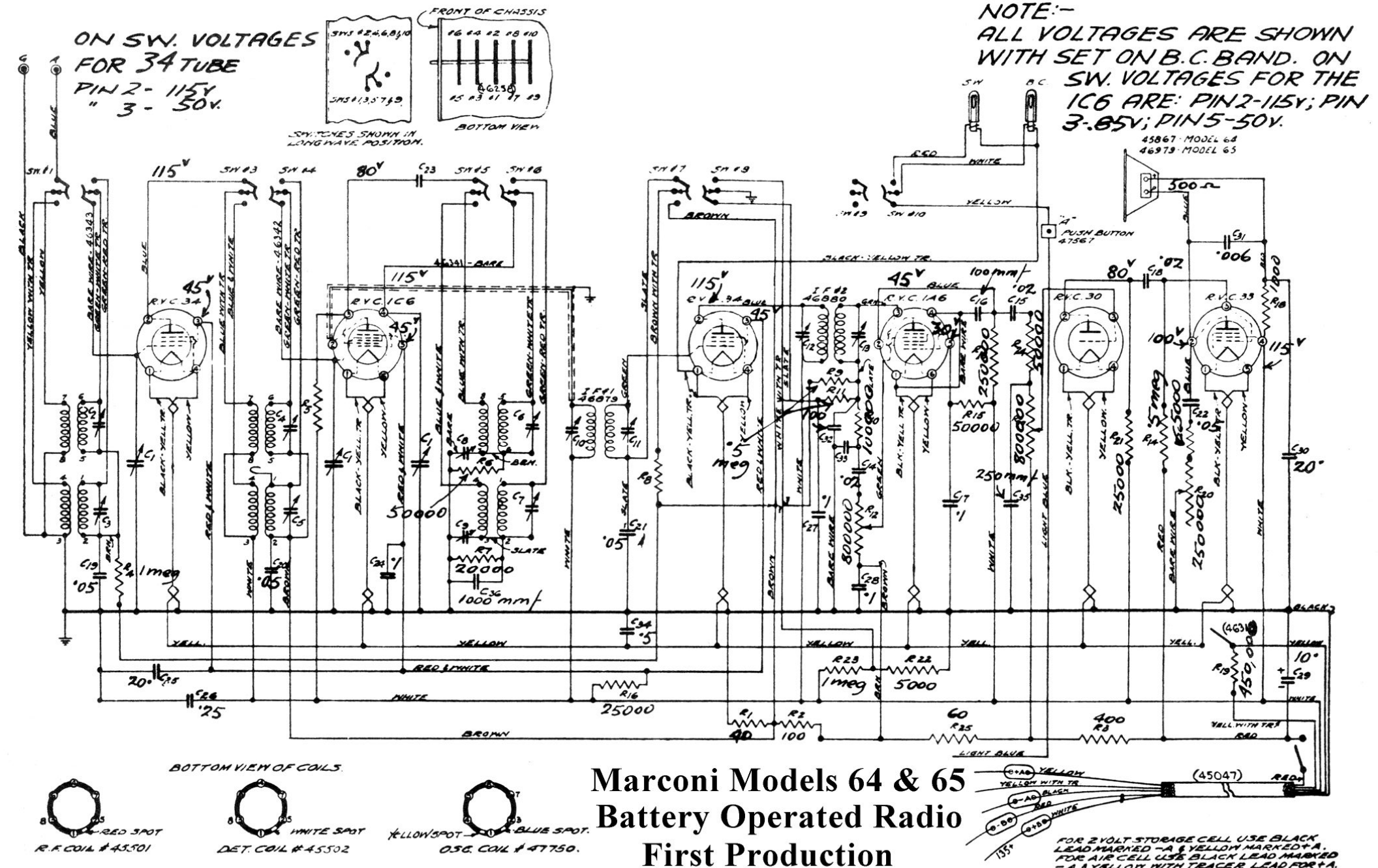
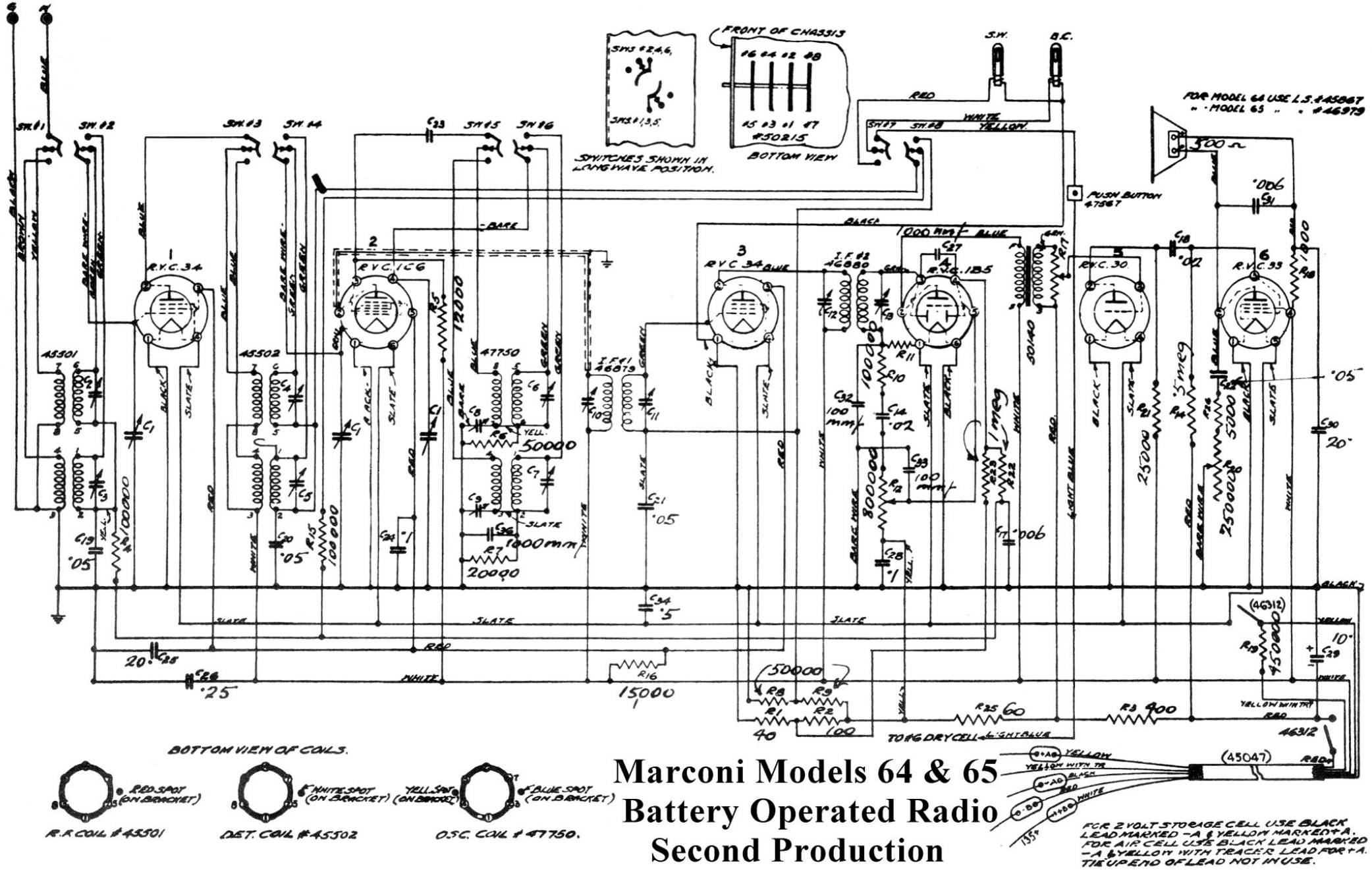


