

SERVICE BULLETIN



Northern Electric RADIO

MODEL 5400

5-Tube Mantel Model AC Universal Superheterodyne

SERVICE INFORMATION



SPECIFICATIONS

GENERAL:

5-Tube Superheterodyne A.C. Universal Radio Receiver housed in table moulded plastic cabinet available in six colours.

Green	Ivory
Brown	Gold
Blue	Red

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
50LG	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

1.9 Watts

8. ANTENNA

Built-in high "Q" box type 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 9½", Width 4¾"

Height 6-3/8"

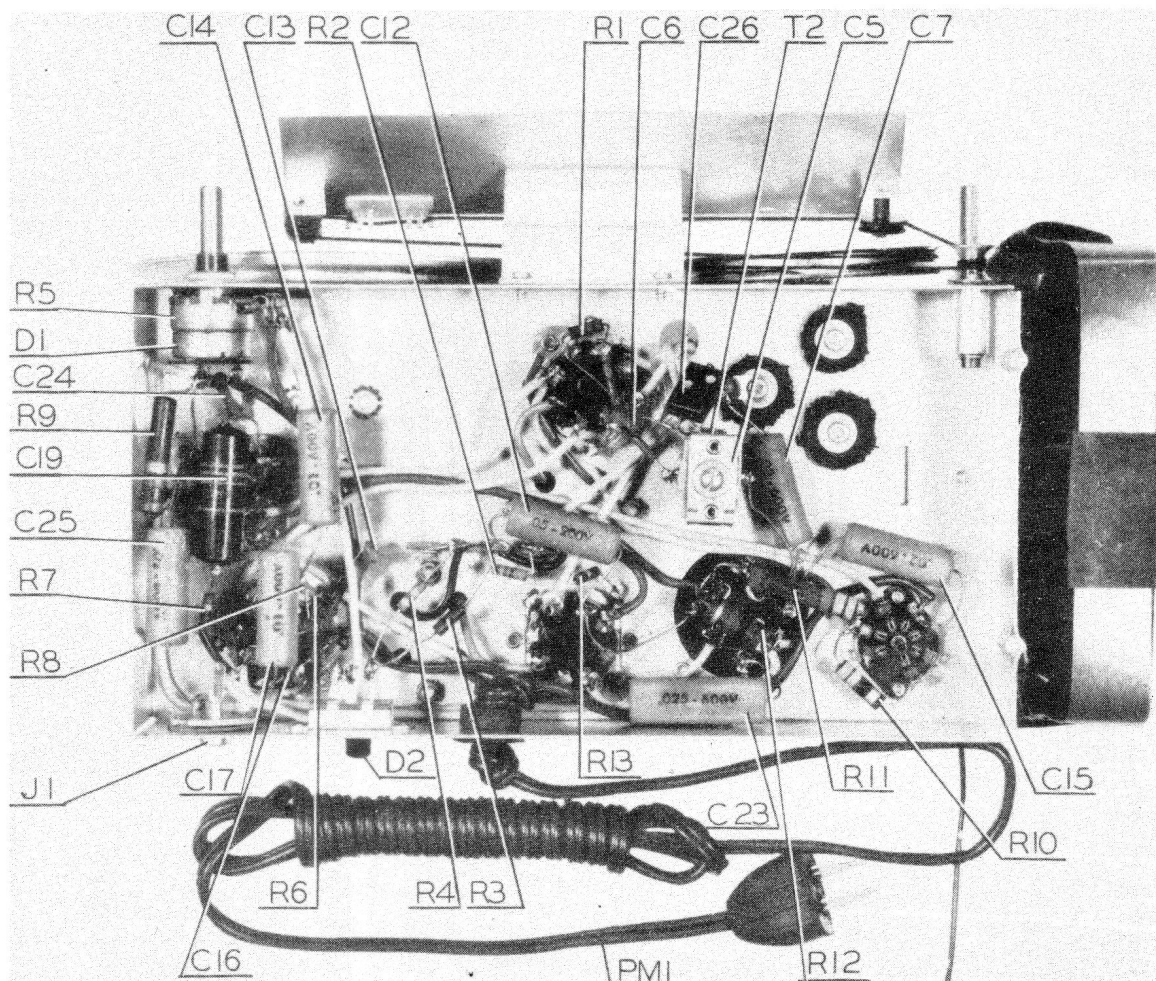
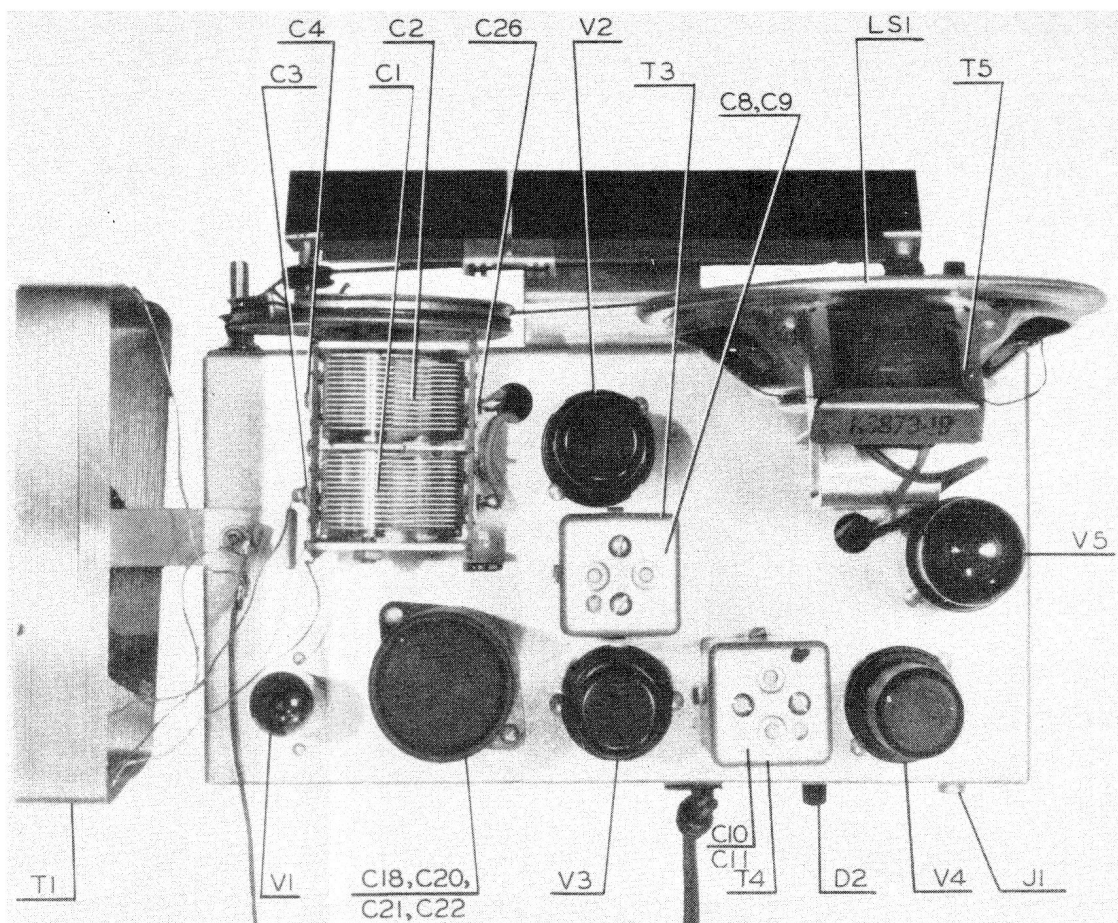
Cabinet, Overall (including knobs)

