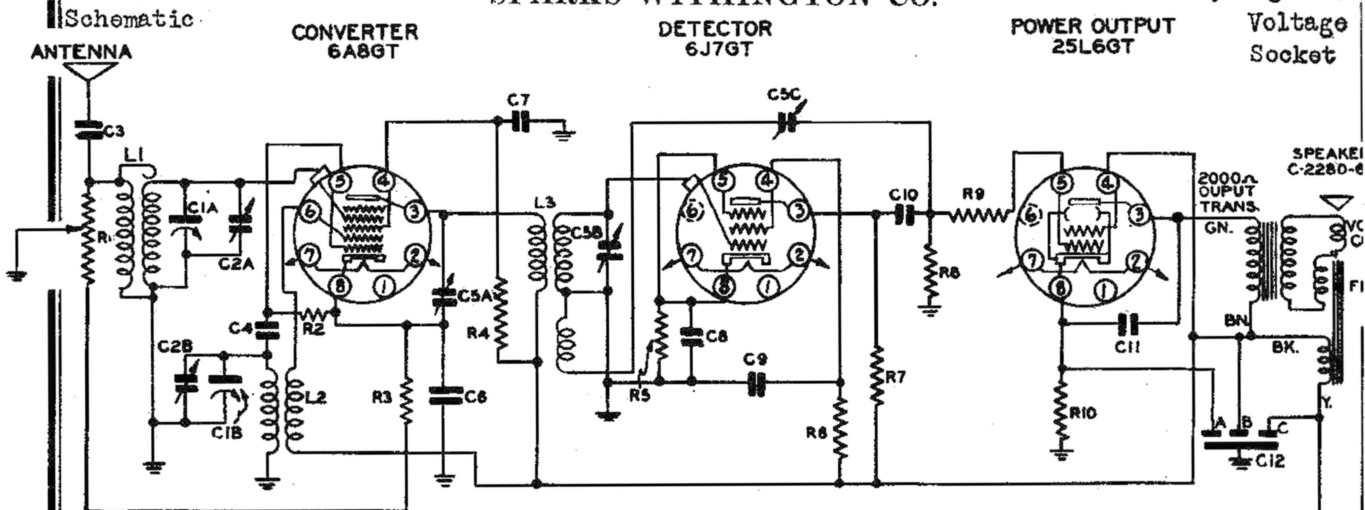


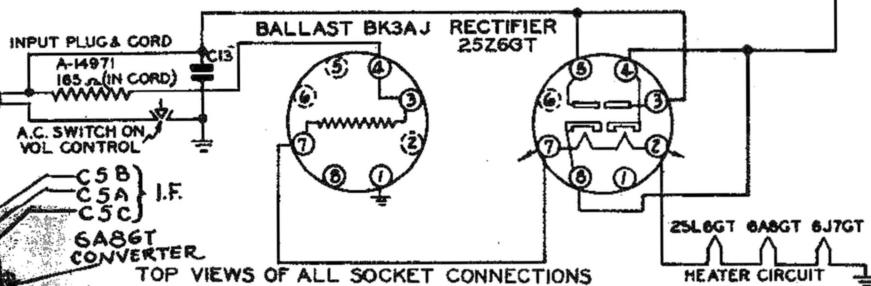
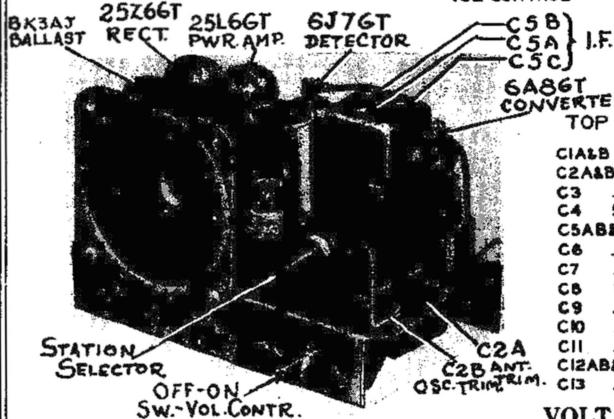
MODEL 409-GL  
Schematic

SPARKS WITHINGTON CO.

Trimmers, Alignment



MODEL 409-GL  
INTERMEDIATE  
FREQUENCY 456 K.C.



