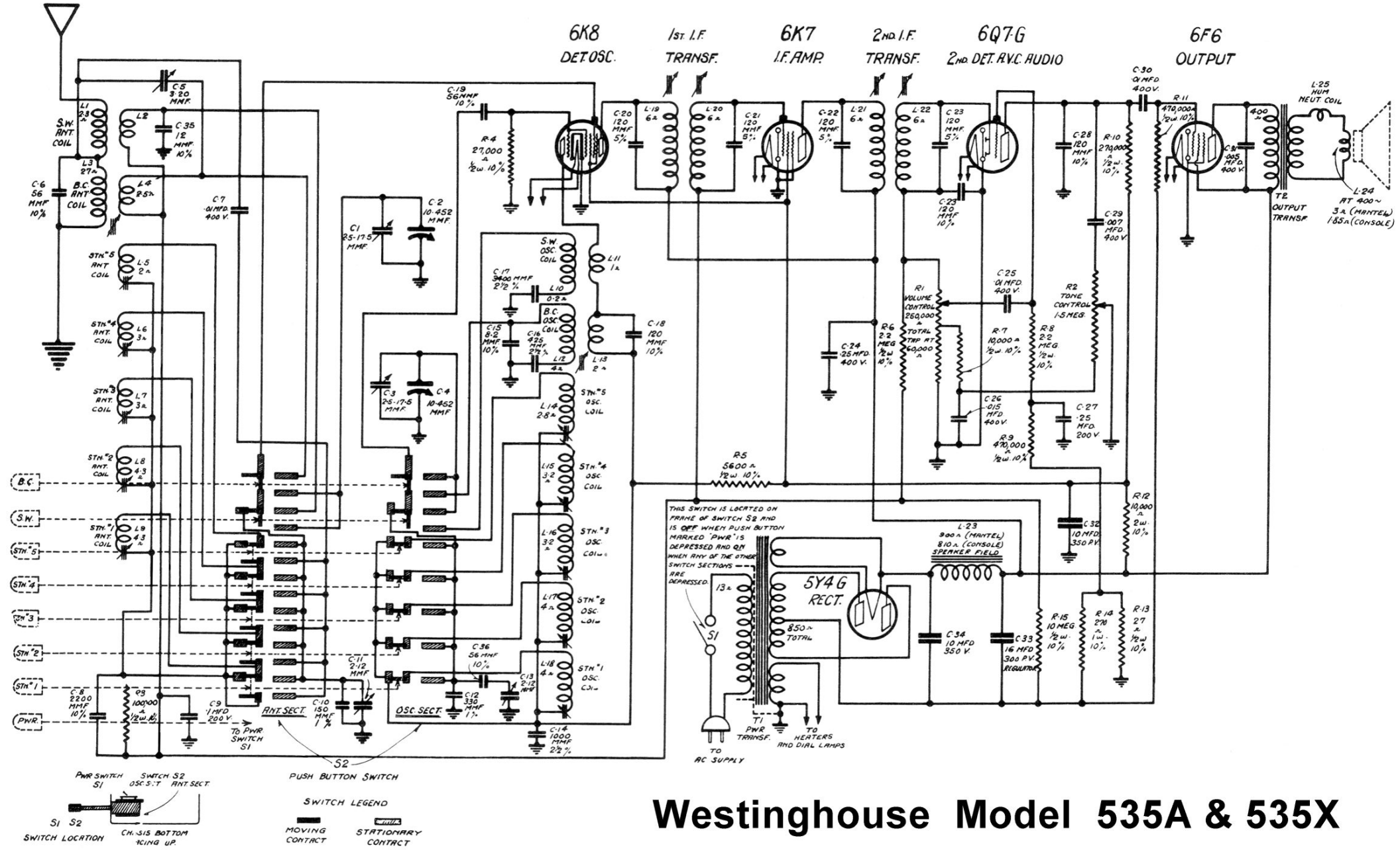


Westinghouse Model 535A & 535X

RCC Westinghouse Data Sheet 60, 1938 - 39

W-535 ALIGNMENT CHART

Order of Alignment	Connection To Receiver	Test Oscillator Dummy Antenna	Frequency Setting	Receiver Dial Setting	Circuit To Adjust	Adjustment Symbols	Adjust to Obtain
1	6K7 I.F. Grid Cap	.001 Mfd.	460 kc.	No Signal 1,700 kc.	2nd I.F. Transf.	L21, L22	Max. (Peak)
2	6K8 Det. Osc.	.001 Mfd.	460 kc.	No Signal 1,750 kc.	1st I.F. Transf.	L19, L20	Max. (Peak)
3	Ant. Term.	200 Mmfd.	600 kc.	600 kc.	B.C. Osc. 600 kc.	L12	Max. (Peak)
4	Ant. Term.	200 Mmfd.	1,500 kc.	1,500 kc.	B.C. Osc. 1,500 kc.	C3	Max. (Peak)
5		Repeat operations 3 and 4 in order until no further improvement results.					
6	Ant. Term.	300 ohms.	17,000 kc.	Rock through signal	S.W. Ant.	C1	Max. (Peak)
7	Ant. Term.	200 Mmfd.	600 kc.	600 kc.	B.C. Ant. 600 kc.	L3	Max. (Peak)
8	Ant. Term.	200 Mmfd.	1,500 kc.	1,500 kc.	B.C. Ant. 1,500 kc.	C5	Max. (Peak)
9	Repeat operations 7 and 8 in order.						

W-535 ADJUSTMENTS TO AUTOMATIC TUNING CIRCUITS

Provision is made in this receiver for automatic pushbutton tuning at five frequencies in the broadcast range. Each of these five automatic tuning buttons has associated with it an antenna coil and an oscillator coil. The two coils for any button are mounted on a common form, and are simultaneously tuned by adjusting a screw which moves two iron cores, which are attached to a common rod. (See Parts List for special tool.)

It will be noted that the oscillator coils have been set at the factory to the one particular position on the form that will allow simultaneous tuning of oscillator and antenna coil by one adjustment. No provision has been made to adjust the alignment of corresponding oscillator and antenna coils by the service man.

If, due to accident or unusual conditions, *one* of the antenna coils becomes out of alignment with its oscillator coil, the service man has two alternatives. (1) He can secure a replacement oscillator and antenna coil assembly (see parts list) already aligned. (2) He can adjust the position of the oscillator coil axially on the common form until optimum reception is secured from the particular station the customer desires to receive with that pushbutton. This adjustment will not necessarily give the correct position for the antenna coil if it is desired to use this button for a different frequency at a later date.

535 K.C. Trimmers.

