

SERVICE BULLETIN

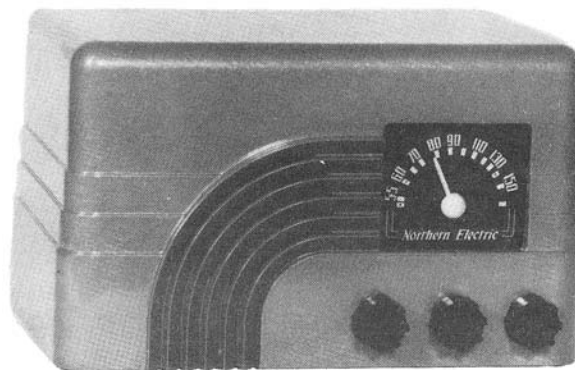


Northern Electric RADIO

Model 5110 M*

5-Tube Mantel Model

AC Universal Superheterodyne



SERVICE INFORMATION

SPECIFICATIONS

GENERAL:

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

MODELS:

5110M Ivory
5110M Gold
5110M Green
5110M Blue
5110M Rose

1. FREQUENCY RANGE:

Broadcast band -- 540 to 1570 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

Spool of flexible aerial wire attached to 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

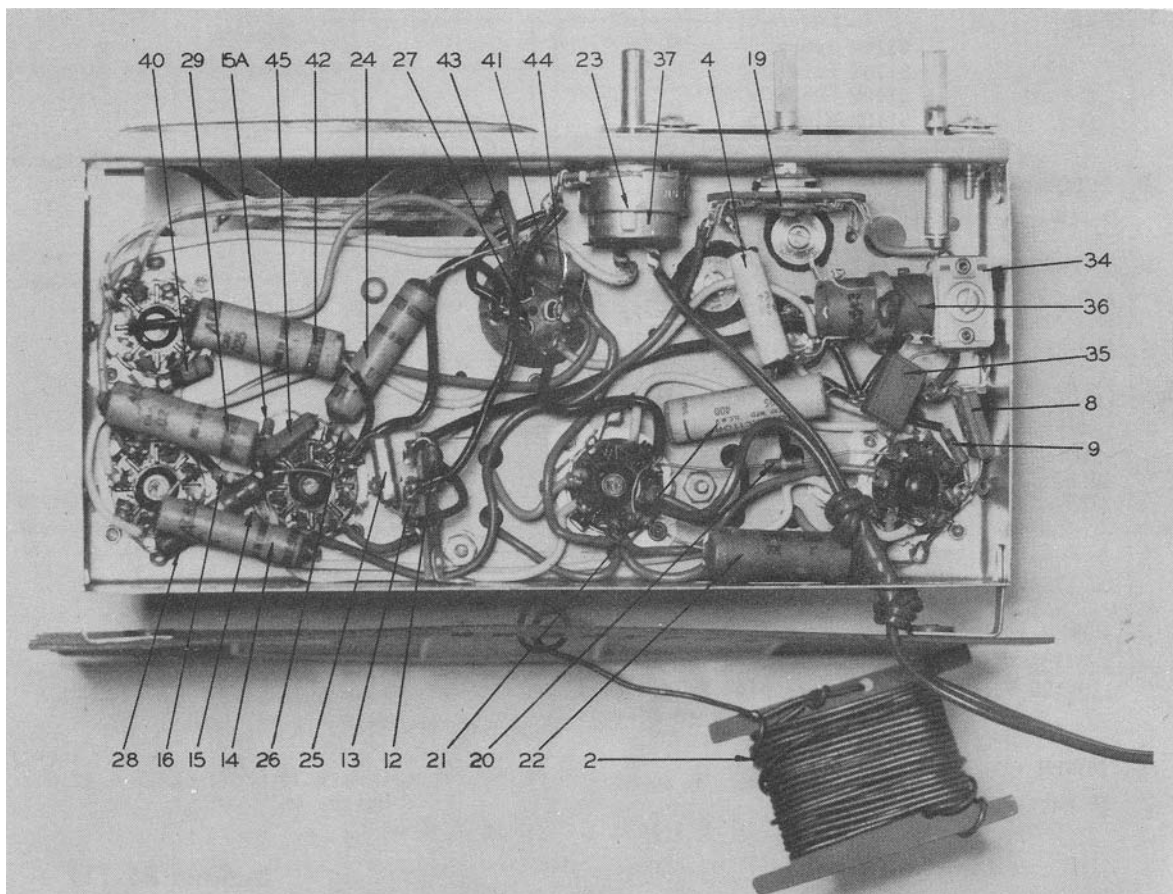
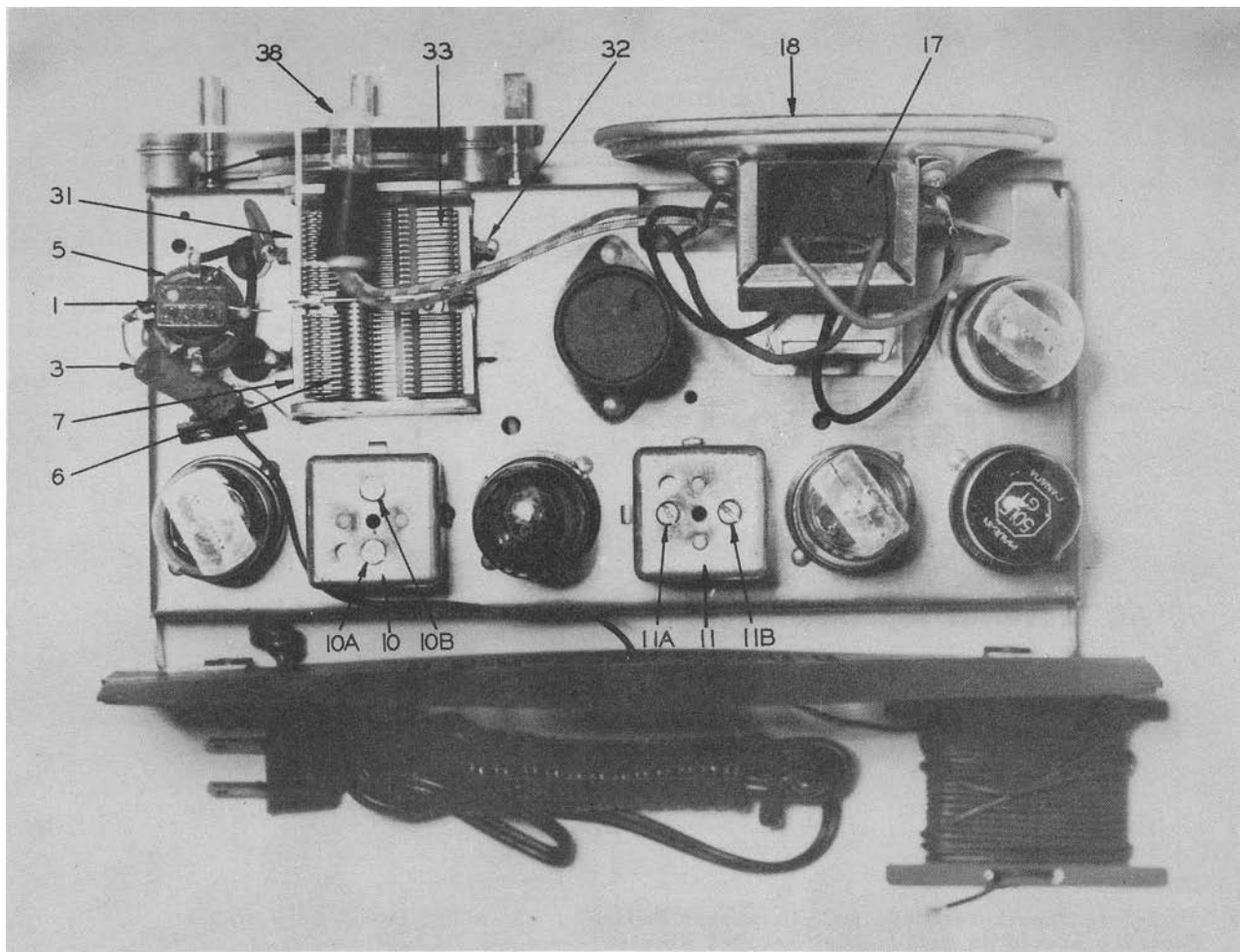
5" Permanent Magnet

12. CONTROLS

Left - Volume Control and ON-OFF Switch.
*Center - Two position tone control (Above Serial 2930 only)
Right - Tuning Control

13. DIMENSIONS

Chassis, Assembled (excluding shafts).
Length 10 11/32", Width 5 3/8",
Height 5 15/16"
Cabinet, Overall (including knobs)
Length 10 5/8", Width 6 9/16",
Height 6 1/4"



