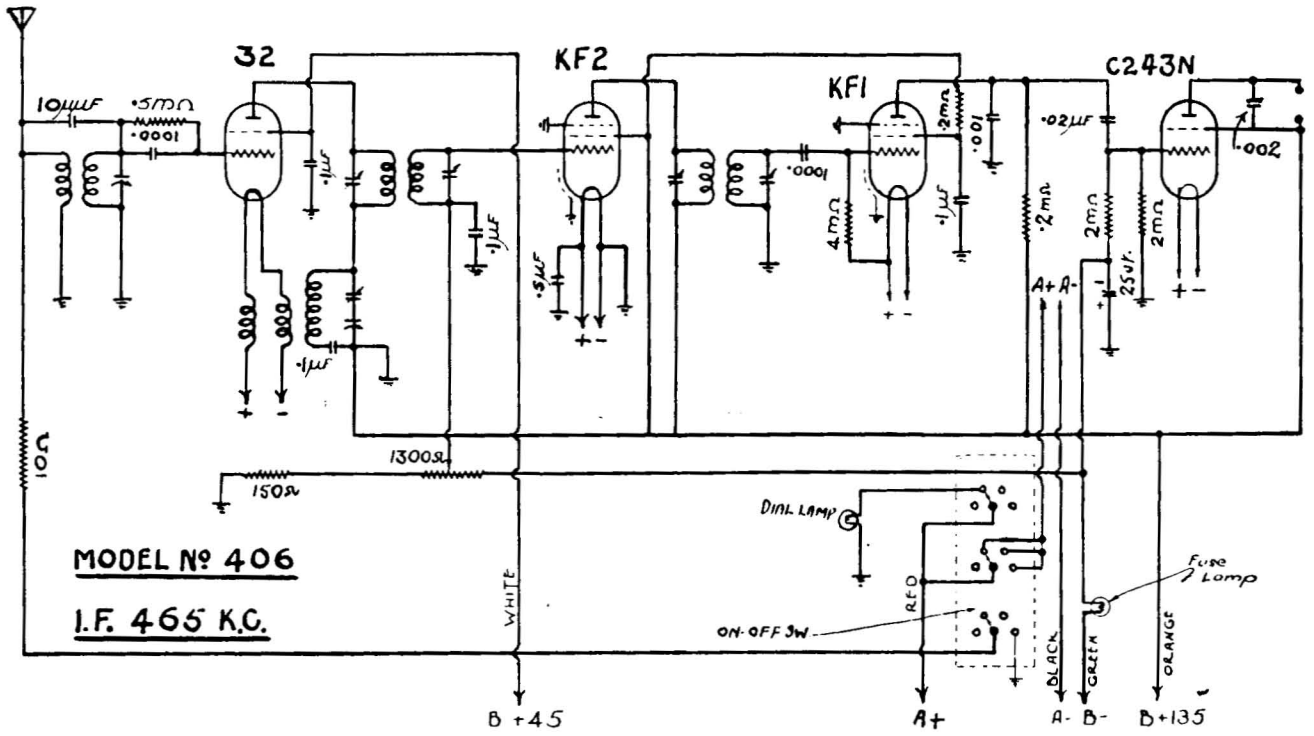
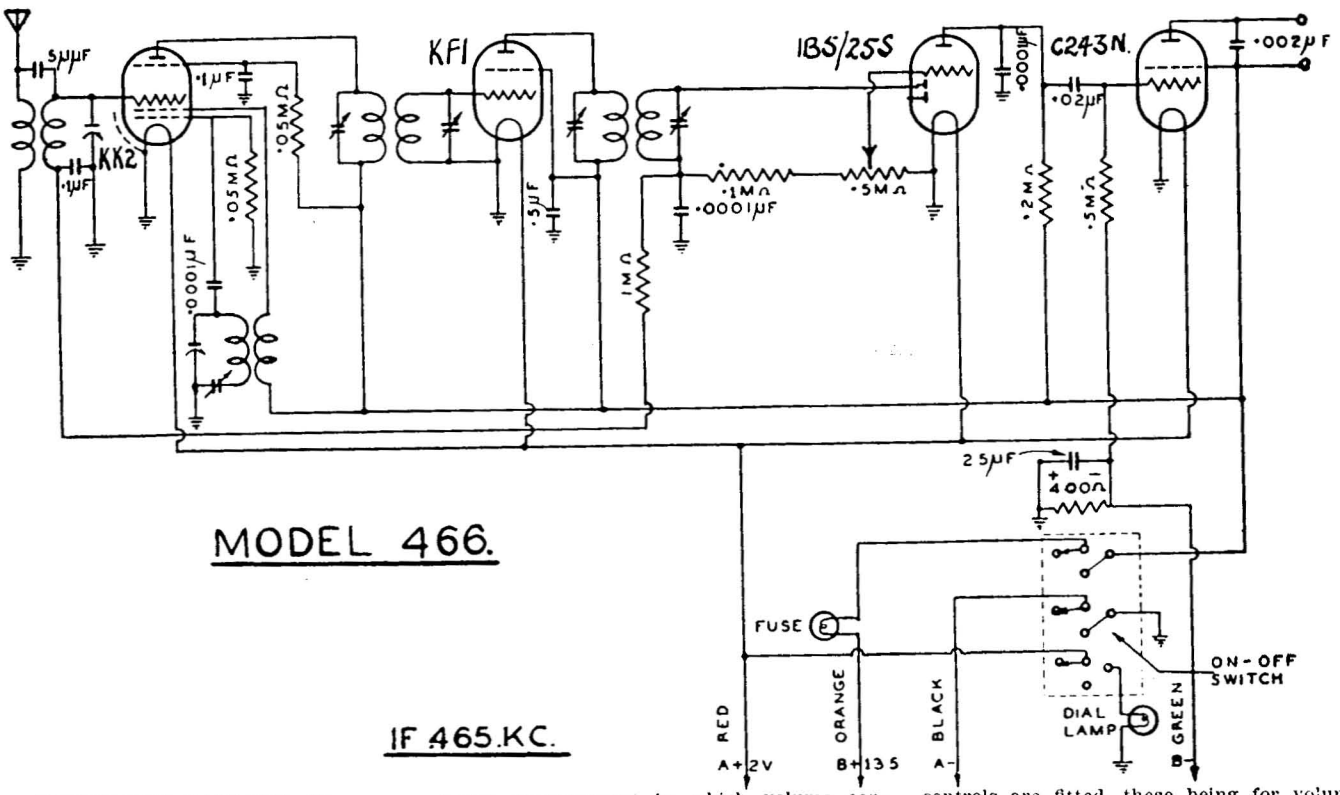
"Stromberg-Carlson" Battery Models 406, 466





