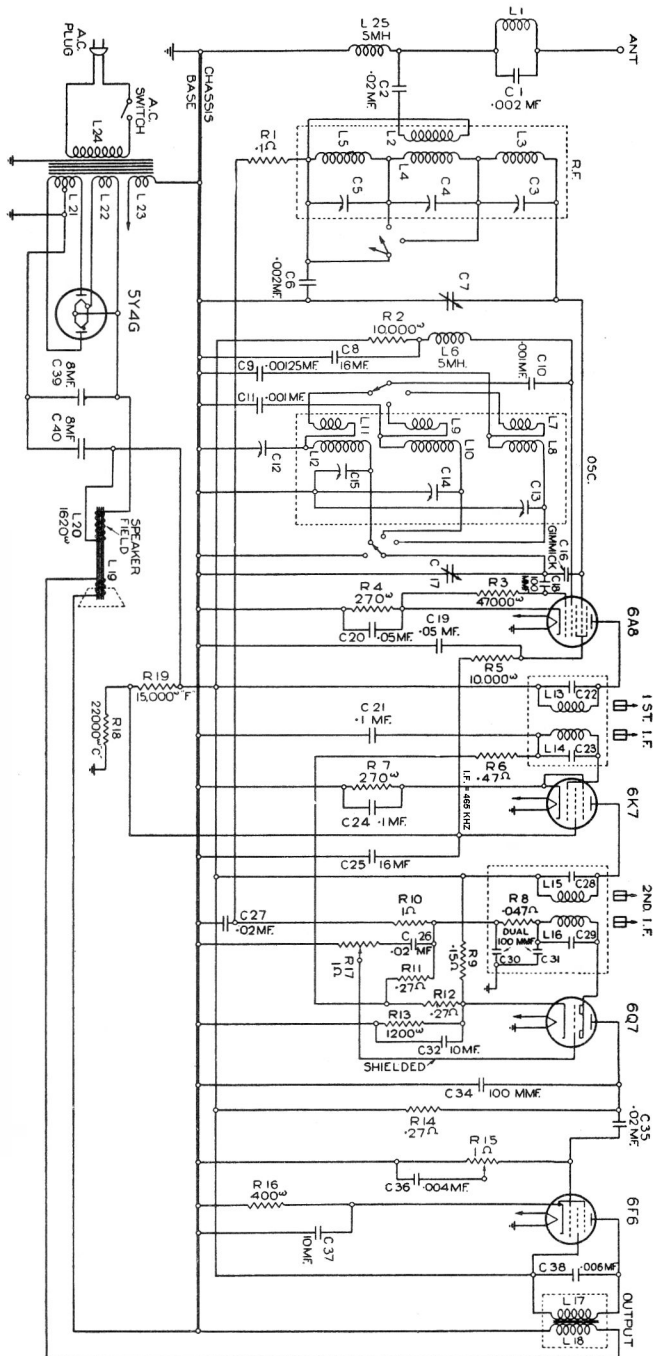
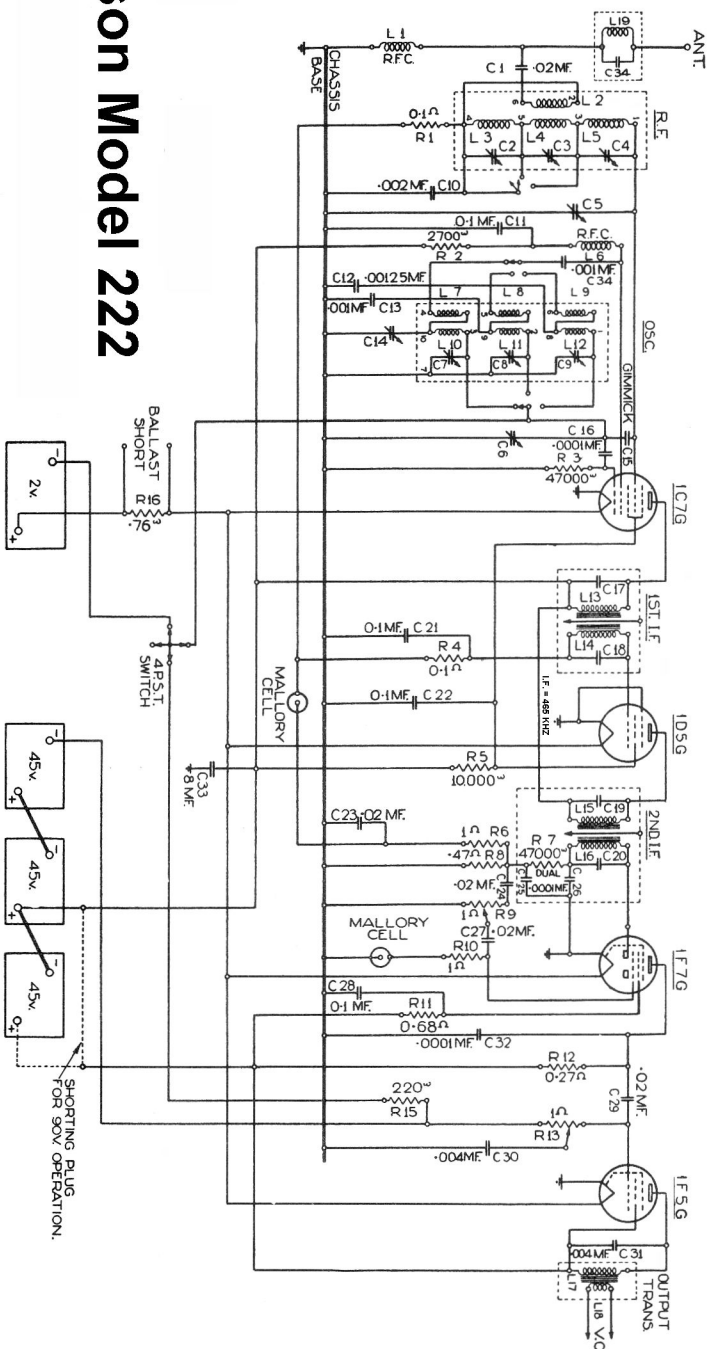


