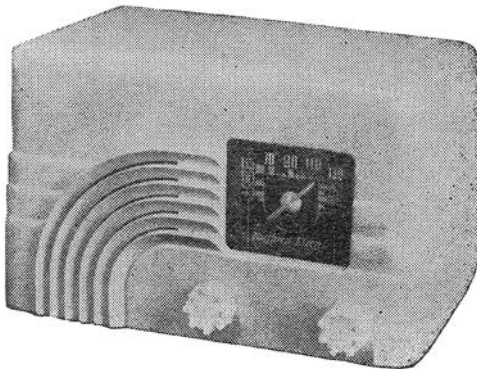


SERVICE BULLETIN



Northern Electric RADIO



Model B4100

4 Tube Mantel Model

Battery Operated Radio-Receiver

SERVICE INFORMATION

SPECIFICATIONS

GENERAL: 4 tube Battery Operated superheterodyne Radio Receiver, available in two models: Ivory and Brown.

1. FREQUENCY RANGE:

Broadcast band, 540 to 1600 K.C.

2. INTERMEDIATE FREQUENCY:

455 K.C.

3. TUBES:

Type	Function
1A7GT	Converter
1N5GT	I.F. Amplifier
1H5GT	2nd Detector, A.V.C. and 1st A.F. Amplifier
3Q5GT	Output amplifier

4. A.V.C.:

On type 1A7GT converter.

5. POWER SUPPLY:

"A" Battery — 1.5 volts 250 milliamperes. "B" Battery — 90 volts, 10 milliamperes.

6. POWER OUTPUT:

250 milliwatts.

7. ANTENNA:

An external antenna is required for the operation of this set. Connect to terminal "A" on back of cabinet. Use single wire 40 to 100 feet in length including lead-in.

8. GROUND:

Connect to terminal "G" on back of cabinet.

9. AUDIO SYSTEM:

Audio portion of 1H5GT resistance-capacity coupled to 3Q5GT power output tube.

10. LOUDSPEAKER:

5 inch Permanent Magnet.

11. CONTROLS:

Left Hand — Volume Control and "On-Off" Switch.
Right Hand — Tuning Control.

12. DIMENSIONS:

Chassis (excluding shafts) $10\frac{1}{2}$ " x $5\frac{3}{8}$ " x $5\frac{1}{8}$ ".

Cabinet—Length— $10\frac{5}{8}$ "

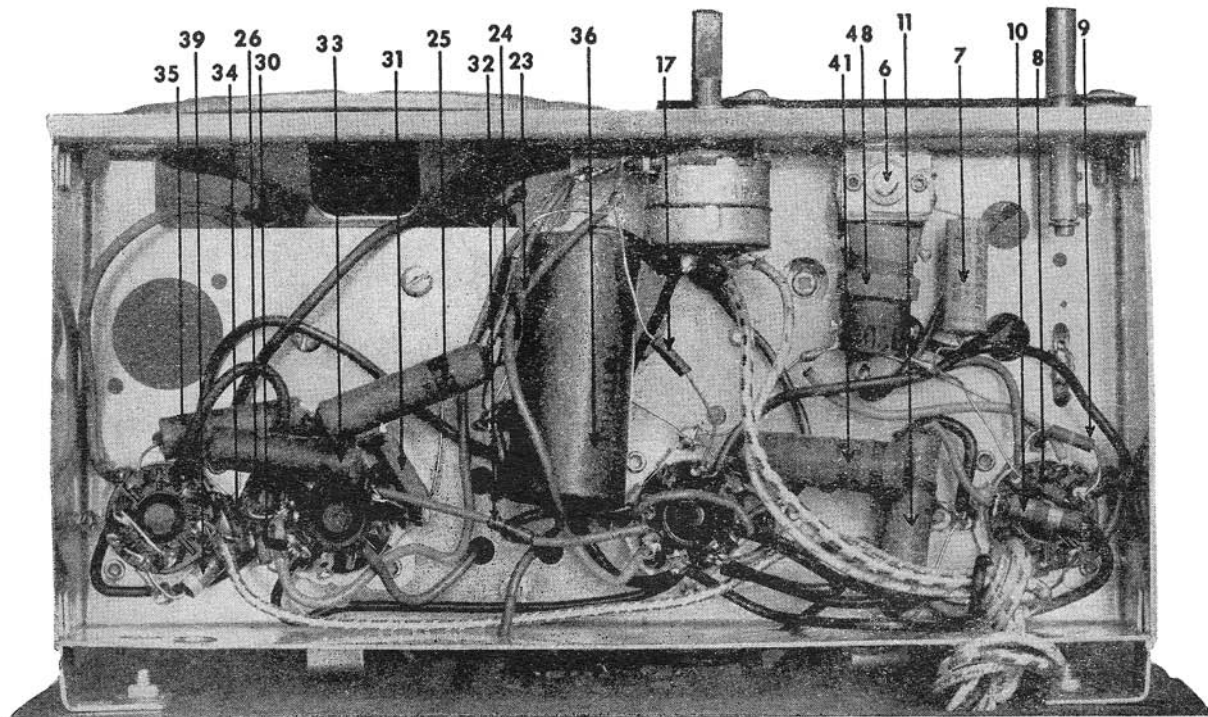
Height— $6\frac{1}{4}$ "

Depth—6"

Knobs protrude approx. $\frac{9}{16}$ ".

