

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, 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.

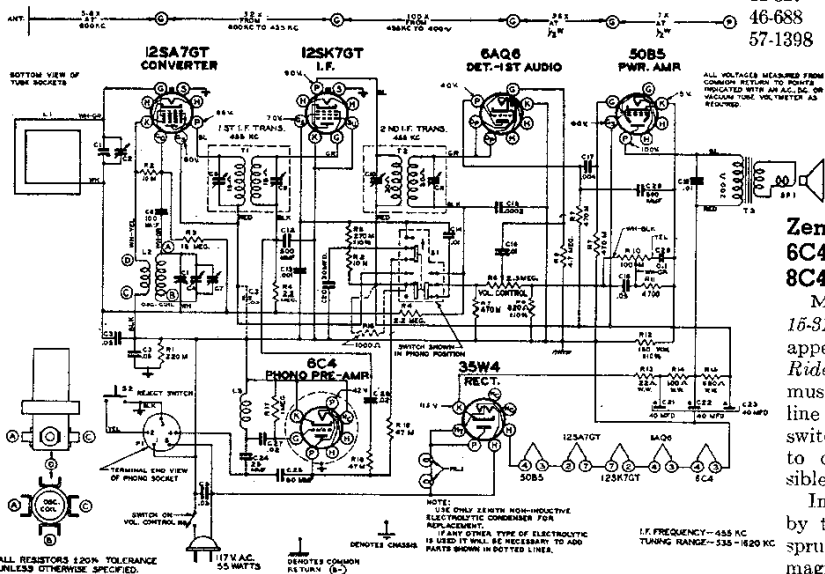
Zenith 6R886Z, Chassis 6E02Z

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:

- 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 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.

<i>Original</i>	<i>Alternate</i>
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

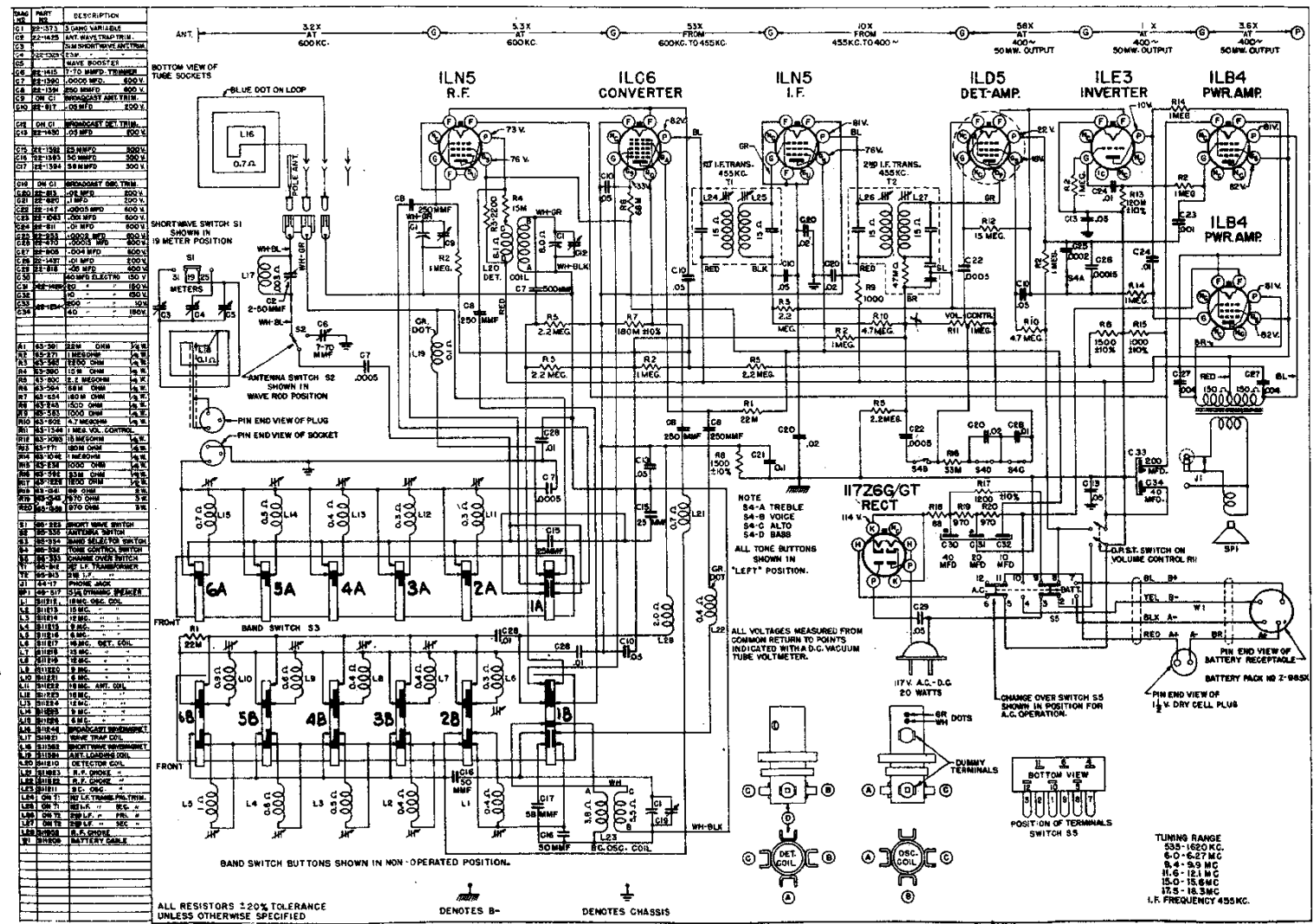
These models appear on pages 16-69 through 16-70 of *Rider's Volume XV*. All receivers of this series are similar. Different letters after the numbers 8G005 indicate differences in the cabinet only, except for Model 8G005BT. The latter is an export-standard model and employs a 220-120-volt changeover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

