

Zenith Radio Corp.

Model: 8G005

Chassis:

Year: Pre 1948

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

Riders Volume 20 - CHANGES 20-18

Riders Volume 15 - ZENITH 15-63

Riders Volume 15 - ZENITH 15-64

Riders Volume 15 - ZENITH 15-65

Riders Volume 15 - ZENITH 15-66

Riders Volume 15 - ZENITH 15-67, 68

Riders Volume 15 - ZENITH 15-69

Riders Volume 15 - ZENITH 15-70

Zenith 9H881, 9H882, 9H885, 9H888, Ch. 9E21

These models appear on pages 19-22 through 19-29,30 of *Rider's Volume XIX*. If capacitor C-4, 0.05 μ f, in series with the wavemagnet is open, the signals will be weak and the addition of an external antenna will not appreciably improve the signal strength. The replacement of this capacitor with a new 0.05 μ f capacitor usually clears up the trouble.

If the phonograph is dead, check resistor R-14, 10,000 ohms, $\frac{1}{2}$ watt, for intermittent operation. Due to movement of the r-f shelf when the band switch is operated, this resistor sometimes becomes intermittent, thus opening the phono circuit.

In most cases when aligning these models, it is not necessary to change or make any alterations in the i-f or discriminator trimmers. These trimmers are quite stable, and the only change recommended in alignment is that of the r-f section.

Be very sure to dress the tone control wires away from the pulley and dial cord. If these are not dressed away, binding and dial slipping will result.

If static is present when tuning in a station, check and see if the silver foil on the paper tube shield is tightly wrapped on the cardboard form. Sometimes this foil unwraps from the cardboard form and lies against the gang plates, creating static.

Zenith 6R886Z, Chassis 6E02Z

Model 6R886Z is the same as Model 6R886 which appears in *Rider's Manual Volume XVII*, pages 17-16 and 17-17, except that a tone control has been added, as illustrated in the accompanying diagram.

The following parts were added:

Zenith Chassis 6C01, 6D0 Series

Chassis 6C01, 6D0 Series, which appears on page 15-26 of *Rider's Volume XV*, will contain variations in the tube line-up. A single chassis may contain octal, lock-in, and miniature button tubes. If an original tube is replaced with an alternate, the socket must also be replaced.

Original	Alternate
35Z5G/GT	35W4
12SQ7GT	12AT6

When replacing speakers, use a speaker with the same code letter (49U, AG etc.) as the original otherwise a low-pitch hum may be produced. If a speaker with a different code is used, R10 (feedback resistor) may have to be changed. With 49U, H, or AG speakers, R10 is 390,000 ohms. When using a 49CS549 speaker, R10 must be 680,000 ohms. R10 is 330,000 ohms for all other speakers.

To repair this set when it produces a howl, change the 14C7 tube, which is probably microphonic.

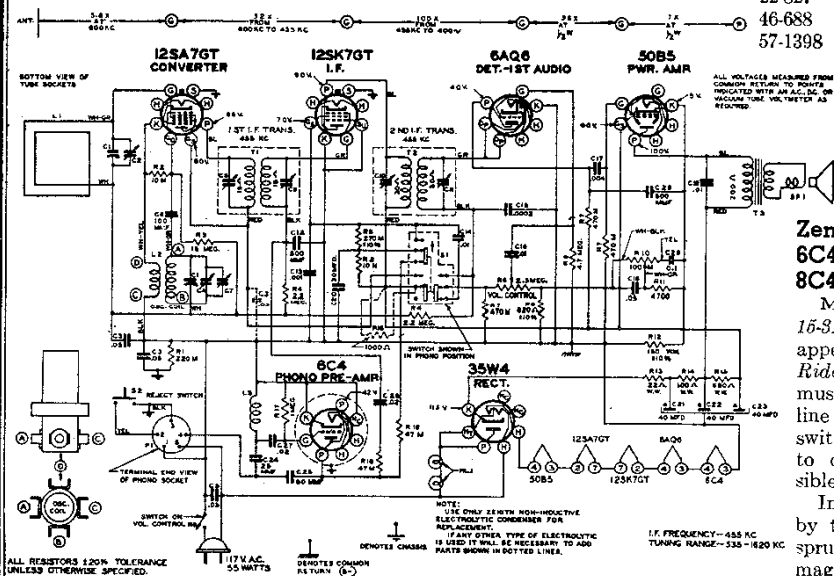
For oscillation, hum, and poor sensitivity, check for grounded tuning capacitor frame. Correct by inserting a rubber pad between the capacitor frame and chassis. Cement in place.