ALIGNMENT

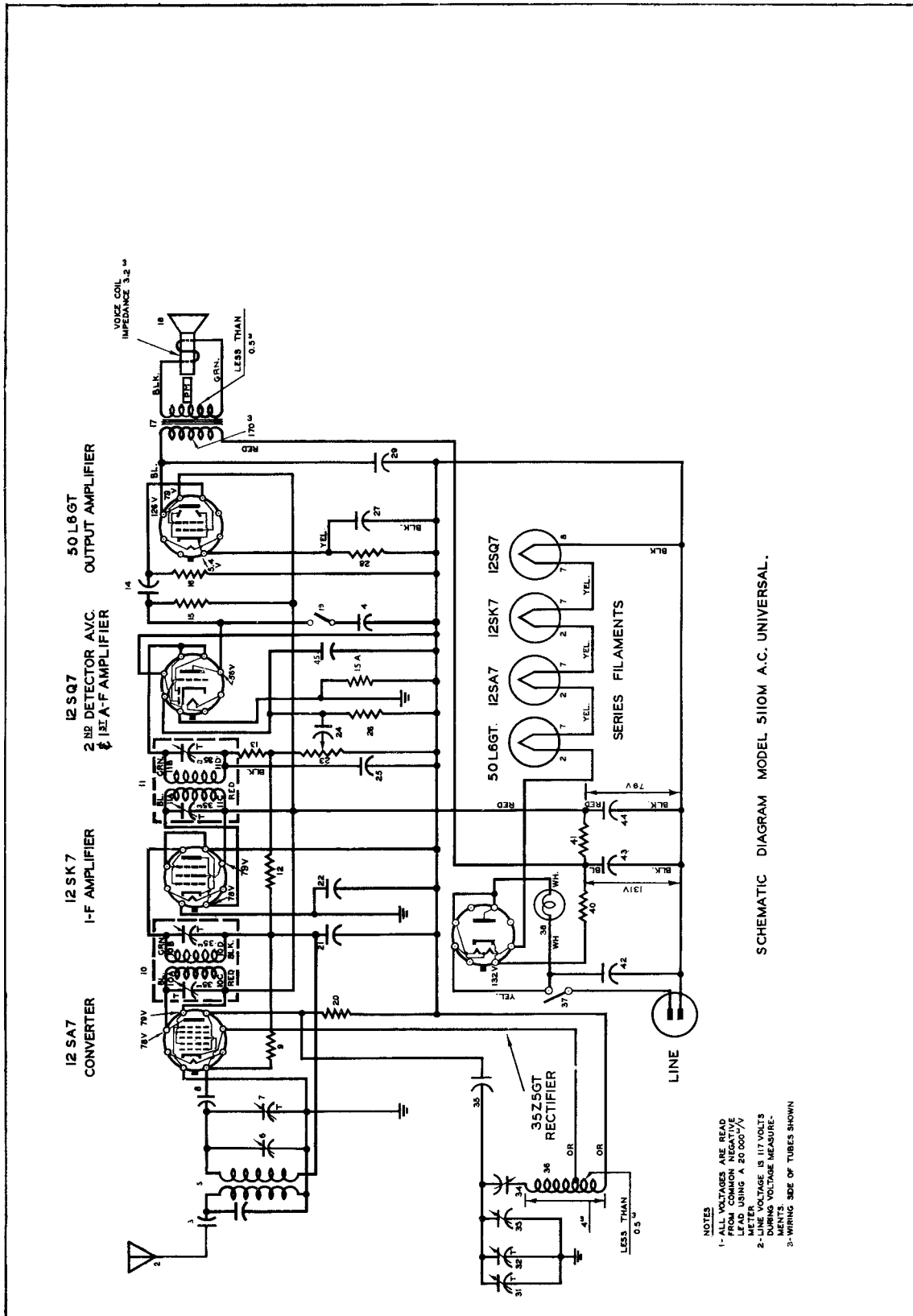
Alignment procedure should be carried out according to the following table and in the order shown.

Alignment Frequency	Dummy Antenna	Receiver Connection	Items to be adjusted for maximum output and their location.
I.F. 455 KC	.1 Mfd (Paper)	Antenna Section Gang	I.F. Trimmers, items 10A, 10B, 11A and 11B on I.F. Transformers (tuning gang open)
B.C. 1400 KC	50 Mmf (Mica)	Antenna Terminal	(a) Oscillator trimmers on gang, 31 and 32 (b) Antenna trimmer on gang 7.
B.C. 600 KC	50 Mmf (Mica)	Antenna Terminal	Oscillator lag trimmer 34. Recheck at 1400 KC.