Length 13", Width 6-1/8"

Height 7½"

14. PHONO CONNECTION

At rear of chassis with switch.



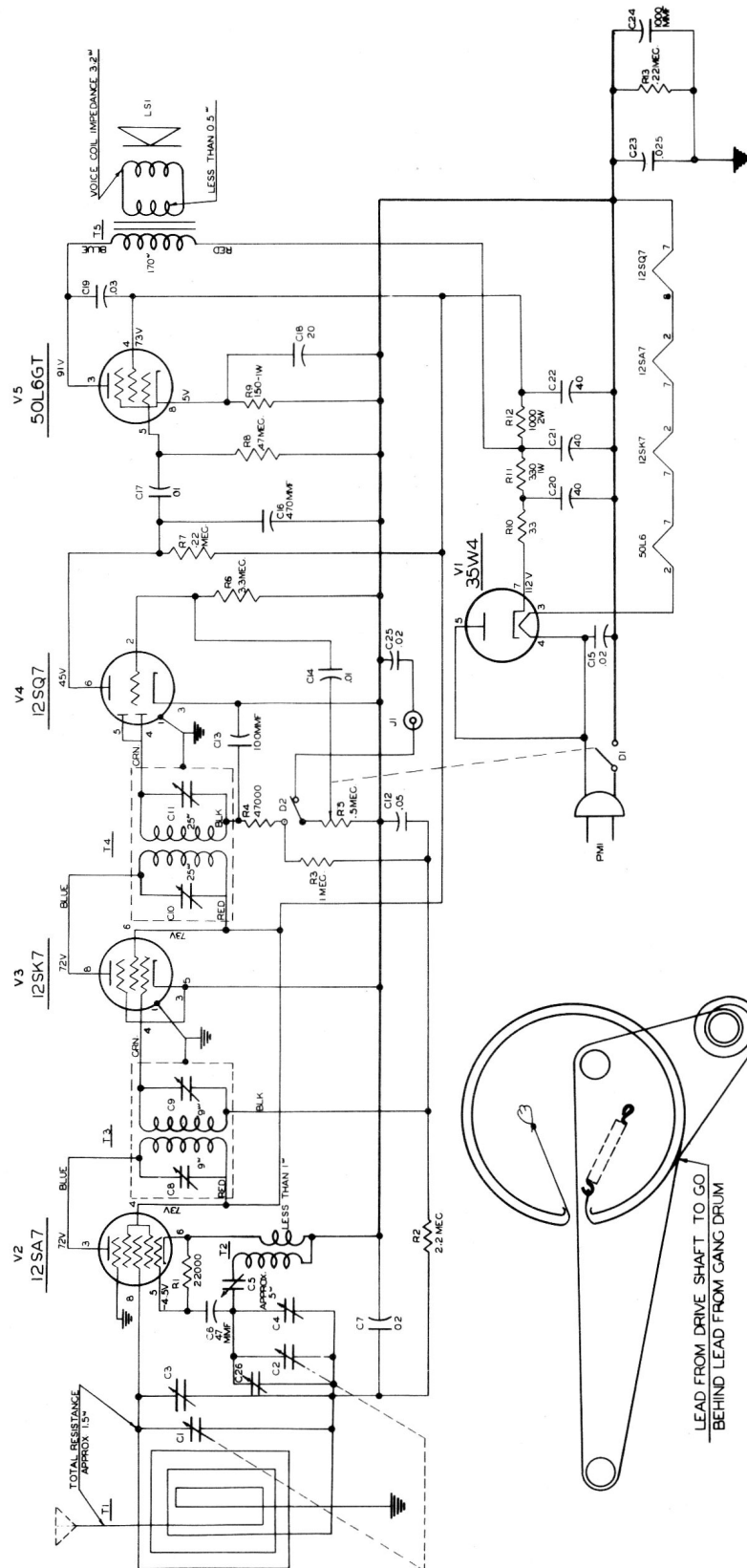
ALIGNMENT

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	.1Mfd. (Paper)	Antenna Section Gang	I.F. Trimmers, items C8, C9, C10 and C11 on I.F. Transformers (tuning gang open)
B.C. 1400 KC	100 Mmf (Mica)	Antenna Wire	(a) Oscillator trimmers on gang, C4 and C26. (b) Antenna trimmer on gang C3.
B.C. 600 KC	100 Mmf (Mica)	Antenna Wire	Oscillator lag trimmer C5. 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	Capacitor, Tuning R.F. Sec. 420 uuf	R17350-27	R13	Resistor, 220000 ohm ½w	K10000C-224
C2	Capacitor, Tuning Osc. Sec. 420 uuf	R17350-27	T1	Loop Antenna Assembly	R17350-23
C3	Trimmer, R.F. 1.5-20 uuf Part of	R17350-27	T2	Coil, Oscillator	R17350-39
C4	Trimmer, Osc. 1.5-20 uuf Part of	R17350-27	T3	1st I.F. Transformer	R17113
C5	Padder, Osc. 225-750 uuf	K1458-13	T4	2nd I.F. Transformer	R17103-2
C6	Capacitor, Ceramicon 47 uuf 500V	K10397C-470	T5	Output Transformer	K3873-19
C7	Capacitor, Paper .02 ufd 600V	K10372-203	V1	Tube, 35W4	
C8	Trimmer, 20-150 uuf Part of	R17113	V2	Tube, 12SA7	
C9	Trimmer, 20-150 uuf Part of	R17113	V3	Tube, 12SK7	
C10	Trimmer, 20-150 uuf Part of	R17103-2	V4	Tube, 12SQ7	
C11	Trimmer, 20-150 uuf Part of	R17103-2	V5	Tube, 50L6	
C12	Capacitor, Paper .05 ufd 200 V	K10391-503	D1	Switch, ON-OFF Part of	R17184-1
C13	Capacitor, Ceramicon 100 uuf 500 V	K10397C-101	PM1	A.C. Plug & Cord Assembly	K10319-31
C14	Capacitor, Paper .01 ufd 600 V	K10372-103	D2	Phono Switch	R17326
C15	Capacitor, Paper .02 ufd 600 V	K10372-203	J1	Socket, Phono	K5893-1
C16	Capacitor, Ceramicon 470 uuf 500 V	K10397C-471	LS1	Loudspeaker	R17350-37
C17	Capacitor, Paper .01 ufd 600 V	K10372-103		Socket, Wafer	K10405-2