Zenith 8G005 Series

These models appear on pages 16-69 through 16-70 of *Rider's Volume XV*. All receivers of this series are similar. Different letters after the numbers 8G005 indicate differences in the cabinet only, except for Model 8G005BT. The latter is an export-standard model and employs a 220-120-volt changeover switch in the rear of the chassis. Otherwise, it is the same as the rest of the series.

S-14667	Dial pointer and pulley assy.
S-14670	Tone control brkt. and lug assy.
12-1490	Cover plate support
22-827	0.1 μ f 200 v.
46-688	Tone control knob
57-1398	Escutcheon

63-1653	Tone control
78-793	Socket-octal tube
85-438	Phono-Radio switch
125-66	Rubber grommet
166-41	Rubber bumper
188-34	Retaining ring.



Changes in the Zenith 6R886Z.

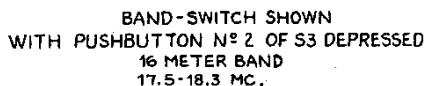
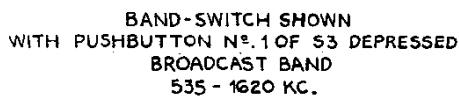
Zenith 6G001, 6G001YX, Chassis 6C40, 8G005, 8G005YX, Chassis 8C40

Model 6G001 appears on pages 15-30 and 15-31 of *Rider's Volume XV*. Model 8G005 appears on pages 15-63 through 15-70 of *Rider's Volume XV*. The On-Off switch must be in the Off position whenever the line plug is inserted into the changeover switch on the rear of the chassis. Failure to do this may cause flashing and possible burn-out of the output tubes.

Intermittent operation may be caused by the wavemagnet snap connectors being sprung, causing a poor contact. Poor wavemagnet contact is made through the cabinet hinge.

