

# "His Master's Voice" Battery Models 346, 347, 348 and 349

(Circuit Diagram of these models will be found on Page 265.)

His Master's Voice models 346 and 347 are six-valve receivers designed for dual-wave coverage and operation from battery power supplies. The chassis employed in both receivers are of identical design, the only difference between the two models being found in the power supply arrangements. Both receivers are fitted to console cabinets, both have five controls — tone (continuous) volume, tuning (dual ratio), wave-change (extra position for gramo.), and battery switching (extra position for dial-lamp control) — and both are fitted with an 8-inch permanent-magnet type loudspeaker. The same chassis, with a slight alteration to the control arrangement, is fitted to radiogram model 348, but in this case, only the vibrator high-tension supply is fitted. The control changes in model 348 consist of fitting a separate gramo. switch in the position normally occupied by the volume control and fitting the latter to the outside of the cabinet.

In addition to the above variations, a "mantel" version of model 346 was released and known as model 349. This

only differed from model 346 in cabinet style.

The variation in the power supply arrangements between model 346 and model 347 is very simple as it merely consists of substituting a set of dry-batteries for the synchronous vibrator unit used with model 346. No circuit changes are necessary because both models have their valve filaments wired in series-parallel for operation from a 6 volt "A" supply and both obtain bias voltages from the drop across the filament network. To simplify matters still further a separate "type 347" battery cable is used when it is desired to omit vibrator high-tension supply from model 346.

The circuit arrangement employed in the "346/347" chassis is quite straightforward and requires no particular description. It should be noted that no A.V.C. is applied to the frequency converter on either wave-band, and that this valve and the R.F. and I.F. amplifiers are all operated on zero bias under no-signal conditions.

## OPERATING VOLTAGES

The following measurements were made with a "1,000 ohms per volt" meter between chassis and the socket contact

indicated. Fully charged batteries were employed in each case and the receivers were adjusted to a point of "no reception."

## MODELS 346, 348, 349.

**1C4, R. F. Amplifier.** Plate, 150 v.; screen, 80 v.; grid, zero.

**1C6 Frequency Converter.** Plate 150 v.; screen, 55 v.; grid, zero; osc. anode grid (broadcast) 70 v., (short-wave) 95 v.

**1C4, 460 KC. I.F. Amplifier.** Plate, 150 v.; screen, 60 v.; grid, zero.

**1K6, Detector, A.V.C. Rectifier, and A.F. Amplifier.** Plate, 60 v.; screen, 60 v.; grid, —2 v. (with relation to negative side of filament).

**30, Audio Driver.** Plate, 100 v.; grid, —4 v. (with relation to negative side of filament).

**19, Class "B" Output Stage.** Plate, 145 v.; grid, —4 v. (with relation to negative side of filament).

## MODEL 347.

**1C4, R.F. Amplifier.** Plate, 135 v.; screen, 70 v.; grid, zero.

**1C6, Frequency Converter.** Plate, 135 v.; screen, 50 v.; grid, zero; osc. anode grid, (broadcast) 60 v., (short-waves) 85 v.

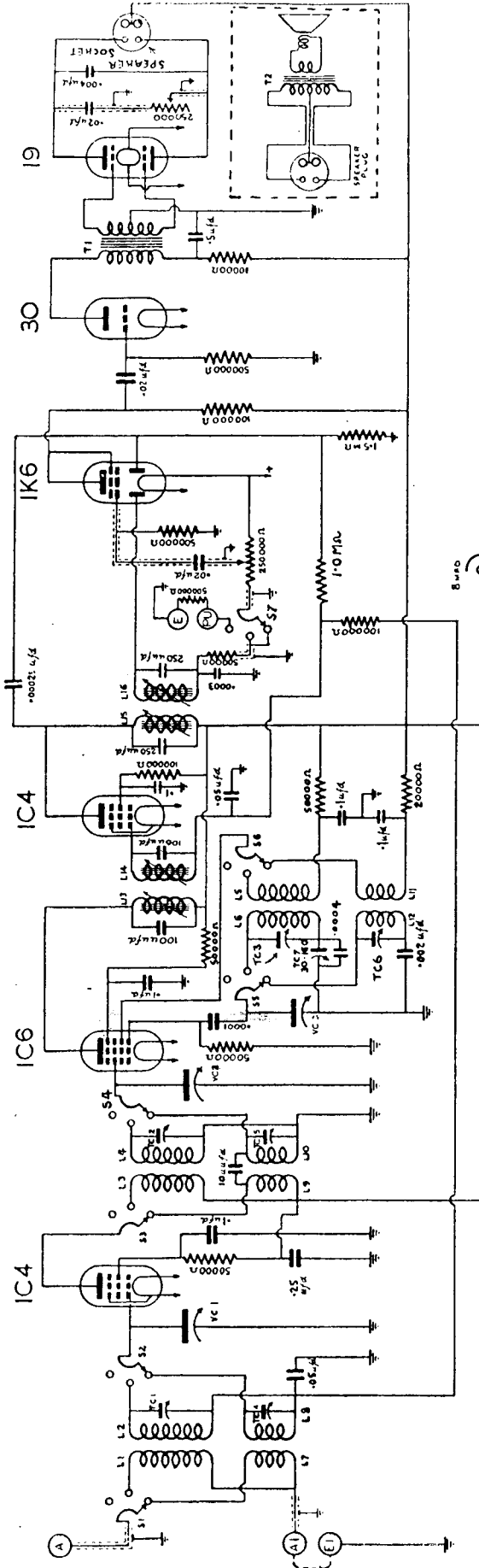
**1C4, 460 KC. I.F. Amplifier.** Plate, 135 v.; screen, 55 v.; grid, zero.

