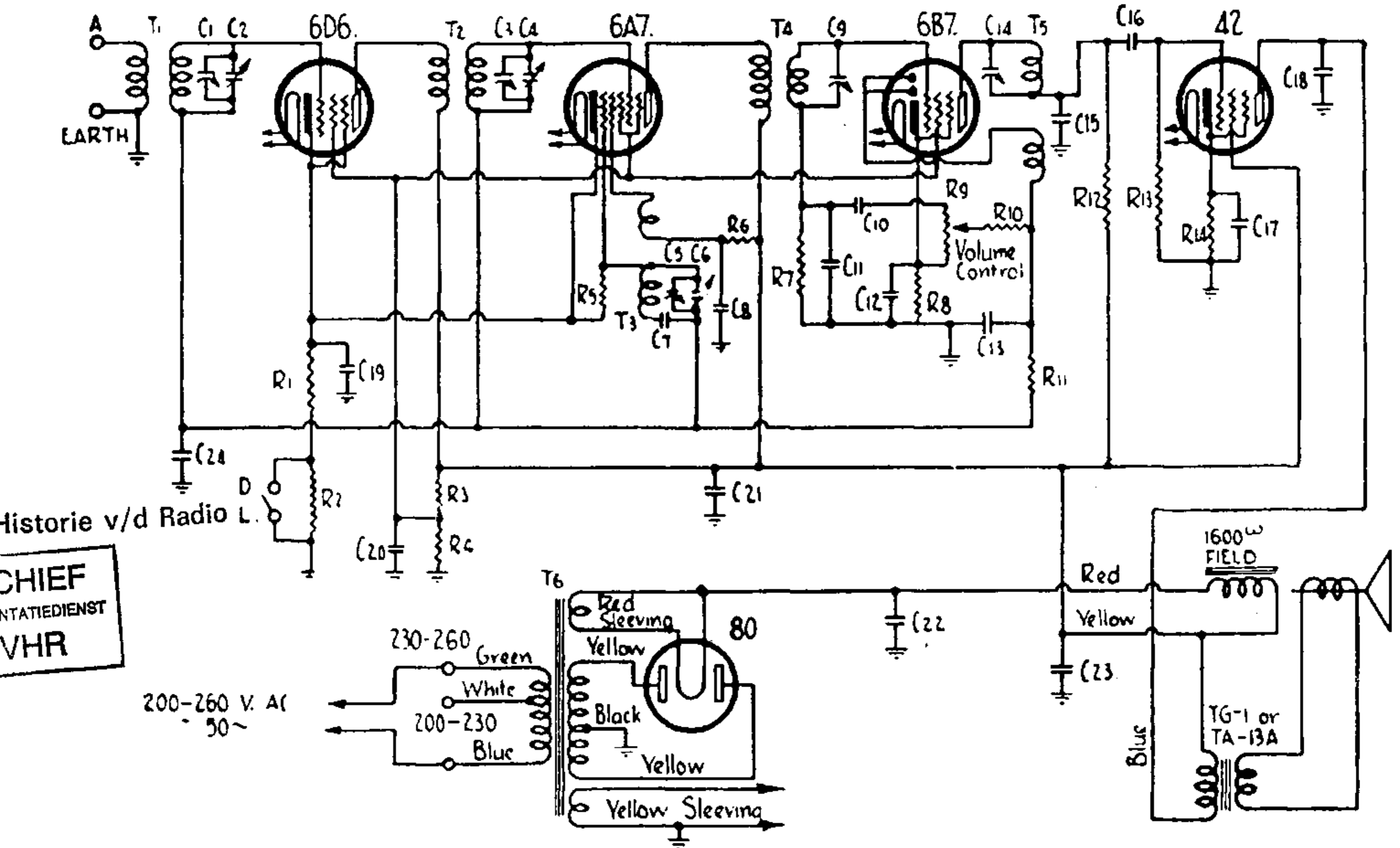


"Radiolette" A.C. Broadcast Models 31, 32



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Radiolette Models "31" and "32" are identical with the exception of the cabinet colour, Model "31" being black and Model "32" ivory. As no other point of difference exists, they will be referred to in the following matter as Model "31/32."

The model 31/32 receiver is a five-valve, A.C. operated arrangement designed for coverage of the 550-1500 KC. band. Controls fitted to this receiver are a tuning knob and a volume control on the front of the cabinet, and a two-position "local-distance" switch on the rear of the chassis. The speaker used with this model has an overall diameter of five inches, and a field coil resistance of 1,600 ohms.