C18,C20	25-150-150-150V				
C21,C22	Capacitor, Electrolytic 20-40-40-40	R8234-38		Socket, Octal	K10145-36
C19	Capacitor, Paper .03 ufd 600 V	K10372-303		Dial Plate Rivetting Assembly	R17350-32
C23	Capacitor, Paper .025 ufd 600 V	K10372-253		Dial Scale	R17350-25
C24	Capacitor, Ceramicon 1000 ufd 500 V	K10397C-102		Dial Indicator Assembly	R17350-24
C25	Capacitor, Paper .02 ufd 600 V	K10372-203		Dial Spring	R17338-1
C26	Trimmer, Osc. 1.5-20 uuf Part of	R17350-27		Dial Cord	K10301
R1	Resistor 22000 ohm ½w	K10000C-223		Drive Shaft, Tuning	R17350-57
R2	Resistor 2.2 meg. ½w	K10000C-225		Pulley, Plastic	K10215-1
R3	Resistor 1.0 meg. ½w	K10000C-105		Pulley, Plastic	K10215-3
R4	Resistor 47000 ohm ½w	K10000C-473		Clip, Retaining	K10216
R5	Volume Control 500000 ohm	R17184-1		Knob Assembly, Ivory	R14958-3
R6	Resistor 3.3 meg. ½w	K10000C-335		Knob Assembly, Brown	R14958-1
R7	Resistor 220000 ohm ½w	K10000C-224		Cabinet Assembly, Brown	R17350-30A
R8	Resistor 470000 ohm ½w	K10000C-474		Cabinet Assembly, Ivory	R17350-30B
R9	Resistor 150 ohm 1w	K10004B-151		Cabinet Assembly, Green	R17350-30C
R10	Resistor 33 ohm ½w	K10003C-330		Cabinet, Assembly, Gold	R17350-30D
R11	Resistor 330 ohm 1w	K10004C-331		Cabinet Assembly, Red	R17350-30E
R12	Resistor 1000 ohm 2w	K10002C-102		Cabinet Assembly, Blue	R17350-30F



SCHEMATIC DIAGRAM MODEL 5400 A.C. UNIVERSAL

NOTE-

1. ALL VOLTAGES ARE TAKEN FROM THE COMMON NEGATIVE AND ABOVE READING ARE TAKEN FOR IN LINE WITH A GROUND METER.
2. ALL RESISTORS TO BE 1/2 WATT UNLESS OTHERWISE STATED.
3. ALL CAPACITANCE VALUES IN MFD UNLESS OTHERWISE STATED.

Northern Electric

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KINGSTON TORONTO HAMILTON LONDON WINDSOR KIRKLAND LAKE TIMMINS SUDBURY
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