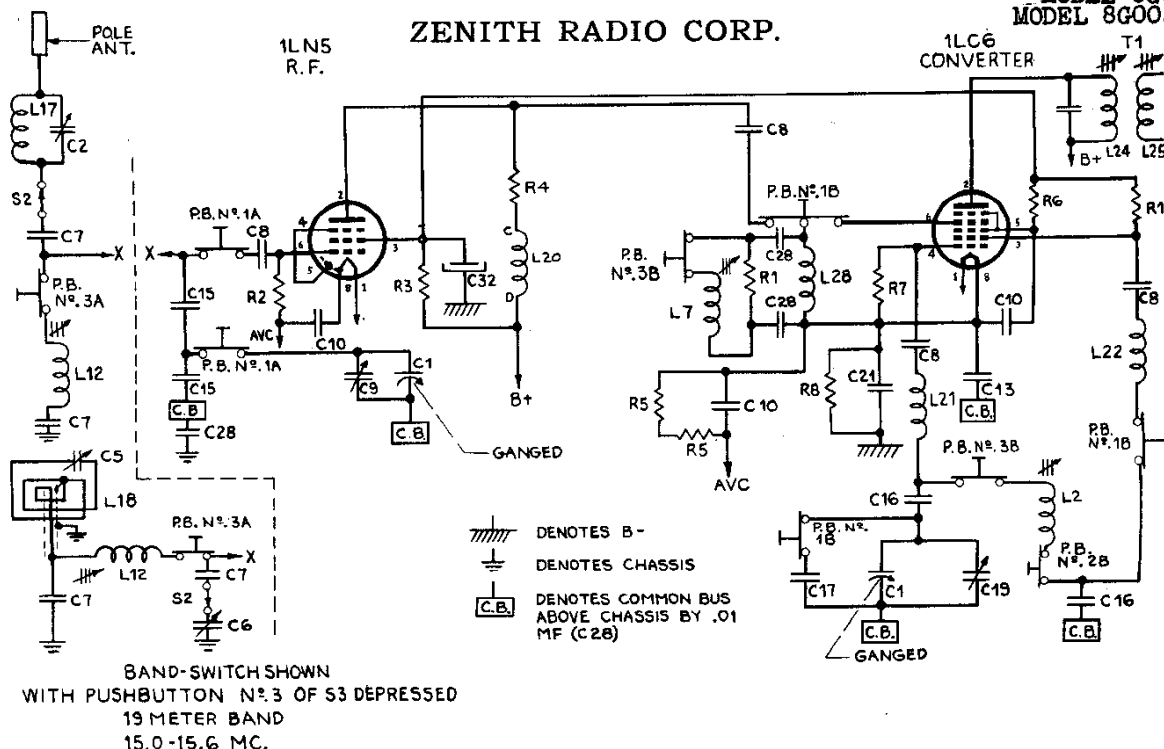
The letter "X" after the model number (6G001YX, 8G005YX) indicates that an aluminum cabinet is used.

ZENITH RADIO CORP.