STROMBERG-CARLSON 406.

Stromberg-Carlson model "406" is a four-valve console receiver designed for broadcast coverage and operation from battery power supplies. Three controls are fitted, these being for volume, tuning, and battery-switching—the latter has two extra positions, one for normal operation without dial-lamps and the other for "local" reception (also without dial-lamps) in which a 10 ohms resistor is shunted across the aerial input coil. The loudspeaker employed is an 8 inch, permanent magnet unit.

The circuit of this receiver is a straightforward "autodyne" and "leaky-grid" detector arrangement in which volume control is effected by applying negative voltage to the I.F. amplifier grid; this negative voltage is derived from a resistor in series with "B" negative. This same voltage serves to bias the output valve grid. The total voltage drop across this resistor is 10 volts.

STROMBERG-CARLSON MODEL 466.

Stromberg-Carlson model "466" might almost be termed an improved version of model "406," as it is also a four-valve battery-operated console, and has the additional refinements of an octode frequency converter and an A.V.C. system. Three controls are fitted, these being for volume, tuning and battery-switching (with one extra position—for dial-lamp control). The loudspeaker is an 8-inch, permanent magnet unit.

Points to note in this circuit are the zero-bias operation of the I.F., converter, and A.F. valves under "no signal" conditions, and the biasing of the output valve from a resistor in series with the "B" negative lead. It should be noted, however, that the converter and A.F. amplifier valves receive A.V.C. bias as soon as a signal is tuned in. The voltage drop across the output valve bias resistor is 5 volts.

SERVICE BULLETIN No. 406 (*Continued*)