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.



PART NO.	DESCRIPTION
R1	500K
R2	100K
R3	100K
R4	100K
R5	100K
R6	100K
R7	100K
R8	100K
R9	100K
R10	100K
R11	100K
R12	100K
R13	100K
R14	100K
R15	100K
R16	100K
R17	100K
R18	100K
R19	100K
R20	100K
R21	100K
R22	100K
R23	100K
R24	100K
R25	100K
R26	100K
R27	100K
R28	100K
R29	100K
R30	100K
R31	100K
R32	100K
R33	100K
R34	100K
R35	100K
R36	100K
R37	100K
R38	100K
R39	100K
R40	100K
R41	100K
R42	100K
R43	100K
R44	100K
R45	100K
R46	100K
R47	100K
R48	100K
R49	100K
R50	100K
R51	100K
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R56	100K
R57	100K
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R96	100K
R97	100K
R98	100K
R99	100K
R100	100K
C1	500P
C2	500P
C3	500P
C4	500P
C5	500P
C6	500P
C7	500P
C8	500P
C9	500P
C10	500P
C11	500P
C12	500P
C13	500P
C14	500P
C15	500P
C16	500P
C17	500P
C18	500P
C19	500P
C20	500P
C21	500P
C22	500P
C23	500P
C24	500P
C25	500P
C26	500P
C27	500P
C28	500P
C29	500P
C30	500P
C31	500P
C32	500P
C33	500P
C34	500P
C35	500P
C36	500P
C37	500P
C38	500P
C39	500P
C40	500P
C41	500P
C42	500P
C43	500P
C44	500P
C45	500P
C46	500P
C47	500P
C48	500P
C49	500P
C50	500P
L1	100UH
L2	100UH
L3	100UH
L4	100UH
L5	100UH
L6	100UH
L7	100UH
L8	100UH
L9	100UH
L10	100UH
L11	100UH
L12	100UH
L13	100UH
L14	100UH
L15	100UH
L16	100UH
L17	100UH
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L37	100UH
L38	100UH
L39	100UH
L40	100UH
L41	100UH
L42	100UH
L43	100UH
L44	100UH
L45	100UH
L46	100UH
L47	100UH
L48	100UH
L49	100UH
L50	100UH

ZENITH RADIO CORP.