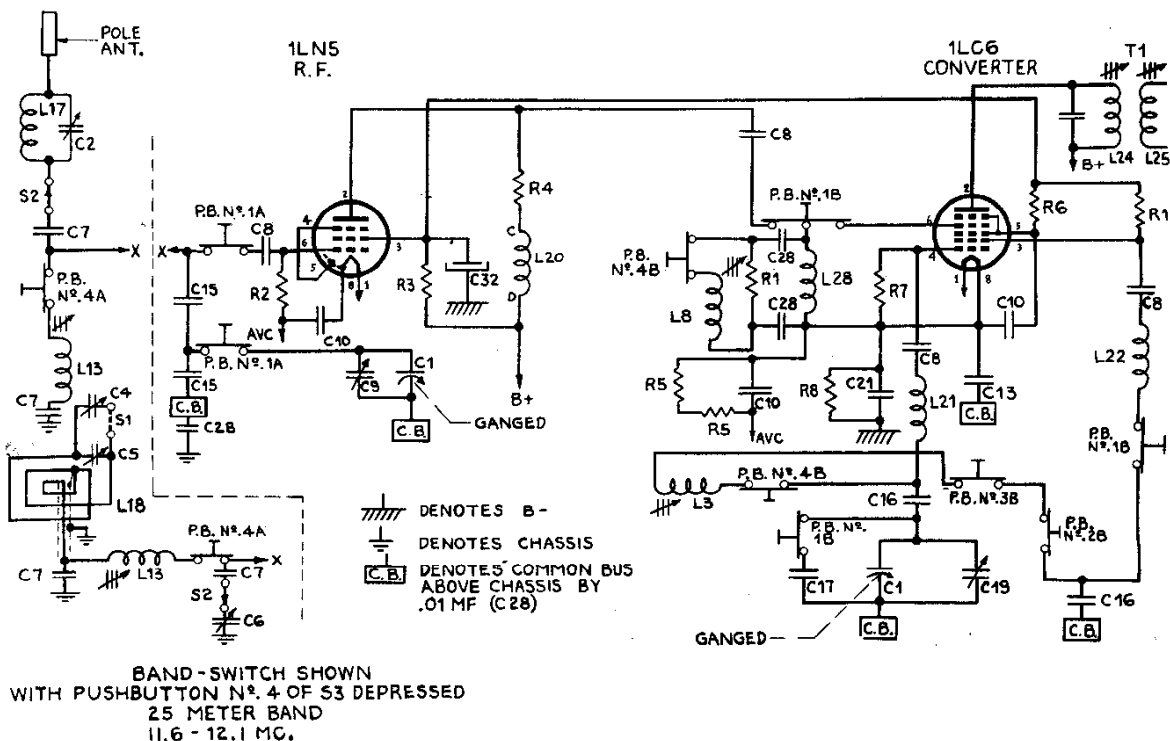


MODEL 8G005
 MODEL 8G005BT

ZENITH RADIO CORP.

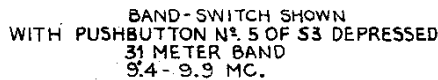


NOTE: Where the pole antenna is not effective, such as on steel buildings, trains automobiles, etc., the shortwave wavemagnet is then used and placed in a corner of the window. The shortwave wavemagnet is equipped with a plug which, when inserted into the receptacle on the rear of the set, automatically disconnects the pole antenna by operating switch S2 in the circuit. It is simply pulled out and switch S2 then automatically reconnects the pole antenna.



MODEL 8G005BT

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POLE ANT.

1LN5
R.F.