Marconi Models 64 & 65
Battery Operated Radio
First Production



Marconi Models 64 & 65
Battery Operated Radio
Second Production

GENERAL DATA:

Circuit:—Dual Wave, six tube battery operated superheterodyne with automatic volume control.

Frequency Range:—525 to 1730 K.C. and 5600 to 18000 K.C.

Intermediate Frequency:—450 K.C.

Undistorted Power Output:—485 Milliwatts.

Maximum Power Output:—685 Milliwatts.

Sensitivity in Microvolts for 100 MW output:—Short wave (10 M.C.) 8 MV., Long Wave (1000 K.C.) 3 MV.

Selectivity:—30 K.C. at 1000 times input at 1000 K.C.

Image Ratio:—13000/1 at 1000 K.C.

Filament Current:—620 Ma. at 2.1 volts.

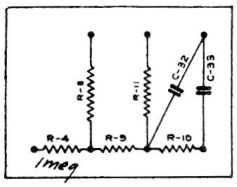
Total Plate Current:—26 Ma. at 135 volts.

BATTERIES:—

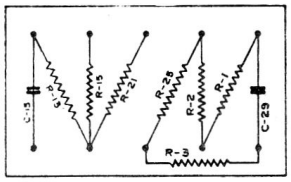
Do not attempt to operate the receiver with more than 135 volts of "B" battery or the tubes will be damaged.