(b) Earth.

The chassis should be connected to earth by means of an insulated wire attached to a water pipe by an approved clamp. It is preferable to connect the earth lead to the last section of the pipe where it enters the ground, thus avoiding the high resistance contacts at the joints. Should a water system not be available, an efficient earth may be obtained by driving a metal pipe or burying about four square feet of metal sheeting in moist earth; the connection to the metal should preferably be soldered.

4. OPERATION:

There are four positions on the "on-off" switch: Fully to the left, off; second position, long-distance reception and dial lamps on; third position, long-distance reception and dial lamps off; fourth position, fully to the right, local reception and dial lamps off. The local reception position should be used whenever a powerful local station is being received.

In this model the left-hand knob is the "on-off" switch; the right-hand knob is the volume control; and the centre knob is the tuning control. Improper tuning will affect the quality of reproduction. Care should be taken to keep the volume control well down, then adjust the tuning control to the point of maximum undistorted signal, thereafter adjusting the volume to the desired level. Judicious use of the volume and tuning controls in the Model 406 will assist in the economy of battery consumption.

5. VOLTAGES:

Valve	Function	Plate	Screen	Bias.
32	Det. Osc.	125	45	—
KF2	I.F.	125	125	−10 to −.5
KF1	Second Detector	—	—	—
C243N	Output Pentode	125	125	—

KF1 screen series fed from B max. through 200,000 ohms.

7. COMPONENTS:

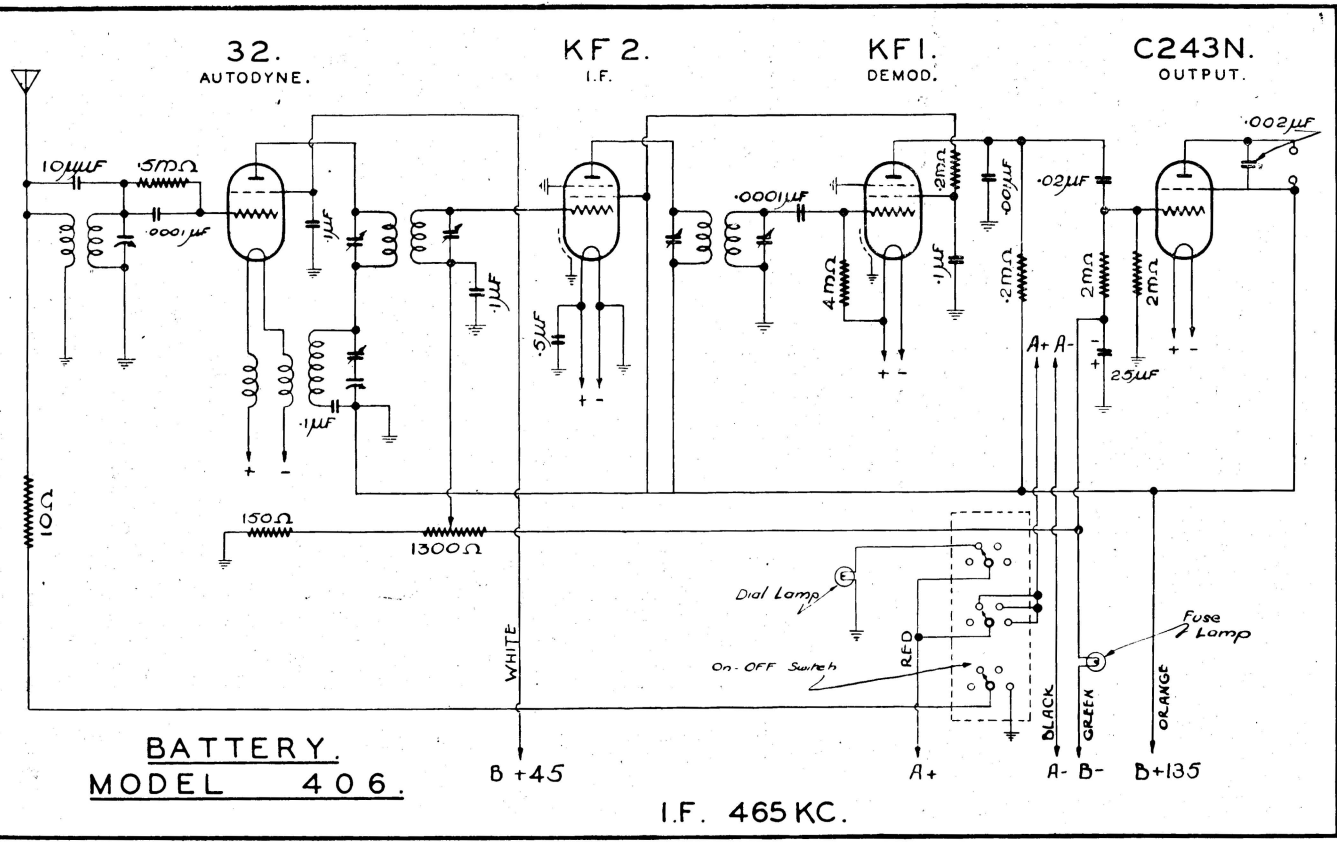
The following list of components is given to facilitate the servicing of the receiver, and as a guide to replacement.

