Model 58, 59

The "Banff"

Radio Receiver

Specifications

Frequency Range:

Broadcast

Tubes:

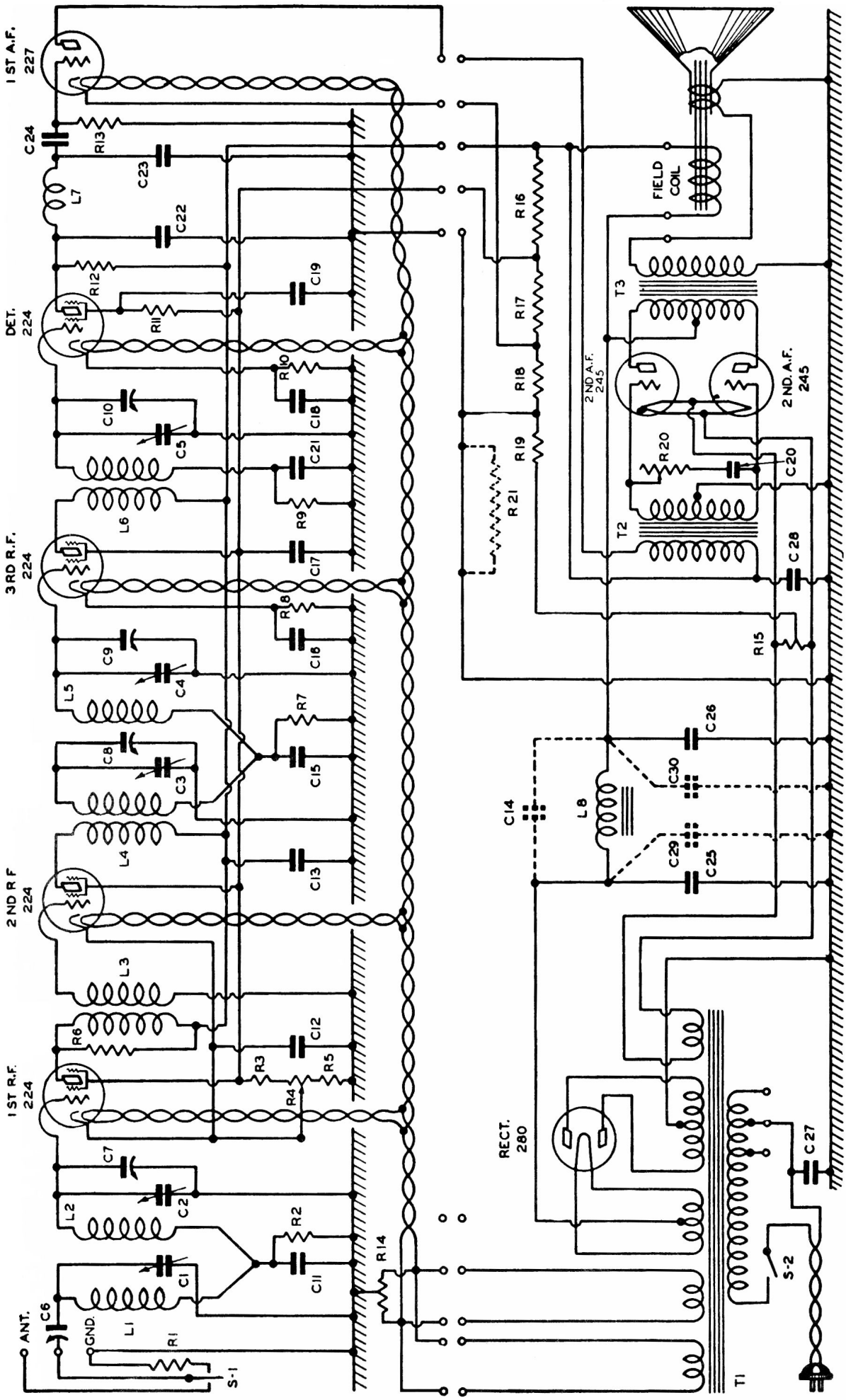
Type	Position	
224	1st R.F.	
224	2nd R.F.	
224	3rd R.F.	
224	Detector	
227	1st A.F.	
245	2nd A.F.	Push-Pull
245	2nd A.F.	
280	Rectifier	

Power Supply:

Model 58—105 to 125 volts A.C. 60 cycles
Model 59—105 to 125 volts A.C. 25 cycles

Controls:

Left—"On-Off' and
"Local—Long Distance"
Centre—Tuning
Right—Volume control
Tone control on right hand side of cabinet.



SCHEMATIC DIAGRAM OF MODEL 58 CHASSIS
DOTTED LINES SHOW ADDITIONS
FOR 25 CYCLES - MODEL 59

THE "BANFF" MODEL

NOMENCLATURE

L-1 Antenna Coil.
L-2 1st R.F. Coil.
L-3 2nd R.F. Coil (Untuned).
L-4 3rd R.F. Coil (Double).
L-5 3rd R.F. Coil (Single).
L-6 Detector Coil.
L-7 Detector Plate Choke.
L-8 Filter Choke.

T-1 Main Power Transformer.
T-2 Audio Input Transformer.
T-3 Audio Output Transformer.