ZENITH PAGE 15-63
MODEL 8G005, Ch. 8C40

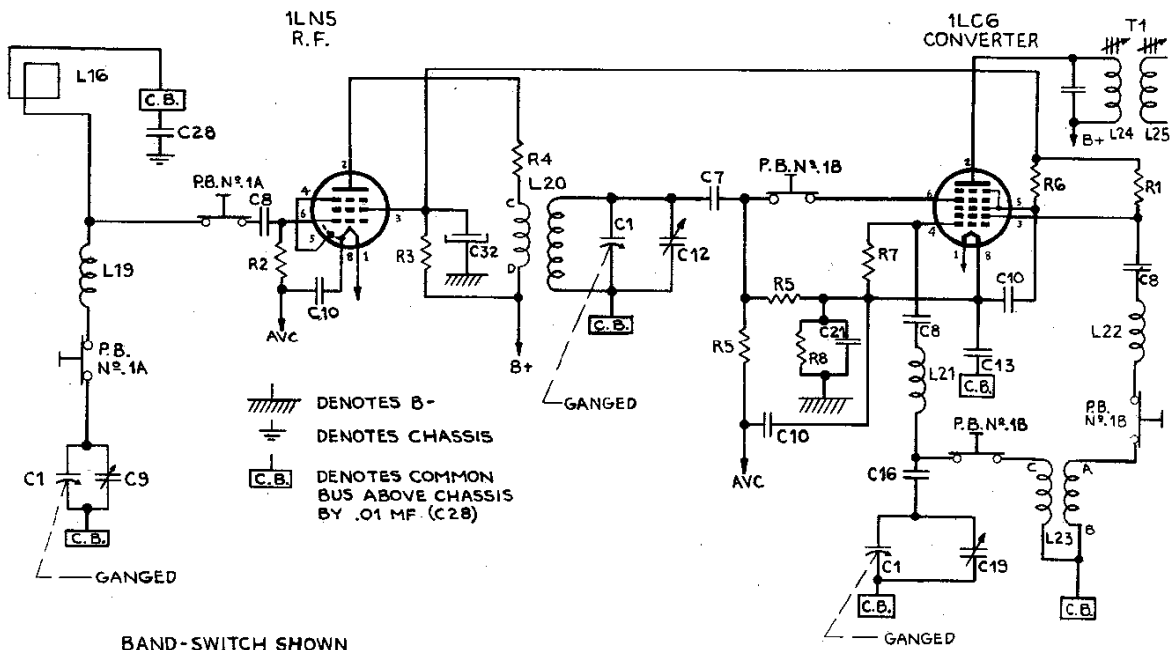
MICROPHONICS: Howl caused by a microphonic 1LD5 tube. These tubes have been improved, and all tubes after F6E (June '46) are non-microphonic and should replace the older type.