TOP VIEWS OF ALL SOCKET CONNECTIONS

- |                                     |                                      |
|-------------------------------------|--------------------------------------|
| C1A&B VARIABLE CONDENSER B-7288     | R1 VOL. CONTROL & SWITCH A-12708-AI  |
| C2A&B ON VARIABLE CONDENSER         | R2 56000 $\Omega$ .25 W. C-2795-83B  |
| C3 .001 MFD. 400 V. C-3204-2C       | R3 390 $\Omega$ .25 W. C-2795-57B    |
| C4 50 MMF. MICA C-720-343           | R4 39000 $\Omega$ .25 W. C-2795-81B  |
| C5A&B I.F. TRIMMER A-14792          | R5 27000 $\Omega$ .25 W. C-2795-79B  |
| C6 .01 MFD. 200V. C-3202-76C        | R6 6.2 MEGOHM .25 W. C-2795-250B     |
| C7 .05 MFD. 200V. C-3202-28C        | R7 56000 $\Omega$ .25 W. C-2795-95B  |
| C8 10 MFD. 25 V. A-14782-2          | R8 56000 $\Omega$ .25 W. C-2795-95B  |
| C9 .01 MFD. 200V. C-3202-20C        | R9 100000 $\Omega$ .25 W. C-2795-86B |
| C10 .01 MFD. 200V. C-3202-20C       | R10 150 $\Omega$ .5 W. C-2798-52C    |
| C11 .02 MFD. 400V. C-3204-78C       |                                      |
| C12A&B 20-25-25 MFD. ELECT. A-14972 |                                      |
| C13 .05 MFD. 400V. C-3204-28C       |                                      |
- 
- |                           |
|---------------------------|
| L1 B.C. ANT. COIL A-14974 |
| L2 B.C. OSC. COIL A-14975 |
| L3 I.F. TRANS A-12989-3   |

VOLTAGE CHART

Line Voltage: 115 volts		Position of Volume Control: Full with Antenna Disconnected †								
Tube	Function	Voltage of Socket Prongs to Gnd. (See Prong Nos. on Schematic Diagram)								
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	Grid Cap
6A8GT	Converter	0	11*	115	42	-2.8	115	5*	1.8	0
6J7GT	Detector	0	5.8*	**	**	**	115	0	**	0
25L6GT	P.O.	0	54*	105	115	0	0	7*	7.2	-
25Z6GT	Rectifier	0	58*	115*	148*	115*	0	54*	148*	-
BK3AJ	Ballast	0	0	62*	62*	0	0	58*	0	-

Notes: Voltage readings are for schematic diagram. Allow 15% + or - on all measurements. Always use meter scale which will give greatest deflection within scale limits. All DC measurements made with 1000 ohms per volt voltmeter. All AC voltages made with rectifier type voltmeter. Unless designated otherwise, voltages in table are + DC voltages. \*AC volts. \*\*Cannot be measured accurately with 1000 ohms per volt voltmeter.

† A regular outside antenna 50 feet in length excluding lead-in and 25 to 50 feet in height should be used for best results with this model.

ALIGNMENT

OPERATION	ALIGNMENT OF	GENERATOR CONNECTED TO	DUMMY ANTENNA	GENERATOR FREQUENCY	TUNING COND. SETTING	TRIMMER	REMARKS
1							(Set dial pointer to last mark on scale when condenser plates are flush)*
2							(Back off, i.e. turn counterclockwise, regeneration cond. C5C "red spot" before I.F. is aligned)
3	I.F.	6A8GT	.1 mf.	456 K.C.	Open	C5A, B	
4							(Adjust C5C "red spot" turning in clockwise until greatest sensitivity is obtained. If oscil. occurs, turn out C5C until oscil. stops)
5	Broadcast Band	Ant.	200 mmf.	1500 KC	1500 KC	C2B Osc.	Peak accurately
6						C2A Ant.	Peak accurately
7							(Check calibration and sensitivity at 600 KC, 1000 KC, 1500 KC)
8							(Connect set to regular antenna and check reception of stations. Readjust C5C if set howls or oscillates on strong signals. Then recheck sensitivity)

\*Model 409-GL chassis may be completely aligned without removing from cabinet.