There are two of these trimmers indicated in the diagram, one for the oscillator (C13) and one for the antenna (C11). These small trimmers are in circuit at all times when any one of the five station pushbuttons is pressed. Their main purpose is to compensate for variations in chassis wiring capacity, they are adjusted at the factory and will ordinarily not require readjustment. If due to error they are thrown out of adjustment, readjustment will be required. This will ordinarily be evidenced by difficulty in securing satisfactory reception on all of the pushbutton channels.

To restore the normal factory adjustment — (a) tune the adjustment screw for pushbutton station No. 1 all the way in, and the adjustment screw for pushbutton station No. 2 all the way out; (b) using a calibrated oscillator, determine to which frequencies pushbuttons 1 and 2 are now tuned. The tuning range should be from 540 K.C. to 900 K.C. (c) Use the oscillator coil 535 K.C. auto-tuning trimmer to raise or lower the frequencies of both pushbutton channels until the range between them corresponds to 540 to 900 K.C. or extends an equal distance in kilocycles each side of this range. (d) Using a test signal at approximately 700 K.C. and placing the receiver in operation, press the button for station No. 1 and adjust the core for maximum output. At the same time adjust the 535 K.C. antenna coil trimmer for alignment.

After any adjustment has been made to the 535 KC trimmers, it will be necessary to re-tune the cores of all the pushbutton channels to the desired station frequencies. Final adjustment should not be made until receiver has "warmed-up" 10 minutes.

REPLACING PUSHBUTTON COILS

After placing the chassis upsidedown with the bottom shield removed, remove the screws which secure the "U" shaped frame holding the pushbutton coils, to the front apron of the chassis. The whole frame may now be tilted so that any one of the coils can be pulled off its mounting. Care should be exercised not to strain the core forms by bending out of line with the frame as this might break the core assembly.

A small sized iron should be used for all soldering or unsoldering. All soldered joints are accessible, with the exception of one, which is under the complete assembly. It is suggested that the wire to this inaccessible terminal be cut off close to the coil and the corresponding wire from the new assembly be spliced to this wire, being careful to thoroughly clean the stranded wire.