PUSHBUTTON SWITCH LABELED 1A, 1B, ETC. FOR REFERENCE TO CLARIFIED SCHEMATICS

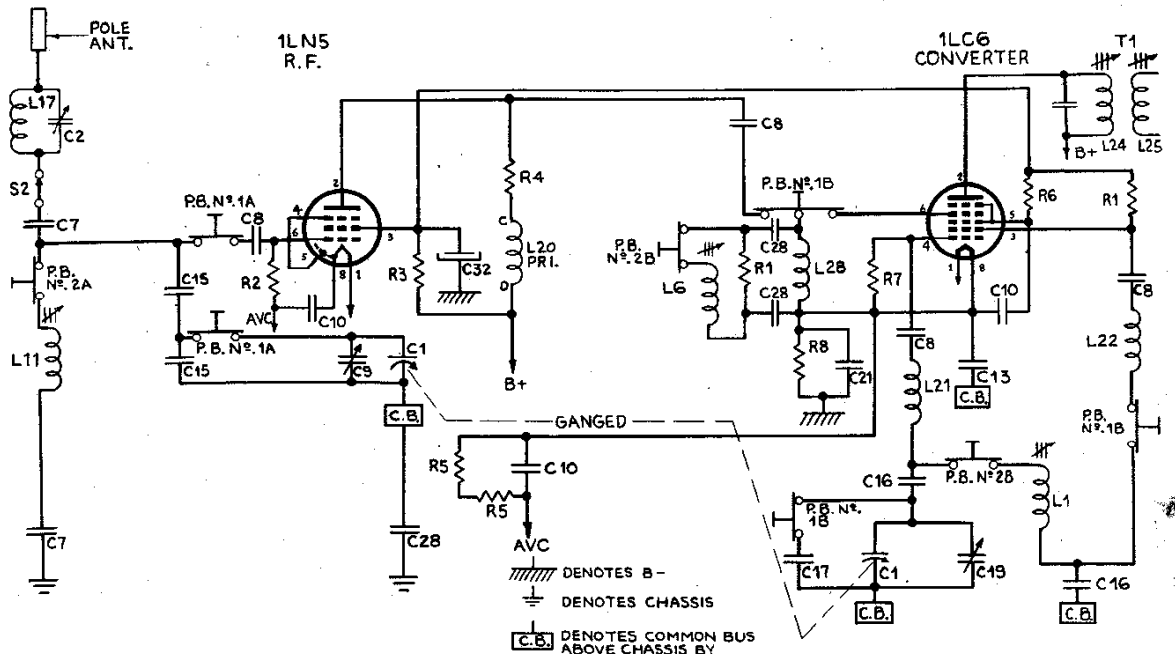
"clarified schematics"

MODEL 8G005
MODEL 8G005BT

ZENITH RADIO CORP.



BAND-SWITCH SHOWN WITH PUSHBUTTON N° 1 OF S3 DEPRESSED
BROADCAST BAND
535 - 1620 KC.

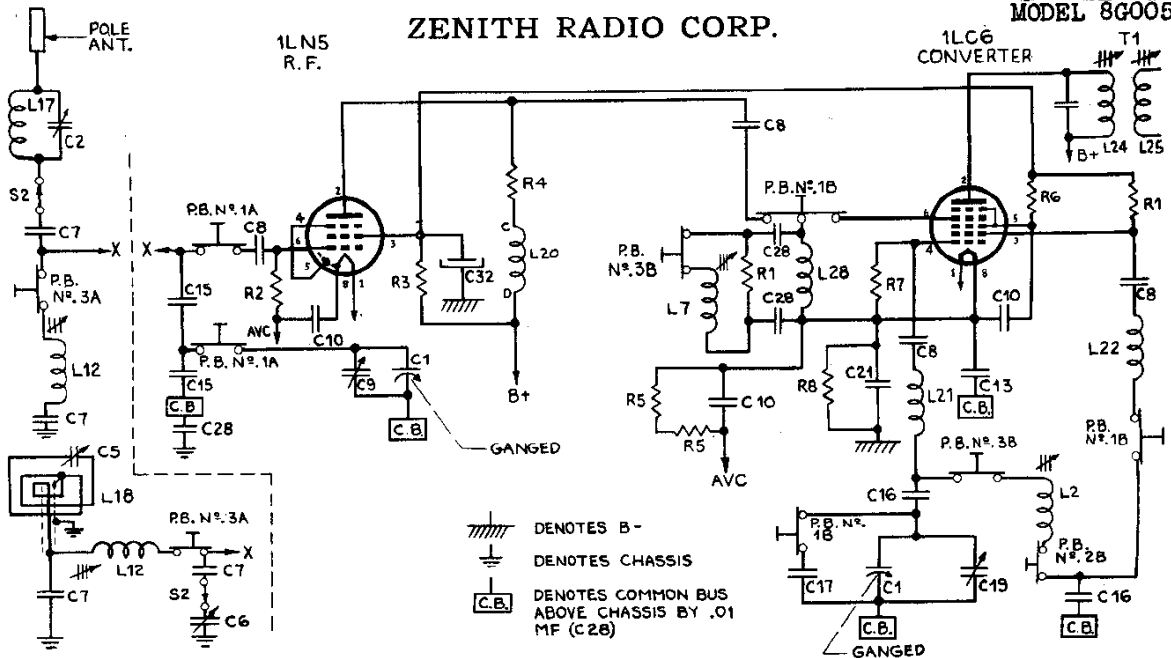


BAND-SWITCH SHOWN WITH PUSHBUTTON N° 2 OF S3 DEPRESSED
16 METER BAND
17.5-18.3 MC.