The numbers refer to position of the components on the assembly panel.

1. 10 ohms.	6. .5 microfarad.	11. 200,000 ohms.
2. .1 microfarad.	7. .1 microfarad.	12. .02 microfarad.
3. 150 ohms.	8. 200,000 ohms.	13. 2 megohms.
4. 25 microfarad.	9. .1 microfarad.	14. .002 microfarad.
5. —	10. .001 microfarad.	

100,000 ohms, half-watt between 11 and 12, side "b."

N.B.—BEFORE LEAVING A STROMBERG-CARLSON RADIO RECEIVER IN A CUSTOMER'S HOME, SEE THAT EVERYBODY WHO IS LIKELY TO HANDLE THE RECEIVER FULLY UNDERSTANDS ITS OPERATION. BY SO DOING MANY



CHANGES

STROMBERG - CARLSON (AUSTRALASIA) LIMITED
SYDNEY AUSTRALIA

DRAWN
EXAMINED
APPROVED
MGN, DIRECTOR
DATE 13-1-36

DRAWING NO 773

SERVICE BULLETIN No. 406 (*Continued*)

Stromberg-Carlson Model 406

FOUR-VALVE, BATTERY-OPERATED

Superheterodyne

1. GENERAL DESCRIPTION OF RECEIVER:

This receiver is a 4-valve battery-operated superheterodyne, designed for use on the broadcast band from 200 to 550 metres. The receiver has been designed to obtain the maximum in sensitivity, selectivity, and quality consistent with a minimum consumption of both "A" and "B" batteries.

The tuning adjustment on the gang capacitor (variable tuning condenser), and the trimmer capacitors on the Intermediate Frequency Transformers (tuned to 465 K.C.) are adjusted and sealed at the factory at the time of calibration.

These adjustments should on no account be touched, or the seals broken, unless a specially calibrated oscillator and indicating instrument are at hand whereby such adjustments can be successfully carried out. In any repairs or adjustments the above remarks in regard to the gang capacitor and intermediate transformers should be carefully noted.