# Stromberg-Carlson Model 220

## Socket Layout



## Socket Layout



# Stromberg-Carlson Model 222

# Stromberg-Carlson Models 220, 222 & 228

## Alignment Data

### Alignment Data - 220, 222, 228

#### Dial Adjustment

Before aligning the circuits of any of these receivers, the tuning dial must be properly aligned to track with the gang tuning capacitors. To check whether the dial is set correctly with respect to the gang tuning capacitor, rotate the "Station Selector" knob in a clockwise direction so that the gang tuning capacitor is set to its maximum capacity position. Then, with the gang tuning capacitor in this position, the dial pointer should center over the middle vertical line of the three vertical lines located on the glass dial, and the vertical lines located on the metal pan of the dial frame. Now, rotate the "Station Selector" knob so that the dial pointer lines up with the horizontal lines located on the metal pan of the dial frame; with the pointer in this position the two horizontal marks on the glass dial (located at approximately 9.3 megacycles on the right hand scale and 2.16 megacycles on the left hand scale) should also be in alignment with the dial pointer. If the above conditions are not obtained, loosen the four clamps which hold the glass dial to the dial pan by slightly loosening the four screws, and shift the glass dial so that a good alignment between the dial pointer, the glass dial, and alignment marks located on the metal pan of the dial frame is obtained for both the horizontal and vertical position of the dial pointer.

#### Intermediate Frequency Adjustments

1. Operate the "Range" switch of the receiver to the "A" range position. Set the receiver's tuning dial at its extreme low frequency position, and operate the Tone Control knob to the "Normal" position. Rotate the Volume Control knob to its maximum clockwise position (maximum volume).
2. Apply between the chassis base (or ground binding post) of the receiver and the grid of the No. 6A8 modulator-oscillator tube, a modulated signal of 465 kilocycles from the test oscillator, using a 0.1 microfarad capacitor in series with the connection between the output terminal of the test oscillator and the grid of the No. 6A8 tube. Do not remove the chassis grid lead connecting to this tube. The ground (or low side) terminal of the test oscillator should be connected to either the chassis base or the ground binding post terminal.
3. Now, noting the aligning adjustments for the first and second I. F. transformers, align the I. F. circuits in the following manner:
  - Secondary of second I. F. transformer.
  - Primary of second I. F. transformer.
  - Secondary of first I. F. transformer.
  - Primary of first I. F. transformer.

Adjusting the circuits to obtain maximum reading on the output meter, reducing the output of the test oscillator as required.

#### Alignment of Short Wave Range (Also Referred to as "C" Band)

In aligning the radio frequency circuits for this range, replace the 0.1-microfarad capacitor which was placed in series with the test oscillator's output lead for the I. F. alignments, with a 400-ohm carbon type resistor. This lead should then be connected to the antenna binding post located on the rear of the receiver chassis. The ground terminal (or low side) of the test oscillator should be connected to the ground binding post on the receiver.

1. Operate the Range Switch on the receiver chassis to the "C" range position, and set the test oscillator's frequency and the receiver's tuning dial to 17 megacycles.
2. Adjust the oscillator's "C" band high frequency aligner for maximum output.
3. Adjust the antenna's "C" band high frequency aligner for maximum output, at the same time rotate the gang tuning capacitor back and forth through resonance until maximum output is obtained.

#### Alignment of Aircraft, Amateur, and Police Range (Also Referred to as "B" Band)

In aligning the radio frequency circuits for this range, use the same artificial antenna (400-ohm carbon type resistor) in series with the output terminal of the test oscillator as was used for aligning the short-wave range. Operate the Range Switch on the receiver chassis to the "B" range position, and set the test oscillator's frequency and the receiver's tuning dial to 3.4 megacycles.

2. Adjust the oscillator's "B" band high frequency aligner for maximum output.
3. Adjust the antenna's "B" band high frequency aligner for maximum output, and at the same time rotate the gang tuning capacitor back and forth through resonance until maximum output is obtained.

#### Alignment of Standard Broadcast Range (Also Referred to as "A" Band)

In aligning the radio frequency circuits for this range, replace the 400-ohm carbon type resistor in series with the test oscillator's output lead with a 200-micro-microfarad capacitor and align these circuits as follows:

1. Operate the Range Switch to the "A" range position and set the test oscillator's frequency and the receiver's tuning dial to 1.4 megacycles.
2. Adjust the oscillator's "A" band high frequency aligner for maximum output.
3. Adjust the antenna's "A" band high frequency aligner for maximum output.
4. Set the test oscillator's frequency and the receiver's tuning dial to 0.6 megacycles.
5. Adjust the oscillator's "A" band low frequency aligner (series aligner) for maximum output, and at the same time rotate the gang tuning capacitor slightly back and forth through resonance until maximum output is obtained.
6. Repeat both the test oscillator's frequency and receiver's tuning dial to 1.4 megacycles and repeat operations Nos. 2 and 3.