"clarified schematics"

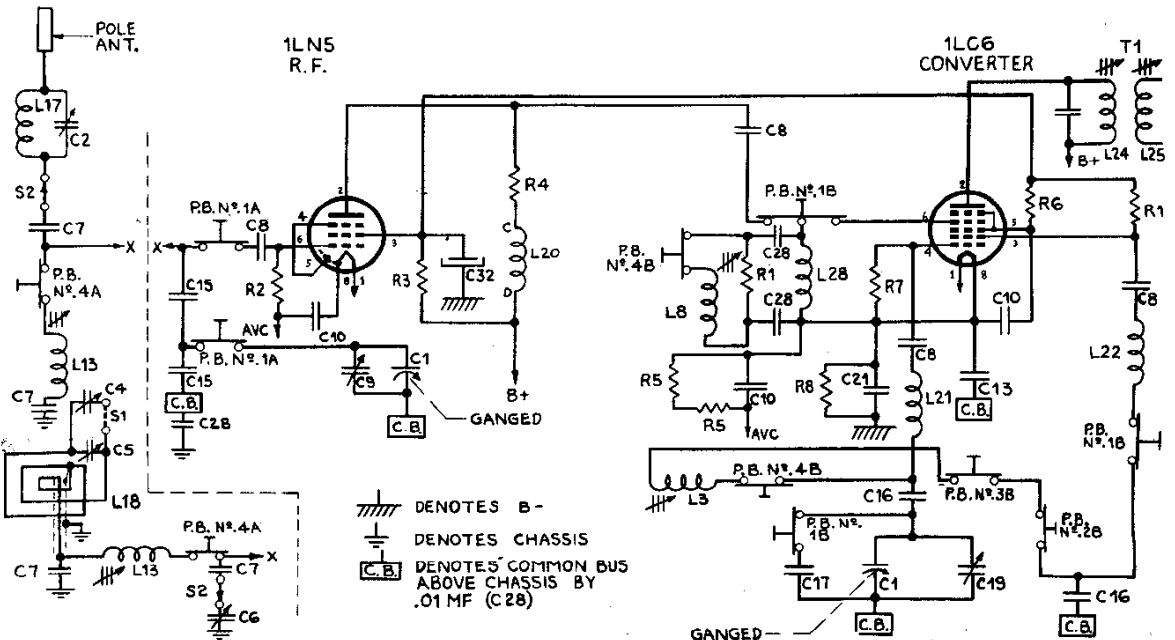
MODEL 8G005
MODEL 8G005BT

ZENITH RADIO CORP.



BAND-SWITCH SHOWN
WITH PUSHBUTTON N° 3 OF S3 DEPRESSED
19 METER BAND
15.0-15.6 MC.

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.