Apart from the reflexed 6B7, there are no unusual features in the circuit arrangement employed. A point of interest which will be apparent on inspection of the circuit is that the frame of the tuning gang is returned direct to the low potential ends of the various windings it serves. This means that the gang frame is "floating" at A.V.C. potential and care should be taken to see that the insulation used for mounting is replaced if the gang is removed from the chassis at any time.

SPECIAL NOTE.

All parts on the "31/32" chassis may be made conveniently accessible by making use of the hinging feature of the

chassis ends. To hinge, remove two screws nearest the foot, and loosen the other two screws. Unsolder the two or three necessary leads and hinge the chassis end back. Self-tapping screws are used to eliminate the use of nuts.

OPERATING VOLTAGES.

The following voltages were taken with a "1,000 ohms per volt" D.C. meter between the chassis and the socket connection indicated. The A.C. supply was at 240 volts with the transformer primary tapping adjusted to the "230/260" position. All controls were at their maximum positions and the receiver was detuned from any signal.

6D6, R.F. amplifier. Plate, 245v.; screen, 55 v.; cathode, 6 v. Plate current, 1.0 mA.

6A7, Frequency converter. Plate, 245 v.; screen, 55 v.; cathode, 6 v.; osc. plate, 170 v. Mixer plate current, 0.5 mA.; osc. plate current, 3.0 mA.

6B7, 175 KC. I.F. amplifier, detector, A.V.C. rectifier and audio amplifier. Plate, 100 v.; screen, 55 v.; cathode, 2.5 v. Note. The plate voltage cannot be measured accurately with an ordinary voltmeter and a better indication is provided by the plate current. This should be 1.2 mA.

42, Output pentode. Plate, 230 v.; screen, 245 v.; cathode, 14 v. Plate current, 30 mA.

80, Rectifier. 300 volts r.m.s. A.C. per plate. Total D.C. output through speaker field, 45 mA.

COMPONENT VALUES

COILS.

T1 (Part No. 29)—Aerial Coil; T2 (P.N. 2327)—R.F. Coil; T3 (P.N. 2329)—Osc. Coil;

T4 (P.N. 871)—1st I.F. Trans.; T5 (P.N. 23)—2nd I.F. Trans.; T6 (P.N. 15)—50 c. Power Trans.; T6 (P.N. 17)—40 c. Power Trans.; T6 (P.N. 1162)—100 c. Power Trans.

RESISTORS.

R1—1,200 ohms w.w.; R2—3,000 ohms, 1/3 W.; R3—40,000 ohms, 1 W.; R4—20,000 ohms, 1 W.; R5—60,000 ohms, 1/3 W.; R6—20,000 ohms, 1/3 W.; R7—500,000 ohms, 1/3 W.; R8—2,000 ohms, w.w.; R9 (P.N. 588)—250,000 ohms volume control; R10—300,000 ohms, 1/3 W.; R11—13 megohms, 1/3 W.; R12—100,000 ohms, 1/3 W.; R13—300,000 ohms, 1/3 W.; R14—400 ohms, 1 W.

CONDENSERS.

C1, C3, C5—10/50 mmfd. mica trimmers for aerial, R.F. and osc. circuits; C2, C4, C6 (P.N. 2A)—three-gang tuning condenser; C7 (P.N. 80)—900 mmfd. mica padding condenser. Note: This unit is matched to the particular oscillator coil in the receiver and is fixed in capacity. C8 (P.N. 43)—0.05 mfd. paper tubular; C9—100/200 mmfd. mica I.F. trimmer; C10 (P.N. 39)—0.01 mfd. paper tubular; C11 (P.N. 73)—200 mmfd. mica; C12—5 mfd., 25 v. electrolytic; C13 (P.N. 73) 200 mmfd. mica; C14—10/50 mmfd. mica I.F. trimmer; C15 (P.N. 78)—700 mmfd. mica; C16 (P.N. 39)—0.01 mfd. paper tubular; C17—25 mfd., 25 v. electrolytic; C18 (P.N. 40-41)—0.02-0.03 mfd. paper tubular; C19, C20, C21 (P.N. 45)—0.25 mfd. paper tubular; C22 and C23 (P.N. 246)—8 mfd., 500 v. and 4 mfd., 350 v. electrolytics, respectively, housed in one can; C24 (P.N. 43)—0.05 mfd. paper tubular.

The part numbers given in brackets after the circuit indices are the A.W.A. replacement numbers of the various components and servicemen will be assured of an exact replacement by ordering the component direct from the manufacturers. Where no part number is shown, the component is an ordinary commercial product.