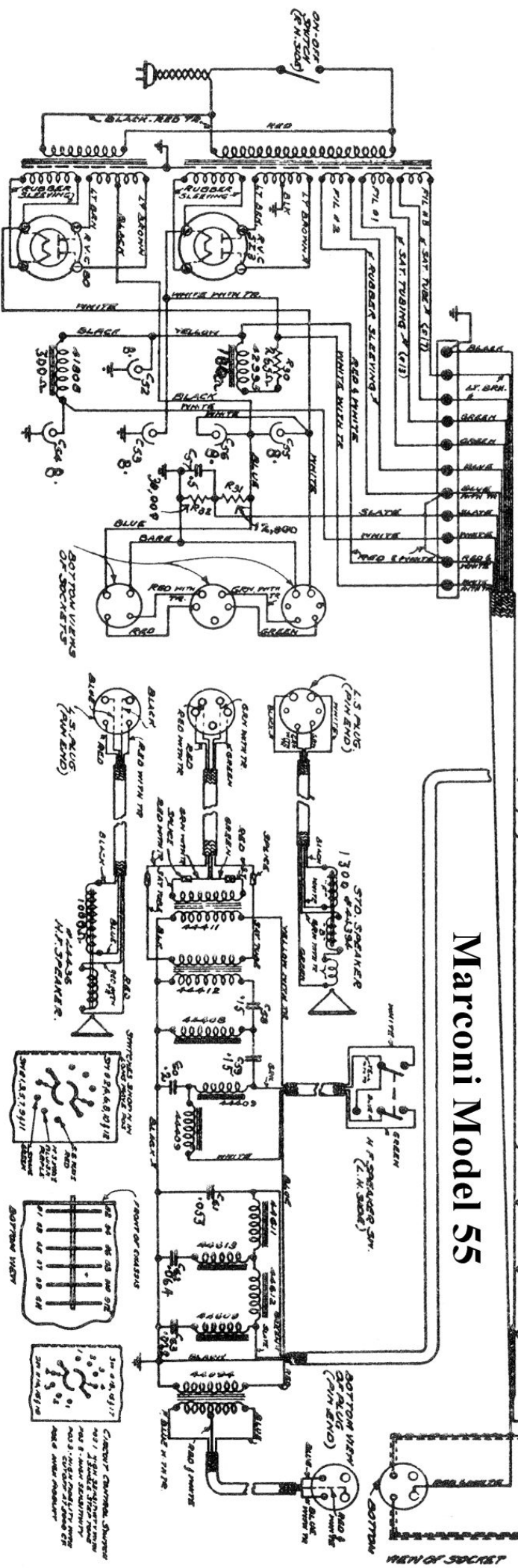


Marconi Model 55



Marconi Model 55 Alignment Procedure and Adjustments

Overload Indicator:—The audio frequency output of the power stage is applied to the grid and cathode of the 89 relay tube. When this voltage reaches a value corresponding to an output of 8 watts, sufficient plate current flows (approx. 10 Ma.) to operate the indicator. **Adjustment:**—Make sure all output and rectifier tubes and the 89 relay tube are in O.K. condition.

Connect an output meter across the voice coil terminals of the dynamic speaker. See that the C.C. switch is in position No. 3 (60-5,000 cycles) and the speaker switch turned for dynamic speaker only.

Supply a signal from a modulated test oscillator and increase volume until the output meter reads 6.9 volts, which should be a sufficiently strong signal to cause the indicator to change to red. If change takes place at a lower or higher voltage, adjust upper screw on back of indicator case and again increase volume to check operating point.

NOTE:—2.78 volts (RMS) across voice coil = 1 watt and 8.8 volts = 10 watts.

ALIGNMENT:

The leads from the Test Oscillator should be connected to the grid cap of the 6A7 Detector tube and to chassis, leaving the grid clip in place. If the oscillator is not provided with a blocking condenser, a .1 Mf. 300 volt condenser should be connected in the lead to the grid. (1) Loosen Trimmer C28 until the screw is quite loose and then adjust C29 for maximum output. (2) This will require a fairly strong signal from the oscillator. (3) Without making any further change in C29, proceed to adjust C28 for maximum output. (4) Turn the C.C. switch to Position No. 2, adjust C27 and C26. (5) Turn the C.C. switch to Position No. 3 and align C33 and C32. (6) Increase the output of the Test Oscillator until the tuning meter shows a reasonable deflection and adjust C31 for *minimum* output. This adjustment also gives maximum deflection of the tuning meter.

All adjustments except that for C31 should be made with a weak signal. The adjustment for C29 and C28 should be made carefully or the audio frequency response of the receiver will be affected.

Broadcast Band Trimmers:—First see that the dial pointer is set at maximum when the gang condenser plates are fully meshed. Connect a Test Oscillator to the "A" and "G" terminals, adjust it to supply a 1,400 K.C. signal and set the receiver dial to 1,400 K.C. Adjust in order:—Oscillator, Detector and R.F. Trimmers. (See chassis diagram.)

I.F. Trimmers:—A sharply tuned 450 K.C. Test Oscillator modulated at about 100 cycles or less, is required. A .2 to .5 Mf condenser connected across the modulator grid inductance will usually bring the modulation down to this frequency. Note that

Tune Test Oscillator and receiver to 600 K. C. and adjust Oscillator Padding Condenser C₃.

Short Wave Trimmers:—Switch to the Red Band and connect a S/W Test Oscillator to "A" and "G" terminals, using a 200 Mmf. condenser in series with the lead to the antenna terminal. The test oscillator should be set at 15,000 K.C. and the dial of the receiver at 20 metres. The Oscillator, Detector and R.F. S/W Trimmers (C45, C39 and C38) should now be adjusted. Make a careful adjustment of all three, using a very weak signal. Set the Test Oscillator to 11,000 K.C., tune the receiver to this frequency (approximately 27 metres) and adjust Tracking Condenser C6 while rocking the dial back and forth. Reset the oscillator to 15,000 K.C. and carefully tune the receiver to this signal. Note the reading on the output meter, make a slight re-adjustment of the Detector Trimmer (C39), carefully retune the receiver and again note the output reading. Proceed in this manner until the optimum adjustment is obtained. A final re-adjustment of the R.F. Trimmer may be required but *do not* touch the Oscillator Trimmer again.

If the receiver seems to lack sensitivity, replace the 6A7 tube and repeat the operations described in the above paragraph.

Switch the Purple Band, set the dial to 48 metres, adjust the Test Oscillator to give a 6,000 K.C. signal and carefully adjust S/W Oscillator Trimmer C44 for maximum output. When this has been completed, adjust the S/W R.F. Trimmer C64 for maximum signal. Do not touch the Detector Trimmer.

Switch to Green Band, set the dial to 100 metres, set the Test Oscillator to give a 3,000 K.C. signal and adjust S/W Oscillator Trimmer C40 for maximum output. Adjust the Test Oscillator to supply a 1,700 K.C. signal and turn the dial to 175 metres. Adjust S/W Oscillator Tracking Condenser C4 while rocking the dial back and forth.