C-1 1st R.F. Tuning Condenser (Antenna Circuit).
C-2 1st R.F. Tuning Condenser.
C-3 3rd R.F. Tuning Condenser. (Intermediate Circuit).
C-4 3rd R.F. Tuning Condenser.
C-5 Detector Tuning Condenser.
C-6 Antenna Trimming Condenser.
C-7 1st R.F. Alignment Condenser.
C-8 3rd R.F. Alignment Condenser.
C-9 3rd R.F. Alignment Condenser.
C-10 Detector Alignment Condenser.
C-11 1st R.F. Coupling Condenser .04 mfd.
C-12 Cathode By-pass Condenser .5 mfd.
C-13 Plate By-pass Condenser .5 mfd.
C-14 Filter Condenser .2 mfd. (25 cycle only).
C-15 3rd R.F. Coupling Condenser .04 mfd.
C-16 Cathode By-pass Condenser .5 mfd.
C-17 Screen By-pass Condenser .5 mfd.
C-18 Detector Cathode By-pass Condenser .1 mfd.
C-19 Detector Screen By-pass Condenser .5 mfd.
C-20 Tone Control Condenser .006 mfd.
C-21 Detector Condenser .04 mfd.
C-22 Detector Plate By-pass Condenser .0001 mfd.
C-23 Detector Plate By-pass Condenser .0001 mfd.
C-24 Audio Coupling Condenser .006 mfd.
C-25 Power Pack Filter Condenser 2. mfd.
C-26 Power Pack Filter Condenser 2 mfd.
C-27 Buffer Condenser 1 mfd.
C-28 Audio By-pass Condenser 4 mfd.
C-29 Filter Condenser, 2 mfd. for 25 cycles—Model 59.
C-30 Filter Condenser, 2 mfd. for 25 cycles—Model 59.

R-1 Antenna Resistor 500 ohms.
R-2 De-coupling Resistor 1,000 ohms.
R-3 Screen Resistor 20,000 ohms.
R-4 Volume Control 3,000 ohms.
R-5 Screen Resistor 250 ohms.
R-6 Untuned Transformer Resistor .1 megohm.
R-7 3rd R.F. de-coupling Resistor 1,000 ohms.
R-8 3rd R.F. Cathode Resistor 1,000 ohms.
R-9 Detector Grid Resistor 1,000 ohms.
R-10 Detector Cathode Resistor 20,000 ohms.
R-11 Detector Screen Resistor 1.00 megohm.
R-12 Detector Plate Resistor .25 megohm.
R-13 1st Audio Grid Resistor 2 megohms.
R-14 Center Tap Resistor (chassis).
R-15 Center Tap Resistor (power pack).
R-16 Screen Supply Resistor 2,050 ohms.
R-17 Audio Cathode Resistor 1,950 ohms.
R-18 Divider Resistor 180 ohms.
R-19 Audio Bias Resistor 950 ohms.
R-20 Tone Control .5 megohm.
R-21 Extra Bias Resistor, 50 ohms, for 25 cycle operation.

Note:—R9 and C21 are eliminated on some receivers; and C27 connected in parallel with L8, instead of in the position shown.

Note:—A 20,000 ohm. resistor has been connected in series with R12, and the junction point by-passed to ground by a .25 mfd. condenser on all chassis stamped "X" on the top right hand corner. Corresponding power packs are stamped "X" on the right hand rear corner, and have C28 changed to 2.0 mfd. Power Packs marked "X" must be used only with chassis marked "X". Chassis marked "X" may be used with either power pack.

SOCKET VOLTAGES, MODEL 58

The socket voltages given in the table below are only approximate, due to unavoidable difference in tubes, line voltage, and the type of set analyzer used. The readings marked with an asterisk are taken through a high resistance circuit and are particularly dependent on the type of tester. They do not represent the actual values and are to be considered only as an indication that the circuit is continuous. The readings are made with the volume control fully "on".

Stage	Tube	Plate	Screen	Grid	Fil.	M.A. Plate
1st R.F.	224	170	75	2.2	2.2	3.
2nd R.F.	224	170	75	2.2	2.2	3.
3rd R.F.	224	170	75	2.2	2.2	3.
Detector	224	*30	*10	1.5	2.2	*0.1
1st A.F.	227	150	..	8.0	2.2	5.0
2nd A.F.	245	250	..	50.	2.4	30.
2nd A.F.	245	250	..	50.	2.4	30.
Rectifier	280	..	..	..	5.0	..

Drive Belt Replacement: The condenser drive belt consists of a heavy stranded phosphor bronze cable having a small loop at each end. Correct tension is maintained by means of a spring, eliminating trouble ordinarily caused by excessive tightness or looseness in the drive. After replacing the belt it is necessary to reset the dial as described in "8" below.

Continued:

1. Turn the condenser gang to the zero position. (Condensers fully open.)

2. Place the loop at one end of the drive cable over the pin at the top right hand side of the large drive drum.

3. Lead the belt along the groove and downward to the small grooved drum.

4. Turn the condenser gang to the "100" position. (Condensers fully engaged.)

5. Start the belt at the center groove of the small drum and wind on 6½ turns in a clockwise direction (to the right), winding toward the front of the receiver.

6. Bring the belt up and over the idler pulley.

7. Follow down the groove of the large drum and hook the loop over the drum tension spring. The spring can most easily be pulled into the correct position by looping a length of wire or strong cord around the spring hook.

8. Reset the dial as follows:
   Loosen the small gear on the knob shaft. Turn the shaft to the left as far as it will go. Set the dial against the stop at the "100" position. Retighten the small gear.