**1K6, Detector, A.V.C. Rectifier and A.F. Amplifier.** Plate, 55 v.; screen, 55 v.; grid, —2 v. (from filament).

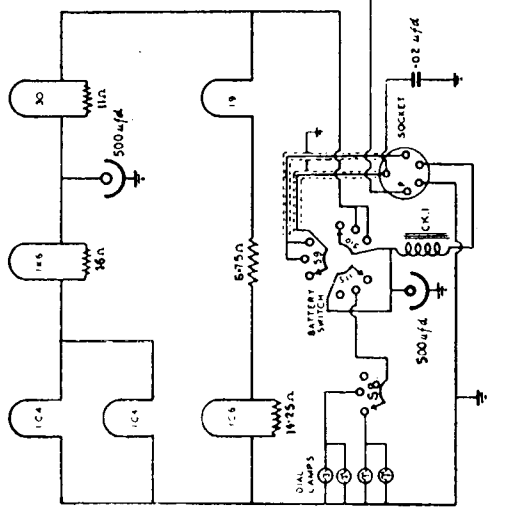
**30, Audio Driver.** Plate, 95 v.; grid, —4 v. (from filament).

**19, Class "B" Output Stage.** Plate, 130 v.; grid, —4 v. (from filament).

# "HIS MASTER'S VOICE" BATTERY-OPERATED DUAL-WAVE MODELS 346 & 347

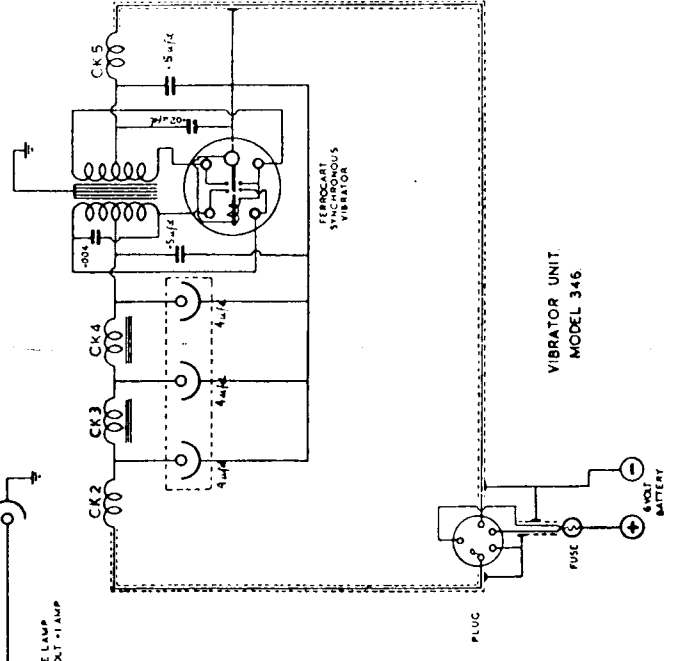


IC1 TC2 TC3 TC4 TC5 TC6 3-20µFD CAPACITY SWITCH SECTIONS 31 32 53 54 55 56 57& 58 ARE LOCATED ON WAVE-CHANGE SWITCH



FILAMENT CIRCUITS

BATTERY CONNECTIONS MODEL 347



H.M.V. model 346/347 is a "convertible" battery-operated receiver which can be powered by either dry batteries or a vibrator-type high-tension supply; the "A" supply being 6-volt accumulator in each case. Complete

circuit arrangements for both conditions of operations are given above. The I. F. used is exactly 460 KC. A general description and operating voltages of this model will be found on Page 270.