. 455 KC	.1 Mfd (Paper)	Antenna Section Gang	I. F. Trimmers, items C10, C11, C15 and C16 on I. F. Transformers (tuning gang open)
B. C. 1400 KC	100 Mmf (Mica)	Antenna Wire	(a) Oscillator trimmers on gang, C4 and C5 (b) Antenna trimmer on gang C3.
B. C. 600 KC	100 Mmf (Mica)	Antenna Wire	Oscillator lag trimmer C7 Recheck at 1400 KC.

Replacement Parts

<i>Item</i>	<i>Description</i>	<i>Part No.</i>	<i>Item</i>	<i>Description</i>	<i>Part No.</i>
C1	Antenna, 420 mmf, Part of	R17111	R7	Resistor, 47,000 ohm, ½W	K10000C-473
C2	Oscillator, 420 mmf, Part of	R17111	R8	Volume Control, .5 meg.	R17184-1
C3	Trimmer Antenna, 1.5-20 mmf, Part of	R17111	R9	Resistor, 3.3 meg, ½W	K10000C-335
C4	Trimmer Oscillator, 1.5-20 mmf, Part of	R17111	R10	Resistor, .22 meg, ½W	K10000C-224
C5	Trimmer Oscillator, 1.5-20 mmf, Part of	R17111	R11	Resistor, 150 ohms, 1W	K10004B-151
C6	Capacitor, Mica, 390 mmf, 500V	R17111	R12	Resistor, .47 meg. ½W	K10000C-474
C7	Trimmer, 225-750 mmf, Part of	K10134C-391	R13	Resistor, 330 ohms, 1W	K10004C-331
C8	Capacitor, Mica 51 mmf, 500V	R13472	T1	Loop Assembly	R8234-23
C9	Capacitor, Paper .03 mfd, 600V	K10134B-510	T2	Oscillator Coil	R16104
C10	Trimmer, 20-150 mmf, Part of T3	R17183	T3	1st I. F. Transformer	R17113
C11	Trimmer, 20-150 mmf, Part of T3	K10128-253	T4	2nd I. F. Transformer	R17103-2
C12	Capacitor, Paper .025 mfd, 600V	K10129-503	T5	Output Transformer	K3873-9
C13	Capacitor, Paper, .05 mfd, 400V	K10129-503	PL1	Pilot Light	K2589-3
C14	Capacitor, Paper, .05 mfd, 400V	K10129-503	V1	Tube, 12SA7	
C15	Trimmer, 20-150 mmf, Part of T4		V2	Tube, 12SK7	
C16	Trimmer, 20-150 mmf, Part of T4		V3	Tube, 12SQ7	
C17	Capacitor, Mica, 390 mmf, 500V	K10134C-391	V4	Tube, 50L6GT	
C18	Capacitor, Paper, .01 mfd, 600V	K10128-103	V5	Tube, 35Z5GT	
C19	Capacitor, Paper, .02 mfd, 600V	K10128-203	D1	Switch, ON-OFF, Part of R8	
C20	Capacitor, Mica, 390 mmf, 500V	K10134C-391	PM1	A.C. Plug & Cord Assembly	K10319-1
C21	Capacitor, Paper, .02 mfd, 600V	K10128-203	D2	Phone Switch	
C22, C23, C24	Capacitor, Electrolytic, 20-40-40, 40, mfd 25V, 150V, 150V, 150V.	R8234-38	PF1	and Plug, Female	R17112
C25	Capacitor, Paper, .01 mfd, 600V	K10128-103	LS1	Loudspeaker	R17242
R1	Resistor, 1 meg. ½W	K10000C-105		Dial Plate	R8234-32
R2	Resistor, 22000 ohms, ½W	K10000C-223		Dial Scale	R17290-25
R3	Resistor, 2.2 meg. ½W	K10000C-225		Dial Indicator	R16334
R4	Resistor, 33 ohms, ½W	K10003C-330		Tuning Shaft	K10296-3
R5	Resistor, 2.2 meg, ½W	K10000C-225		Dial Cord	K10301
R6	Resistor, 2700 ohms, 1W	K10001C-272		Dial Spring	R13898
				Pilot Light Socket	K5517
				Knob Assembly Ivory	R14958-3
				Cabinet	R17290-31