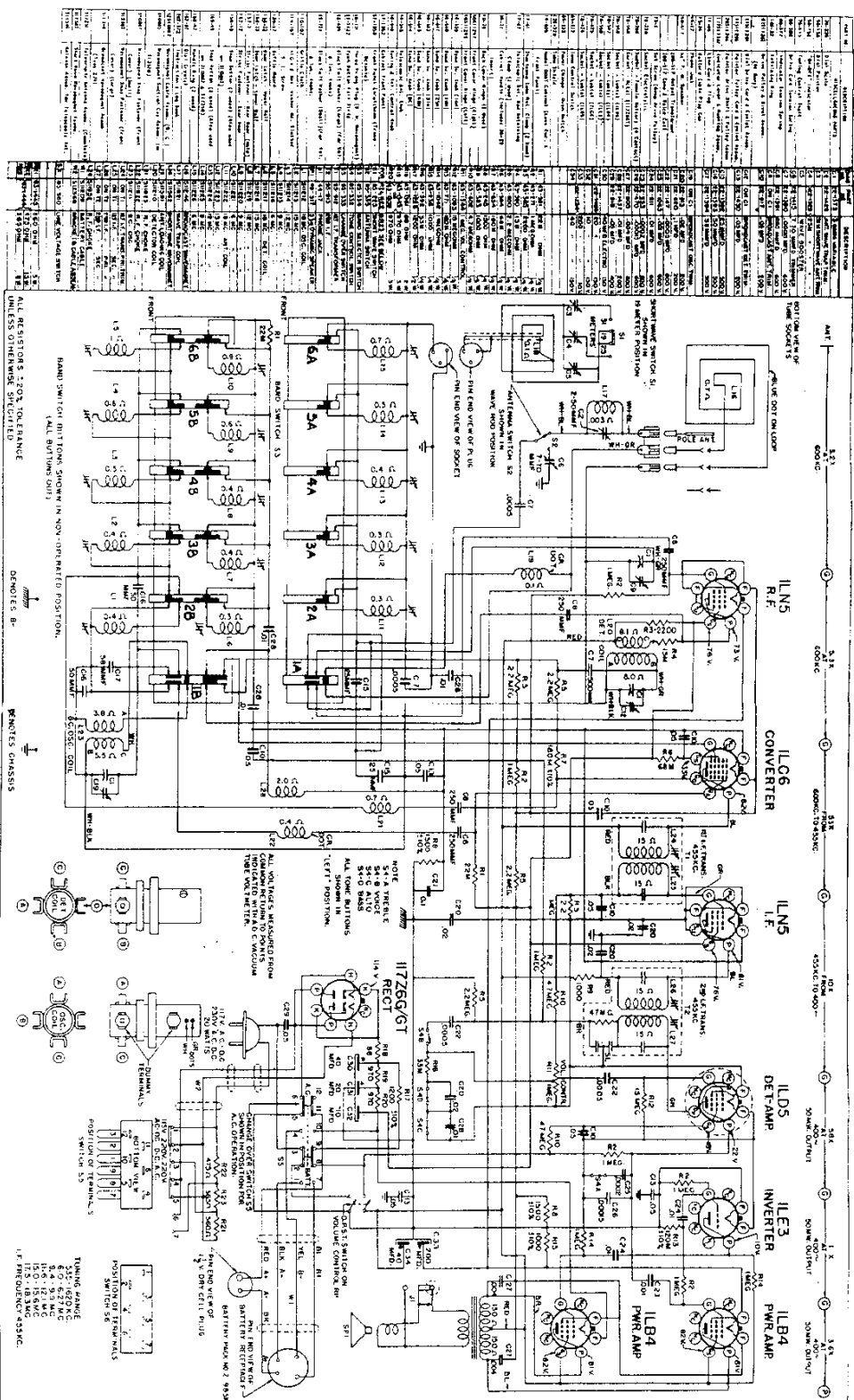
1LC6
CONVERTER

T1

BAND-SWITCH SHOWN
WITH PUSHBUTTON N°6 OF S3 DEPRESSED
49 METER BAND
6.0-6.27 MC.

LEGEND:

- DENOTES B-
- DENOTES CHASSIS
- DENOTES COMMON BUS ABOVE CHASSIS BY .01 MF (C28)



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MODELS 8G005, 8G005BT
CHASSIS 8C40, 8C40BT

TO THE SERVICE MAN:

CAUTION—Before attempting to operate this receiver, make certain that the Line Voltage Switch is properly set.

1. For 110-125 V. AC or DC operation set the Line Voltage Switch to 115 V. AC-DC.
2. For 210-240 V. AC operation, set the switch to the 220 V. AC position.
3. For 210-240 V. DC operation, set the switch to the 220 V. DC position.

The 8C40BT chassis is an AC, DC or battery operated superheterodyne circuit with a stage of tuned radio frequency amplification and band spread tuning over the 49, 31, 25, 19, and 16 meter bands.

The audio amplifier used in chassis 8C40BT features phase inversion and push-pull power output.

If removal of the chassis from the cabinet becomes necessary, great care must be exercised so that the coil assembly is not damaged.

The 8C40BT chassis is isolated from the DC circuits, and all measurements must be from a common negative point. The most convenient place to reach this point is at the junction where C13 is connected to the filter condenser. The DC resistance from the chassis to any circuit must be almost infinite. If any circuit becomes grounded to the chassis, a hum will appear. Microphonic tubes will cause an audio howl. Check the 1LD5 and 1LC6 tubes.

The wavemagnet is connected to the chassis through the hinges in the cabinet, snags and flexible leads. If the RF becomes weak or dead, check resistance of wavemagnet at the condenser gang. The DC resistance across the two leads should be approximately 1 ohm. If the circuit is open, unscrew the four wood screws and the two screws which hold the handle. The top can now be removed and connecting leads will be visible for inspection. Also loosen the snap-on socket and check for broken or shorted leads.

The alignment of chassis 8C40BT is conventional. However, care must be exercised when making adjustments, and the alignment procedure must be followed exactly. Set the chassis over a metal plate approximately the same distance the battery pack is from the bottom of the chassis when it is in the cabinet. This procedure will introduce the approximate amount of metal in the field of the RF and oscillator coils as when the chassis is in the cabinet. A signal generator of reasonable accuracy and good attenuation must be used. An output meter (AC) of the copper oxide rectified type with a range of 1 to 30 volts in several steps is necessary to get accurate output readings. Alignment wrenches should be of the non-metallic type, especially when making adjustments at the higher frequencies.