No "C" battery is required as correct bias voltages are automatically supplied to all tubes by the potential divider (R1, R2, R25 and R3). This permits using "B" batteries even after they have dropped as low as 100 volts, although maximum sensitivity and tone quality can only be expected with fresh "B" batteries.

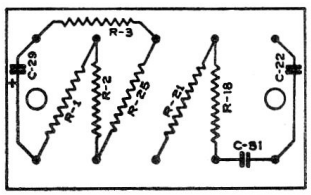
When the total "B" voltage drops below about 112 volts, the 1C6 tube may not oscillate on the short wave bands. The actual voltage at which oscillation stops will vary with different tubes and if the receiver does not function on short wave when the batteries are partially run down, it may be necessary to try several new 1C6 tubes, in order to obtain one that will operate satisfactorily.



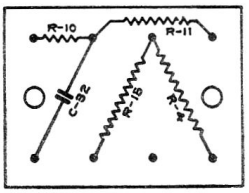
Resistor Panel



First Production



Resistor Panel

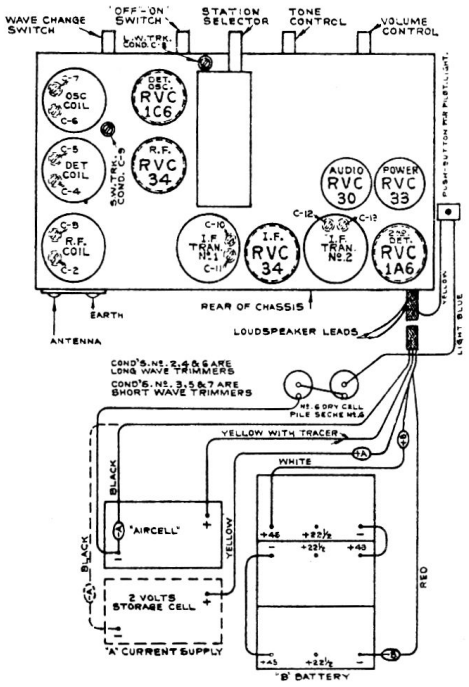


Second Production.

ALIGNMENT

I.F. Trimmers:—Set gang condenser at minimum and connect a 450 K.C. Test Oscillator to the grid cap of the 6A7 tube leaving the grid clip in place. A .1 Mf. blocking condenser should be used in series with the lead from the Test Oscillator. Turn the volume control on full and reduce the output of the T.O. until the output of the receiver is not more than 100 MW (e.g. 27 volts at 400 cycles across the speaker terminals). Adjust, in order, C13, C12, C11, C10. Go over these adjustments several times to insure the best possible setting.

Marconi Models 64 & 65 Battery Operated Radio



Broadcast Band Alignment:—Set the gang condenser at minimum capacity (plates out of mesh) and adjust pointer to the lower side of the black band on the right hand side.

Connect the test oscillator to the A & G terminals and supply a 1600 K.C. signal. Tune the receiver to 1600 and adjust, in order, C6, C4, C2.

Tune the receiver to 580 and supply a 580 K.C. signal. Adjust the oscillator tracking condenser C8 while rocking the dial slightly in order to secure the maximum output. A final adjustment should be made at 1600 K.C.

These adjustments should be made with the volume control full on and the output of the T.O. reduced to give a maximum output from the receiver of not more than 100 MW.

Holes are provided in the tops of R.F. Det. and Osc. coil shield cans to permit the insertion of a tuning wand. This device may be used to check the correctness of alignment. Inserting one end of the wand in the coil, increases its inductance and inserting the other end decreases its inductance. With the receiver tuned to a steady signal, inserting either end of the wand in any of the three coils will cause a drop in output if all circuits are correctly aligned. If an increase is noted, it will indicate incorrect adjustment of the trimmer.

The same procedure can be used for checking short wave alignment.

Short Wave Alignment:—If correct short wave alignment is to be obtained it is imperative to use a test oscillator that will supply the necessary test frequency as fundamentals and that will attentuate the signal so that a very low output is obtained from the receiver. An output meter is, of course, also essential. Connect the T.O. to the "A" and "G" terminals using a 250 mmf. condenser in series with the aerial lead and adjust it to supply a 16 M.C. signal. Rotate the gang condenser until the pointer is at 16 M.C. and tune in the 16 M.C. signal by adjusting C7, C5, and C3. To obtain exact trimming, the detector trimmer C5 should be varied while rocking the gang condenser back and forth until maximum output is obtained.

Rotate the gang till the pointer is at approximately 6 M.C. and supply a 6 M.C. signal. Adjust S/W tracking condenser C9 while rocking the dial slightly to obtain maximum output. A final adjustment should be made at 16. M.C.