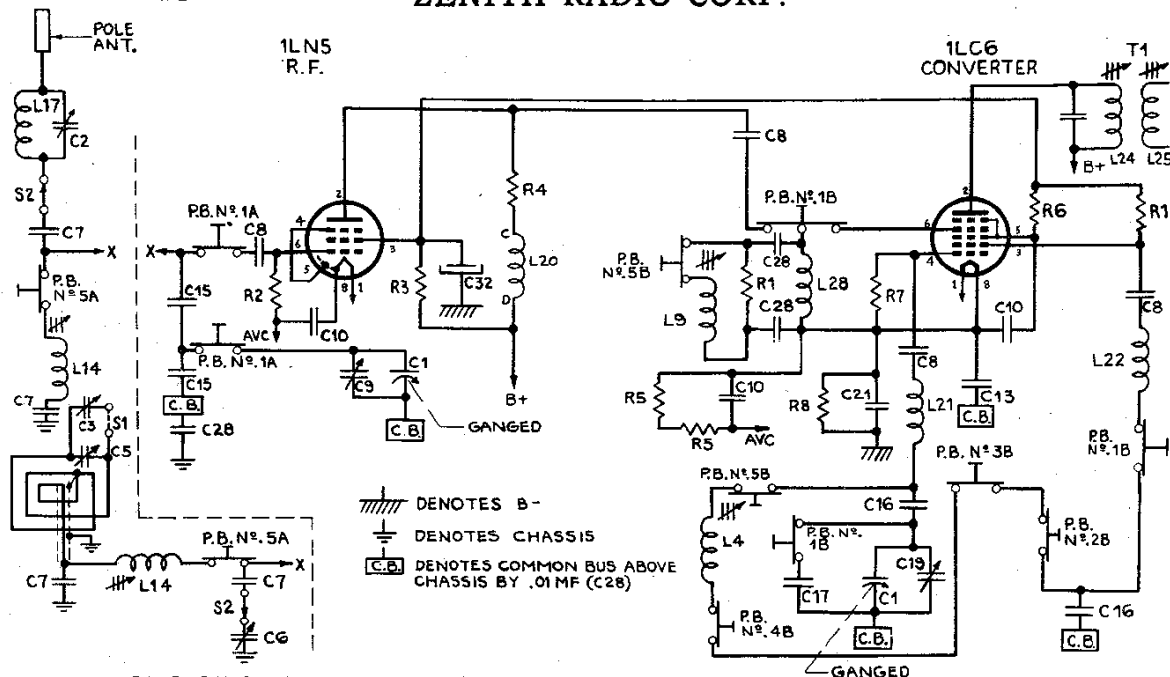
BAND-SWITCH SHOWN
WITH PUSHBUTTON N° 4 OF S3 DEPRESSED
25 METER BAND
11.6 - 12.1 MC.

"clarified schematics"

PAGE 15-66 ZENITH

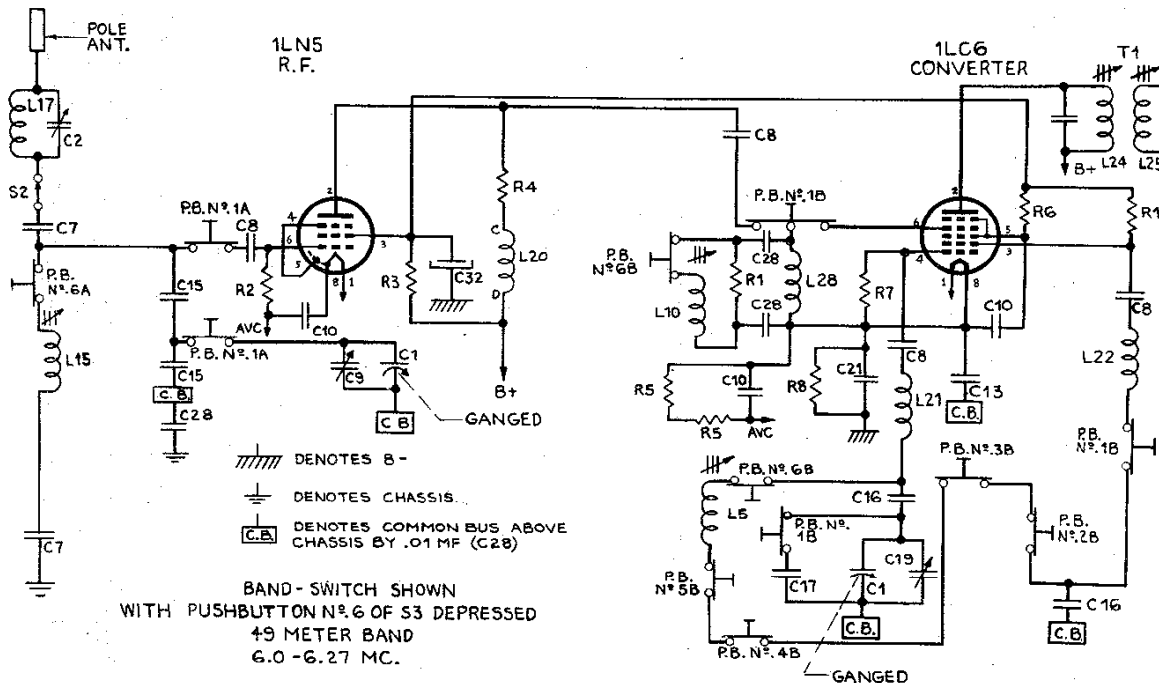
MODEL 8G005
MODEL 8G005BT

ZENITH RADIO CORP.

