

## Allied Radio Corp.

**Model: 4G-420**

**Chassis:**

**Year: Pre 1951**

**Power:**

**Circuit:**

**IF:**

**Tubes:**

**Bands:**

**Resources**

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# ALIGNMENT AND SERVICE DATA

Remove chassis from cabinet for alignment.

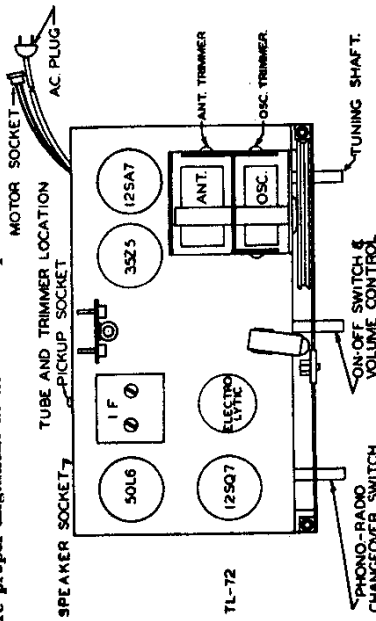
A Signal Generator is required having the following frequencies: 455 KC, 1400 KC, 1720 KC. An output meter should be connected across the speaker.

The receiver volume control should be turned to maximum during the I.F. and all subsequent alignments to keep the AVC from working and giving false readings. Keep the generator output as low as possible to prevent overloading.

**FIRST STEP:** Connect the hot lead from the generator to the ANT. section of the gang condenser, through a .1 MFD condenser. The ground lead from the generator must be connected to the floating ground buss under the chassis. Turn the gang condenser to complete minimum capacity. Adjust the generator to 455KC and adjust the trimmers of the 1st and 2nd I.F. transformers until a maximum reading is noted on the output meter.

**SECOND STEP:** With the leads from the generator still connected in the same manner, adjust the Signal Generator to 1720 KC. The OSC. trimmer is located on the front of the chassis. Adjust this trimmer until the 1720 KC signal is tuned in.

**THIRD STEP:** Remove the hot lead of the generator from the ANT section of the gang condenser. Connect this lead to the primary of the loop antenna through a 200 MMFDC condenser. Adjust the Signal Generator to 1400 KC. Rotate the tuning control until this signal is tuned in. The ANT trimmer is located on the top of the ANT. section of the gang condenser. Adjust this trimmer until a maximum reading is noted on the output meter. No further adjustment should be necessary, unless the set has been damaged, as the coils and condenser in this receiver have been specially handled at the factory to insure proper alignment at the lower frequencies.



PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
1R-20	50L6	SW-1	SWITCH ON VOLUME CONTROL
1R-21	12SA7	SW-2	RADIO-PHONO SWITCH
1R-22	12SQ7	T-1	1720 KC. TUNING CONTROL
1R-23	3325	T-2	1400 KC. TUNING CONTROL
1R-24	50L6	V-1	VOLUME CONTROL
1R-25	12SA7	L-1	LOOP ANT.
1R-26	12SQ7	L-2	OSC. ANT.
1R-27	3325	L-3	OSC. ANT.
1R-28	50L6	P-1	500 CYCLES MOTOR
1R-29	12SA7	P-2	TONE ARM WITH L7'S CARTRIDGE
1R-30	12SQ7	P-3	500 CYCLES MOTOR
1R-31	3325	P-4	TONE ARM WITH L7'S CARTRIDGE
1R-32	50L6	P-5	500 CYCLES MOTOR
1R-33	12SA7	P-6	TONE ARM WITH L7'S CARTRIDGE
1R-34	12SQ7	P-7	500 CYCLES MOTOR
1R-35	3325	P-8	TONE ARM WITH L7'S CARTRIDGE
1R-36	50L6	P-9	500 CYCLES MOTOR
1R-37	12SA7	P-10	TONE ARM WITH L7'S CARTRIDGE
1R-38	12SQ7	P-11	500 CYCLES MOTOR
1R-39	3325	P-12	TONE ARM WITH L7'S CARTRIDGE
1R-40	50L6	P-13	500 CYCLES MOTOR
1R-41	12SA7	P-14	TONE ARM WITH L7'S CARTRIDGE
1R-42	12SQ7	P-15	500 CYCLES MOTOR
1R-43	3325	P-16	TONE ARM WITH L7'S CARTRIDGE
1R-44	50L6	P-17	500 CYCLES MOTOR
1R-45	12SA7	P-18	TONE ARM WITH L7'S CARTRIDGE
1R-46	12SQ7	P-19	500 CYCLES MOTOR
1R-47	3325	P-20	TONE ARM WITH L7'S CARTRIDGE
1R-48	50L6	P-21	500 CYCLES MOTOR
1R-49	12SA7	P-22	TONE ARM WITH L7'S CARTRIDGE
1R-50	12SQ7	P-23	500 CYCLES MOTOR
1R-51	3325	P-24	TONE ARM WITH L7'S CARTRIDGE
1R-52	50L6	P-25	500 CYCLES MOTOR
1R-53	12SA7	P-26	TONE ARM WITH L7'S CARTRIDGE
1R-54	12SQ7	P-27	500 CYCLES MOTOR
1R-55	3325	P-28	TONE ARM WITH L7'S CARTRIDGE
1R-56	50L6	P-29	500 CYCLES MOTOR
1R-57	12SA7	P-30	TONE ARM WITH L7'S CARTRIDGE
1R-58	12SQ7	P-31	500 CYCLES MOTOR
1R-59	3325	P-32	TONE ARM WITH L7'S CARTRIDGE
1R-60	50L6	P-33	500 CYCLES MOTOR
1R-61	12SA7	P-34	TONE ARM WITH L7'S CARTRIDGE
1R-62	12SQ7	P-35	500 CYCLES MOTOR
1R-63	3325	P-36	TONE ARM WITH L7'S CARTRIDGE
1R-64	50L6	P-37	500 CYCLES MOTOR
1R-65	12SA7	P-38	TONE ARM WITH L7'S CARTRIDGE
1R-66	12SQ7	P-39	500 CYCLES MOTOR
1R-67	3325	P-40	TONE ARM WITH L7'S CARTRIDGE
1R-68	50L6	P-41	500 CYCLES MOTOR
1R-69	12SA7	P-42	TONE ARM WITH L7'S CARTRIDGE
1R-70	12SQ7	P-43	500 CYCLES MOTOR
1R-71	3325	P-44	TONE ARM WITH L7'S CARTRIDGE
1R-72	50L6	P-45	500 CYCLES MOTOR
1R-73	12SA7	P-46	TONE ARM WITH L7'S CARTRIDGE
1R-74	12SQ7	P-47	500 CYCLES MOTOR
1R-75	3325	P-48	TONE ARM WITH L7'S CARTRIDGE
1R-76	50L6	P-49	500 CYCLES MOTOR
1R-77	12SA7	P-50	TONE ARM WITH L7'S CARTRIDGE
1R-78	12SQ7	P-51	500 CYCLES MOTOR
1R-79	3325	P-52	TONE ARM WITH L7'S CARTRIDGE
1R-80	50L6	P-53	500 CYCLES MOTOR
1R-81	12SA7	P-54	TONE ARM WITH L7'S CARTRIDGE
1R-82	12SQ7	P-55	500 CYCLES MOTOR
1R-83	3325	P-56	TONE ARM WITH L7'S CARTRIDGE
1R-84	50L6	P-57	500 CYCLES MOTOR
1R-85	12SA7	P-58	TONE ARM WITH L7'S CARTRIDGE
1R-86	12SQ7	P-59	500 CYCLES MOTOR
1R-87	3325	P-60	TONE ARM WITH L7'S CARTRIDGE
1R-88	50L6	P-61	500 CYCLES MOTOR
1R-89	12SA7	P-62	TONE ARM WITH L7'S CARTRIDGE
1R-90	12SQ7	P-63	500 CYCLES MOTOR
1R-91	3325	P-64	TONE ARM WITH L7'S CARTRIDGE
1R-92	50L6	P-65	500 CYCLES MOTOR
1R-93	12SA7	P-66	TONE ARM WITH L7'S CARTRIDGE
1R-94	12SQ7	P-67	500 CYCLES MOTOR
1R-95	3325	P-68	TONE ARM WITH L7'S CARTRIDGE
1R-96	50L6	P-69	500 CYCLES MOTOR
1R-97	12SA7	P-70	TONE ARM WITH L7'S CARTRIDGE
1R-98	12SQ7	P-71	500 CYCLES MOTOR
1R-99	3325	P-72	TONE ARM WITH L7'S CARTRIDGE
1R-100	50L6	P-73	500 CYCLES MOTOR

## Operating Instructions

**POWER SOURCES:** This combination will operate on an alternating (AC) current only, of 110 to 125 volts at 60 cycles.

**CAUTION:** Always predetermine voltage of power source. Never try to plug this combination into a 220 volt line, as this will cause serious damage.

Never try to operate this combination on 50 cycle current, as this will cause the motor to rotate at an incorrect speed. The normal speed is 78 R.P.M. (revolutions per minute) and to insure proper reproduction of recordings 60 cycle current must be used.

This receiver is equipped with a sensitive bank antenna and under ordinary conditions no external antenna would be required. However, in steel constructed buildings or in distant isolated locations, the reception may be improved by using an outside antenna. This should be a single wire not more than 50 feet long and should be connected to the antenna lead that projects from the back of the receiver. No ground wire is required at any time.

**INSTALLATION:** Unwind power cord and plug into a convenient power outlet. Follow instructions under "Controls" to operate receiver.

**CONTROLS:** Three controls are provided on the front panel for operation of this combination. The right hand control is the station selector which is used only in "Radio" operation. The left hand control is a switch which selects operation of either "Radio" or "Phonograph". The center control is used to adjust volume on either "Radio" or "Phonograph" and is also used as a power switch to turn the combination "On" or "Off".

**RADIO RECEPTION:** After the power cord plug has been connected to your power outlet, turn the center control to the right in a clockwise direction and a click will be heard. This indicates that the power is turned on, and the pilot light in the dial should begin to glow. After about 30 seconds, the set will be ready for operation.

Make sure that the left hand control is turned to the left, in "Radio" position. Turn the center control about halfway on, in a clockwise direction to increase volume. Rotate the right hand control to the right or left to select the desired station. By mentally adding a zero to the figures on the upper half of the dial, the result will be read directly in kilocycles (i.e., 60 plus 0 equals 600KC or 140 plus 0 equals 1400KC). After a station has been tuned in, adjust the center control to your desired volume.

**PHONOGRAPHE REPRODUCTION:** To operate the phonograph, be sure that the left hand control is turned to the right. This puts the circuit in "Phonograph" position and also turns on the power for the motor. The center control must also be turned on (as in Radio instructions) as it is the master control for power to the radio receiver and phonograph motor.