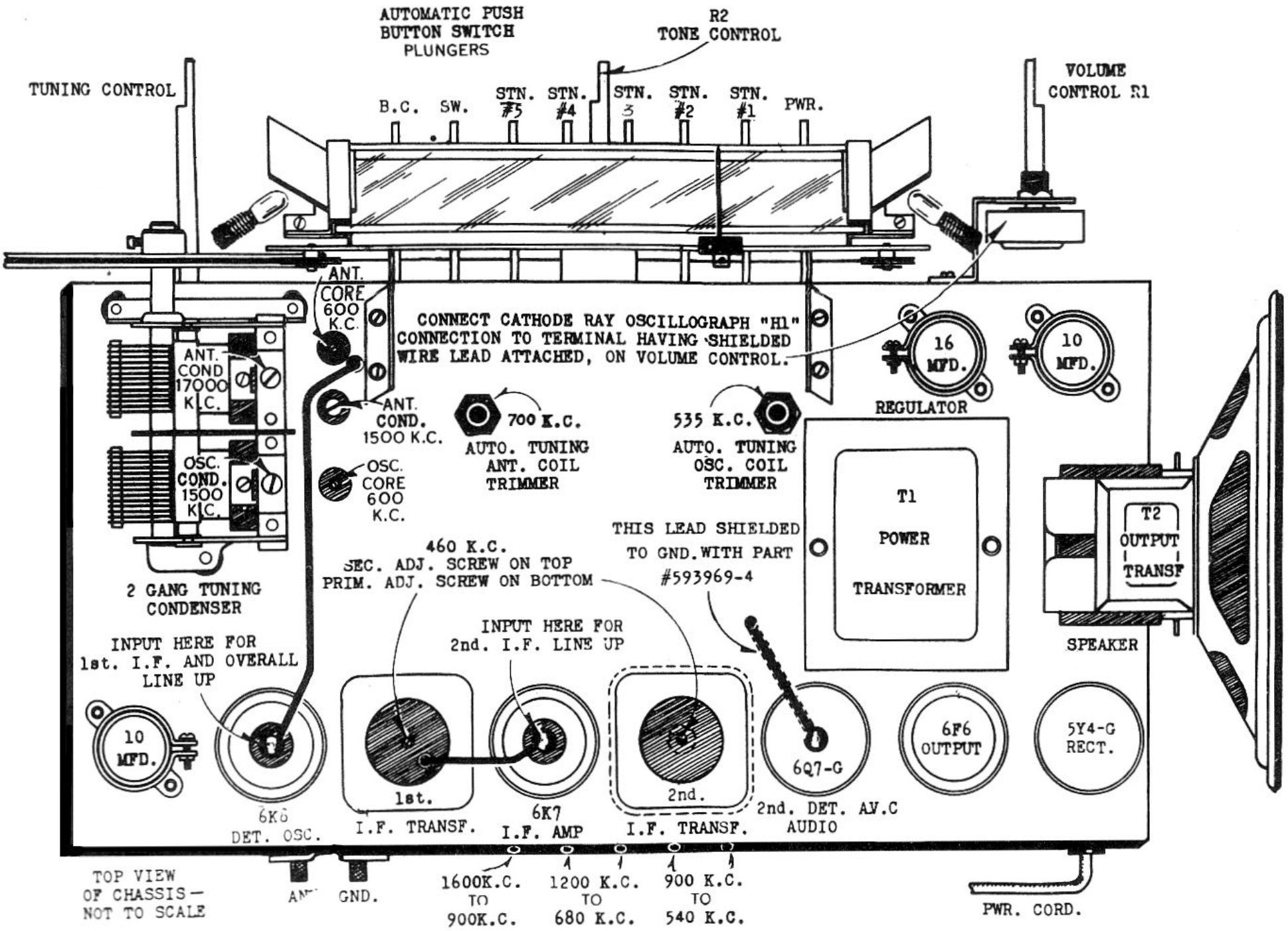
W-636 ADJUSTMENT TO AUTOMATIC TUNING CIRCUIT

These adjustments will be similar to those on the W-535, except that there is only one 535 KC trimmer. This is in the oscillator circuit and is designated "C-11."

To adjust this condenser for correct alignment of all pushbutton, detector and oscillator coils, it is only necessary to proceed as follows:

Use a test signal of approximately 700 KC, place the receiver in operation, press the button for Station No. 1 and adjust the core for maximum output. Then, adjust the 535 KC trimmer for maximum output while rocking the frequency control on the test oscillator back and forth.

This will give most accurate alignment of the pushbutton channel. Slight variations in adjustment of the trimmer are permissible if necessary to extend the range of the pushbutton channels up or down. After any adjustment has been made to this 535 KC trimmer, it will be necessary to re-tune the cores of all the pushbutton channels to the desired station frequencies.



Westinghouse Models 535A, X