13. PHONOGRAPH CONNECTION:

Most record players using crystal pick-ups may be used with this receiver by connecting the centre wire of the pick-up cable to the terminal marked "P" and the shielding on the cable to terminal "G". When playing records, the receiver should be tuned to a quiet part of the dial.



B4100 Chassis Wiring

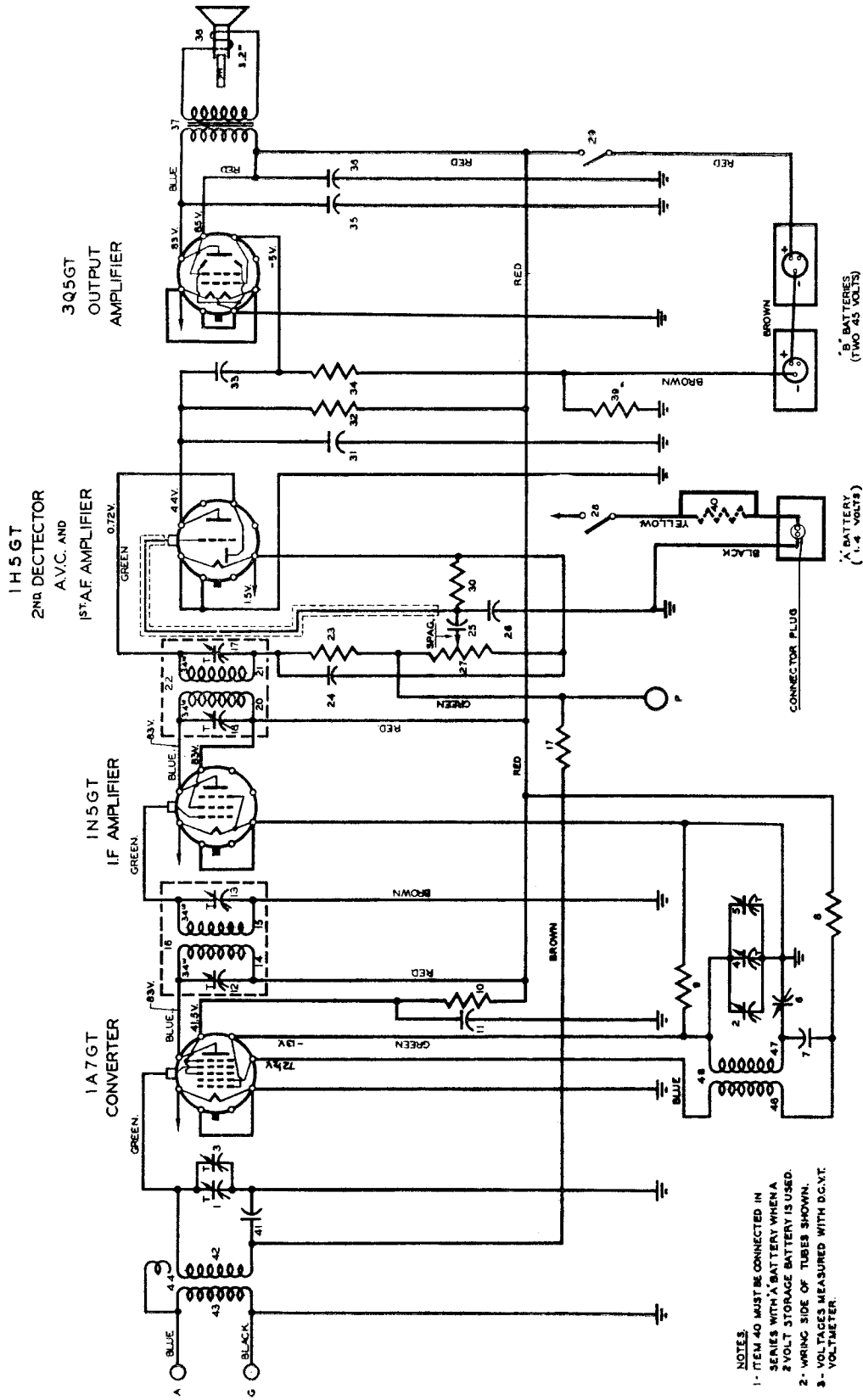
REALIGNING DETAILS

Alignment Procedure should be carried out according to the following table and in the order shown:

Alignment Frequency	Dummy Antenna	Receiver Connection	Items to be adjusted for maximum output and their location
I.F. 455 Kc.	0.1 mfd. (paper)	1A7GT grid cap	I.F. Trimmers, Items 17, 18, 13 and 14 on I.F. transformers (tuning gang open).
B.C. 1400 Kc.	100 mmf. (mica)	Antenna Terminal	Oscillator trimmers on gang, Items 4 and 5. Antenna trimmer on gang, item 3.
B.C. 600 Kc.	100 mmf. (mica)	Antenna Terminal	Oscillator lag trimmer, item 6, adjust while rocking gang.
			Repeat at 1400 Kc.