When reinstalling the chassis in the cabinet be careful not to disturb the cabling between the short wave coil assembly and chassis. Tune in a weak broadcast signal near 1400 Kc., and touch up trimmer C9. This will insure maximum performance after alignment.

A LOS MECANICOS

PRECAUCION: Antes de empezar el funcionamiento de este receptor, corriéndose de que el Interruptor del Voltaje de la línea esté debidamente ajustado.

1. Para corriente de 110-125 voltios, corriente continua o corriente alterna, ajústese el Interruptor del Voltaje de la línea a 115 voltios C.C. o C.A.

2. Para corriente de 210-240 v. C.A., ajústese el interruptor en la posición de 220 v. C.A.

3. Para corriente de 210-240 v. C.C., ajústese el superheterodino que funciona por corriente alterna a El bastidor 8C40BT es un circuito superheterodino con una etapa de amplificación de radio-corriente continua o por batería de acumuladores con una etapa de amplificación de radio-corriente sintonizada y un ensanche de banda que sintoniza con las bandas de 49, 31, 25, y 16 metros.

La válvula amplificadora de audiofrecuencia que se usa en el bastidor 8C40BT da importancia a la inversión de fases y a la salida simétrica de la energía.

Si se hace necesario quitar el bastidor del armario, deberá ejercerse gran cuidado para evitar que se dañe el embobinado.

El bastidor 8C40BT está aislado de los circuitos de corriente continua, y todas las medidas deben hacerse desde un punto negativo común. El lugar más conveniente para alcanzar este punto está en la unión donde C13 está conectado al condensador del filtro. La resistencia de cualquier circuito deberá ser casi infinita. Si la corriente continua procedente del bastidor a cualquier circuito deberá ser casi infinita. Si uno de los circuitos está a masa (cortacircuito) con el bastidor, se oír un zumbido. Las válvulas microfónicas producirán un ruido de audio. Examine las válvulas 1LD5 y 1LC6.

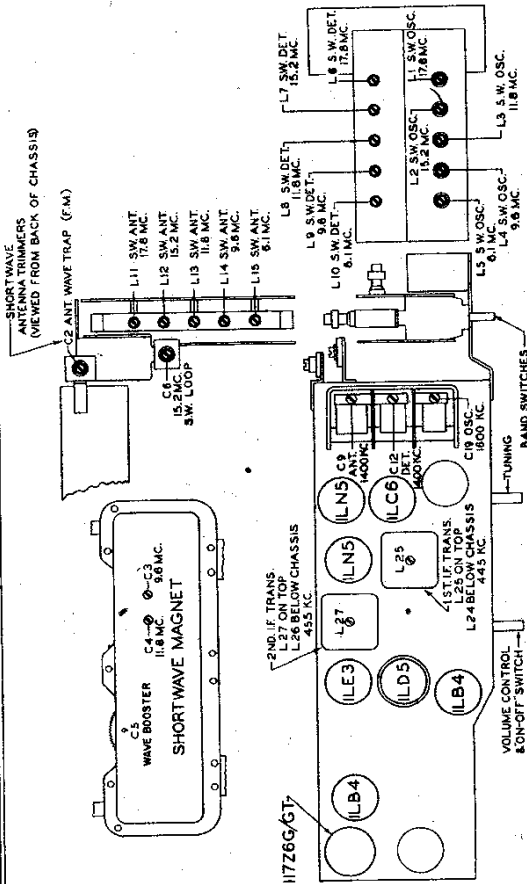
El imán de ondas está conectado al bastidor por medio de las bisagras en el armario, garras, y conductores (plomos) flexibles. Si la energía radiofrecuente se debilita o no existe, inspecciónese la resistencia del imán de ondas en el múltiple del condensador. La resistencia de la C.C. a través de los dos conductores (plomos) deberá ser aproximadamente de 1 ohm. Si al circuito está abierto, aflojense los cuatro tornillos de madera y los dos tornillos que sostienen el mango. Ahora, la tapa se puede quitar, quedando visibles para su inspección los conductores conectados. Aflojese también el casquillo de resorte y examínese para ver si hay conductores rotos o en cortocircuito.