2. BATTERIES:

(i.) "A" Battery—This is a 2-volt storage battery or equivalent 2-volt battery, having a (recommended) capacity of at least 80 ampere-hours. The "A" battery drain is 0.62 ampere.

(ii.) "B" Batteries—These comprise three heavy-duty 45-volt batteries. The "B" Battery consumption varies with the adjustment of the volume control, averaging about 8 M.A.

To connect the battery leads correctly, reference should be made to the designation tabs on the leads, and to the colour code as shown on the circuit diagram on Page 2.

The "A" battery and the three "B" batteries may be placed on the lower shelf of the speaker compartment of the cabinet.

3. INSTALLATION INSTRUCTIONS:

(a) Aerial.

The sensitivity of this model is such that an aerial placed along the picture moulding in a room, or beneath the carpet, will prove satisfactory. Care should be taken to place all such indoor aerials as far away as possible from electric light or power conduits, and, in particular, clear of all unshielded flexible leads, since these latter are prolific radiators of undesirable electrical impulses.

An outdoor aerial is the most efficient. The length of this aerial should be from 30 to 50 feet. In noisy areas (due to electrical interference) the aerial should be erected as far as possible from, and at right angles to, any electric power or light mains.

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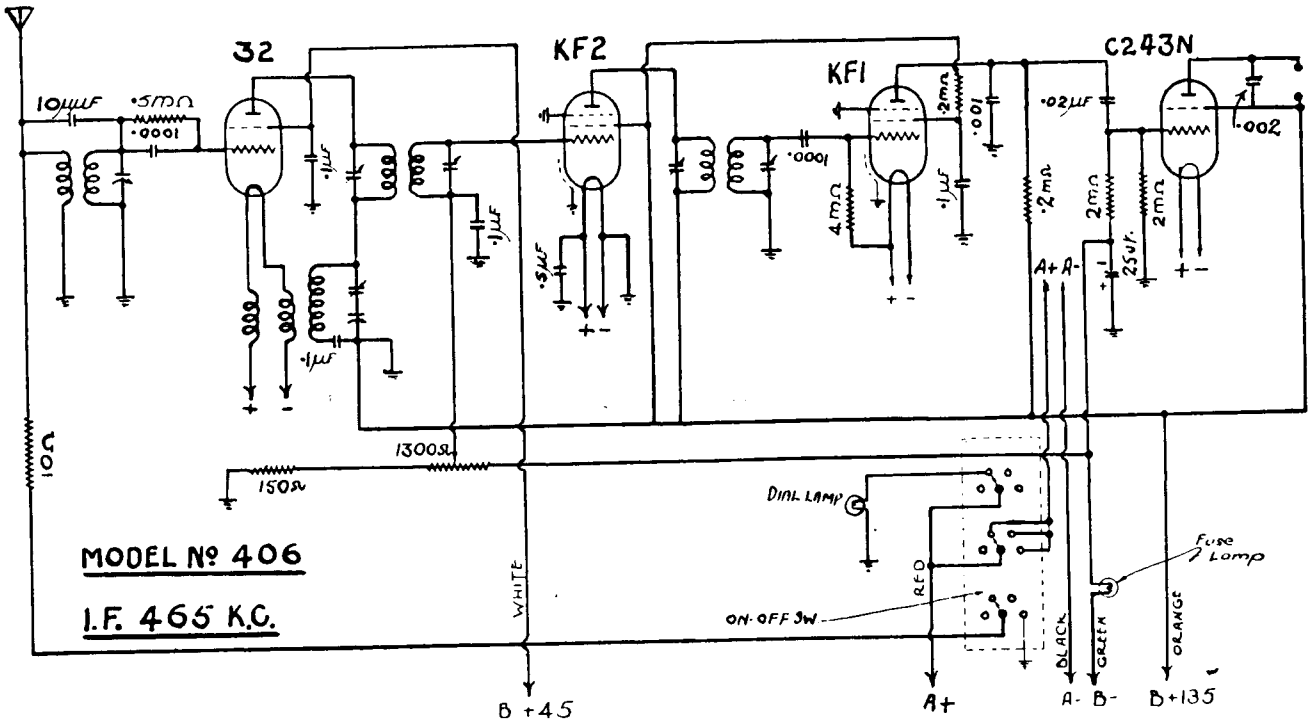