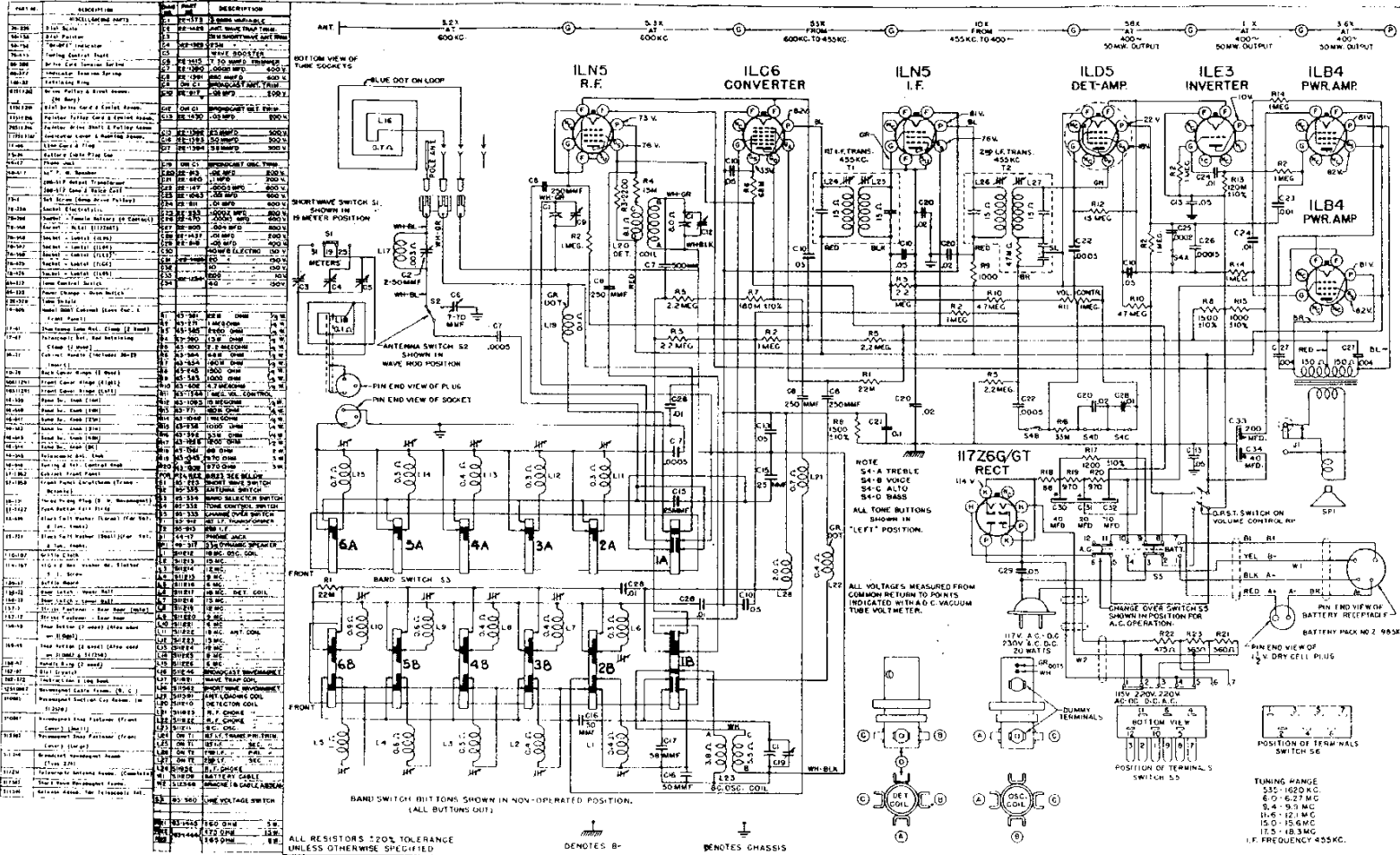


BAND-SWITCH SHOWN
WITH PUSHBUTTON N° 5 OF S3 DEPRESSED
31 METER BAND
9.4-9.9 MC.