El alineamiento del armazón 8C40BT es convencional; sin embargo, debe tenerse cuidado al hacer ajustes o composuras, y es imperativo hacer el alineamiento siguiendo el procedimiento exactamente. Colóquese el armazón sobre una plancha de metal aproximadamente a la misma distancia que el paquete de los acumuladores está del armazón cuando éste está en el armario. Este procedimiento introducirá en el campo de las bobinas de R.F. y del oscilador la cantidad aproximada de metal que hay cuando el armazón está en el armario. Hay que usar un generador de señales que funcione con exactitud y buena atenuación. Se necesita un medidor de rendimiento de C.A. del tipo rectificado de éxito de cobre, con una amplitud de 1 a 30 voltios en varias etapas, para obtener medidas correctas del rendimiento. Hay que usar llaves de alineamiento que no sean de metal, especialmente cuando se hagan ajustes o reparaciones en las frecuencias altas.

Cuando se instala otra vez el armazón en el armario, téngase cuidado de no desatreglar las posiciones de los cables que se extienden entre el conjunto de la bobina de onda corta y el armazón. Sintonícese con una señal de radiodifusión débil cerca de 1400 Kc., y tóquese la pieza C9 (trimmer). Así se obtendrá un funcionamiento máximo después del alineamiento.

MODELS 8G005,
8G005BT

ZENITH RADIO CORP.



ALIGNMENT PROCEDURE

OPERATION	CONNECT OSCILLATOR TO	DUMMY ANTENNA	INPUT SIG. FREQUENCY	BAND	SET DIAL AT	TRIMMERS	PURPOSE
1	Converter Grid (Pin 6-1LC6)	.1 mfd.	455 Kc.	BC	600 Kc.	L-24, 25, 26, 27	Align I.F.
2			1400 Kc.	BC	1600 Kc.	C-19	Set Oscillator to Scale
3	One Turn Loop Coupled Loosely to Broadcast Wavemagnet		1400 Kc.	BC	1400 Kc.	C-12	Alignment of Detector Sec.
4			1400 Kc.	BC	1400 Kc.	C-9	Alignment of B.C. Wavemagnet
5*	3 Feet of Wire Approx. 1 foot from Extended Wavemagnet		6.1 Mc.	49 Met.	6.1 Mc.	L-5, L-10, L-15	Alignment of S.W. Antenna, Detector and Oscillator
6*			9.6 Mc.	31 Met.	9.6 Mc.	L-4, L-9, L-14	
7*			11.8 Mc.	25 Met.	11.8 Mc.	L-3, L-8, L-13	
8*			15.2 Mc.	19 Met.	15.2 Mc.	L-2, L-7, L-12	
9*			17.8 Mc.	16 Met.	17.8 Mc.	L-1, L-6, L-11	Alignment of Shortwave Magnet
10	One Turn Loop Coupled Loosely to Shortwave Magnet, Wavemagnet Collapsed		15.2 Mc.	19 Met.	15.2 Mc.	C-5, C-6	
11			11.8 Mc.	25 Met.	11.8 Mc.	C-4	
12			9.6 Mc.	31 Met.	9.6 Mc.	C-3	
13	When Receiving Normal Transmission on the 49, 31, 25, 19 or 16 Meter Bands, if FM Interference is Experienced Adjust Wave Trap Trimmer C-2 for Minimum Response of the Interfering Signal.						

*Note: Rock Tuning Condenser When Making Alignment Under Operations 5, 6, 7, 8 and 9.