REPLACEMENT PARTS LIST

Item	Description	Part No.	Item	Description	Part No.
1	Capacitor Gang, Antenna section 420 mmfd., part of.....	R12734	38	Loudspeaker, 5" P.M.....	R12791
2	Capacitor Gang, Oscillator section 420 mmfd., part of.....	R12734	39	Resistor, 430 ohm. 1/2 watt.....	K10003A-431
3, 4, 5	Capacitor, Trimmer on gang 1.5—20 mmfd., part of.....	R12734	40	Resistor, 2.2 ohms, 1/2 watt.....	K10003B-22
6	Capacitor trimmer, part of R13472 trimmer and bracket assembly 300-625 mmfd.	K3860-8	41	Capacitor, Paper .05 mfd. 400 volts.....	K10129-503
7	Capacitor Paper, .002 mfd. 400 volt.....	K10128-202	44	Coil, Antenna Complete.....	R13376
8	Resistor 10,000 ohms 1/2 watt.....	K10000C-103	46	Coil, Oscillator Plate.....	
9	Resistor .22 meg. 1/2 watt.....	K10000C-224	47	Coil, Oscillator Grid.....	
10	Resistor 68,000 ohms 1/2 watt.....	K10000B-683	48	Coil, Oscillator Complete.....	R13015
11	Capacitor, Paper .1 mfd., 200 volts.....	K10130-104		MISCELLANEOUS	
12, 13	Capacitor Trimmer, 1st I.F. 20-150 mmfd.	R15373		Cord, Dial 10".....	K4636
16	Transformer, 1st I.F. Complete.....	R15375-2		Spring, Dial Cord.....	R12741
17	Resistor 2.2 meg 1/2 watt.....	K10000C-225		Scale, Dial assembly.....	R8145-24
18, 19	Capacitor Trimmer, 2nd I.F. 20-150 mmfd.	R15373		Shaft, Dial Drive.....	R12727
22	Transformer, 2nd I.F. Complete.....	R15307-2		Sockets, octal, tube.....	K10145-36
23	Resistor 47000 ohms 1/2 watt.....	K10000C-473		Indicator, Dial assembly.....	R13012
24	Capacitor, Mica 100 mmfd., 800 volts.....	K10134C-101		Bezel.....	R12951
25	Capacitor, Paper .01 mfd, 200 volts.....	K10128-103		Knob assembly, Tuning, Ivory.....	R15348-1
26	Capacitor, Mica 100 mmfd., 800 volts.....	K10134C-101		Knob assembly, Tuning, Brown.....	R15348-4
27	Control, Volume (with switch) .5 meg.....	K4754-5		Plug "A" Battery.....	K5550
28, 29	Switch, battery, part of.....	K4754-5		Plug "B" Battery.....	K4780-2
30	Resistor 10 meg. 1/2 watt.....	K10000C-106		Cable, Battery assembly.....	R13377
31	Capacitor, Mica 100 mmfd., 800 volts.....	K10134C-101		Back, Cabinet assembly.....	R8465-23
32	Resistor, 1 meg. 1/2 watt.....	K10000C-105		Strip, Resistor mounting.....	K10120-1
33	Capacitor, Paper .003 mfd. 600 volts.....	K10128-302		Trimmer and bracket assembly.....	R13472
34	Resistor 2.2 meg. 1/2 watt.....	K10000C-225		Cabinet, Plastic, Ivory.....	R13357A
35	Capacitor, Paper .005 mfd 600 volt.....	K10128-502		Cabinet, Plastic, Brown.....	R12829A
36	Capacitor, Electrolytic 16 mfd., 150 volt..	K10124-13		Knob assembly, (V.C. and switch) Ivory.....	R13372-1
37	Transformer, Output.....	K3873-16		Knob assembly, (V.C. and switch) Brown.....	R13372-4
				Speednut, dial cover mounting.....	R12979



SCHEMATIC DIAGRAM MODEL B4100 BATTERY OPERATED RECEIVER

Northern Electric
COMPANY LIMITED

HALFAX	MONCTON	QUEBEC	CHICOUTIMI	THREE RIVERS	SHERBROOKE	MONTREAL	OTTAWA
VAL D'OR	TORONTO	HAMILTON	LONDON	WINDSOR	KIRKLAND LAKE	TIMMINS	SUDBURY
PORT ARTHUR	WINNIPEG	REGINA	LETHBRIDGE	CALGARY	EDMONTON	VERNON	VANCOUVER
							VICTORIA