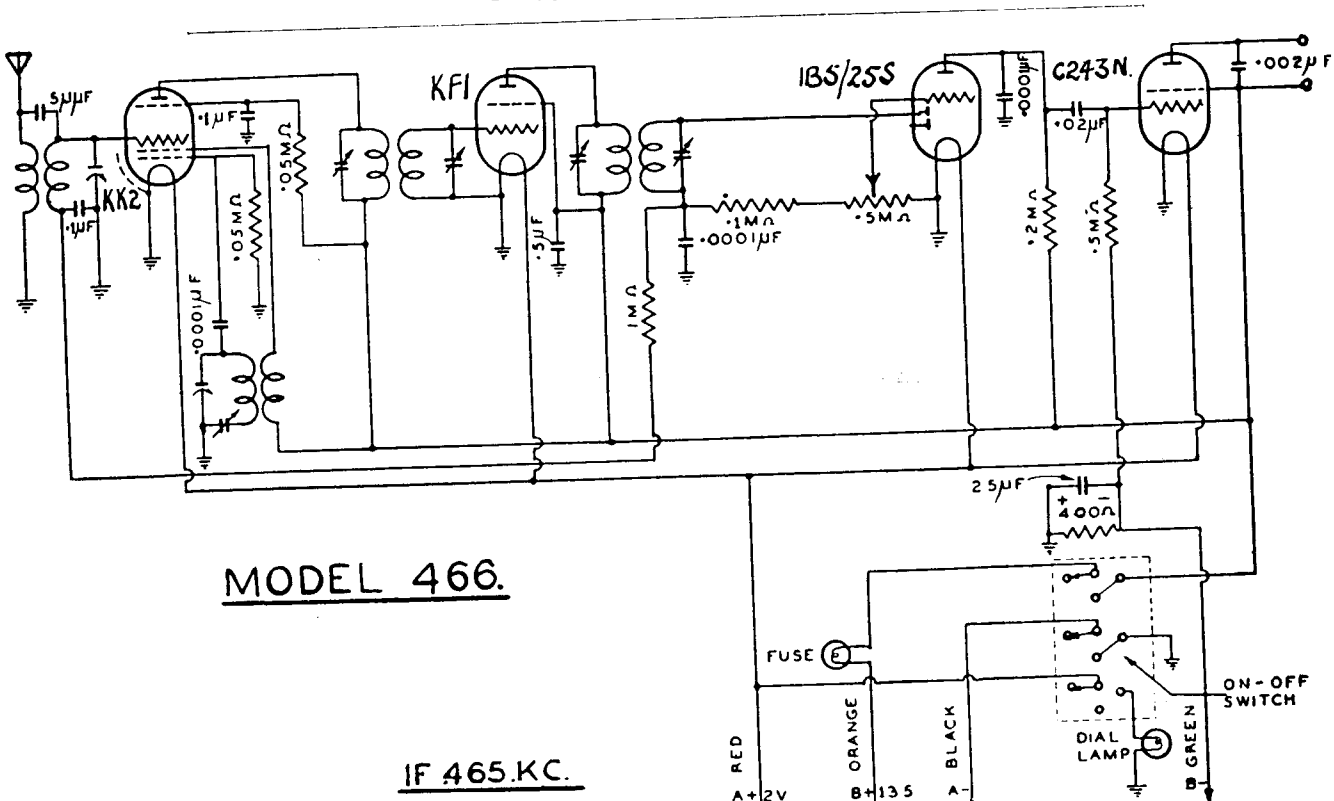

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