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.



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



PUSHBUTTON SWITCH LABELED
1A, 1B, ETC. FOR REFERENCE TO
CLARIFIED SCHEMATICS

MODEL 8G005BT
CHASSIS 8C40BT

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, snaps 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 a 220 v. C.A.
 3. Para corriente de 210-240 v. C.C., ajústese el Interruptor en la posición de 220 v. C.C.
- El bastidor 8C40BT es un circuito superheterodino que funciona por corriente alterna o corriente continua o por batería de acumuladores con una etapa de amplificación de radio-frecuencia sintonizada y un ensanche de banda que sintoniza con las bandas de 49, 31, 25, y 16 metros.

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

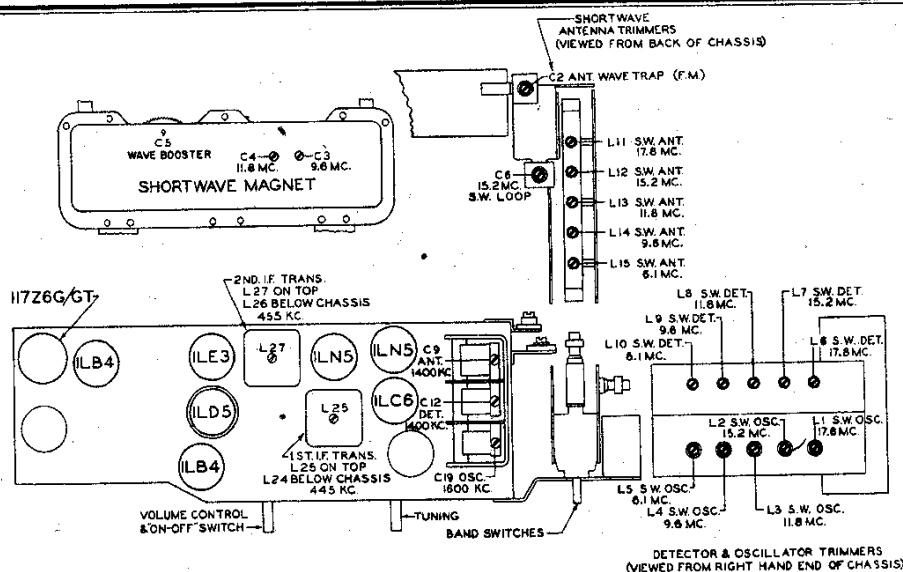
Si se hace necesario quitar el bastidor del armario, deberá ejercerse gran cuidado para evitar que se dañe el embobinado.

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 la corriente continua procedente del bastidor a cualquier circuito deberá ser casi infinita. Si uno de los circuitos está a masa (cortocircuito) con el bastidor, se oír un zumbido. Las válvulas microfónicas producirán un aullido de audio. Examinense 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 el circuito está abierto, añóñese 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. Añóñese también el casquillo de resorte y exáminese para ver si hay conductores rotos o en cortocircuito.

El alineamiento del armazón 8C40BT es convencional; sin embargo, debe tenerse cuidado al hacerse 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 óxido 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 instale otra vez el armazón en el armario, téngase cuidado de no desarreglar las posición 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.



ALIGNMENT PROCEDURE

OPERATION	CONNECT OSCILLATOR TO	DUMMY ANTENNA	INPUT SIG. FREQUENCY	BAND	SET DIAL AT	TRIMMERS	PURPOSE
1	Converter Grid (Pin 6-11C6)	.1 mfd.	455 Kc.	BC	600 Kc.	L-24, 25, 26, 27	Align I.F.
2	One Turn Loop Coupled Loosely to Broadcast Wavemagnet		1600 Kc.	BC	1600 Kc.	C-19	Set Oscillator to Scale
3			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 Waverod		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	
10	One Turn Loop Coupled Loosely to Shortwave Magnet, Waverod Collapsed		15.2 Mc.	19 Met.	15.2 Mc.	C-5, C-6	Alignment of Shortwave Magnet
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.