REPLACEMENT PARTS LIST

Item	Description	Part No.	Item	Description	Part No.
1	Capacitor, Mica, 51 Mmf, 500 V.....	K10134B-510	35	Capacitor, Mica, 51 Mmf 500 V.....	K10134B-510
2	Antenna Spool & Wire Assy.....	R13379	36	Coil, Oscillator.....	R12513
3	Capacitor, Paper, .002 Mfd 600 V.....	K10128-202	37	Switch, ON-OFF, Part of.....	K10323-2
4	Capacitor, Ceramic, 6800 Mmf, 350 V.....	K10332B-682	38	Lamp, Dial, 6.3 Volts, 250 ma.....	K2589-3
5	Transformer, Antenna.....	R13376	40	Resistor, 33 Ohm $\frac{1}{2}$ W.....	K10003C-330
6	Capacitor, Gang, Antenna Section, 420 Mmf, Part of.....	R12734	41	Resistor, 2,700 Ohms, 1 W.....	K10001C-272
7	Capacitor, Trimmer, 1.5-20 Mmf, Part of	R12734	42	Capacitor, Paper, .025 Mfd 600 V.....	K10128-253
8	Capacitor, Mica, 1,000 Mmf 300 V.....	K10134C-102	43	Capacitor, Electrolytic, 40 Mfd, 150 V, Part of.....	R12730
9	Resistor, 1.0 Meg, $\frac{1}{2}$ W.....	K10000C-105	44	Capacitor, Electrolytic, 40 Mfd 150 V Part of.....	R12730
10	Transformer, 1st I.F.....	R15375-1	45	Capacitor, Mica, 390 Mmf, 500 V.....	K10134C-391
10A	Capacitor, Trimmer, 20-150 Mmf, Part of	R15373	Miscellaneous		
10B	Capacitor, Trimmer, 20-150 Mmf, Part of	R15373		Socket, Octal Tube.....	K10145-36
10C & D	Coil, 1st I.F.....	--		Dial Scale Assembly.....	R16127-24 or R8142-24
11	Transformer, 2nd I.F.....	R17103-2		Dial Indicator Assembly.....	R16281 or R13012
11A	Capacitor, Trimmer, 20-150 Mmf, Part of	R15373		Spring, Dial.....	R13898
11B	Capacitor, Trimmer, 20-150 Mmf, Part of	R15373		Dial Cord (10").....	K10301
11C & D	Coil, 2nd I.F.....	--		Bezel.....	E12951
12	Resistor, 2.2 Meg, $\frac{1}{2}$ W.....	K10000C-225		Shaft, Tuning Drive.....	R12727
13	Resistor, 47,000 Ohm, $\frac{1}{2}$ W.....	K10000C-473		Socket, Lamp.....	K5517
14	Capacitor, Paper, 0.01 Mfd 600 V.....	K10128-103		Strip, Terminal, Triple.....	K10120-10
15	Resistor, .22 Meg $\frac{1}{2}$ W.....	K10000C-224		Plain Knob Assembly (Ivory).....	R15348-1
15A	Resistor, .22 Meg $\frac{1}{2}$ W.....	K10000C-224		Speed Nut (Bezel Mounting).....	R12979
16	Resistor, .47 Meg $\frac{1}{2}$ W.....	K10000C-474		Cabinet, Ivory..... (2 Holes)	R13357A
17	Transformer, Output.....	K3873-9	*	Cabinet, Ornamental Green (2 Holes)	R13357C
18	Loudspeaker.....	R12791	*	Cabinet, Ornamental Gold (2 Holes)	R13357E
*19	Switch, Tone.....	K6127-2	*	Cabinet, Ornamental Blue (2 Holes)	R13357G
20	Resistor, 22,000 Ohm $\frac{1}{2}$ W.....	K10000C-223	*	Cabinet, Ornamental Rose (2 Holes)	R13357J
21	Capacitor, Paper, .05 Mfd 400 V.....	K10129-503	*	Cabinet, Ivory..... (3 Holes)	R13357B
22	Capacitor, Paper, 0.2 Mfd 200 V.....	K10130-204	*	Cabinet, Ornamental Green (3 Holes)	R13357D
23	Volume Control, .5 Meg, Part of.....	K10323-2	*	Cabinet, Ornamental Gold (3 Holes)	R13357F
24	Capacitor, Paper, .01 Mfd 600 V.....	K10128-103	*	Cabinet, Ornamental Blue (3 Holes)	R13357H
25	Capacitor, Mica, 390 Mmf 500 V.....	K10134C-391	*	Cabinet, Ornamental Rose (3 Holes)	R13357K
26	Resistor, 3.3 Meg, $\frac{1}{2}$ W.....	K10000C-335		Trimmer and Bracket Assembly (including Item 34).....	R13472
27	Capacitor, Electrolytic, 20 Mfd 25V, Part of.....	R12730		Mounting Plate (Electrolytic).....	R15102
28	Resistor, 150 Ohm 1 W.....	K10904B-151		Stud, Gang Mounting.....	K10298-3
29	Capacitor, .02 Mfd 600 V.....	K10128-203			
31	Capacitor, Trimmer, 1.5-20 Mmf, Part of	R12734			
32	Capacitor, Trimmer, 1.5-20 Mmf, Part of	R12734			
33	Capacitor, Gang, Oscillator Section, 420 Mmf, Part of.....	R12734			
34	Capacitor, Trimmer, 225-750 Mmf (Part of R13472).....	K1458-13			

* Note: 3 Hole Cabinets are required for Models equipped with Tone Control (Above Serial 2930).



SCHMATIC DIAGRAM MODEL 510M A.C. UNIVERSAL.

Northern Electric

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