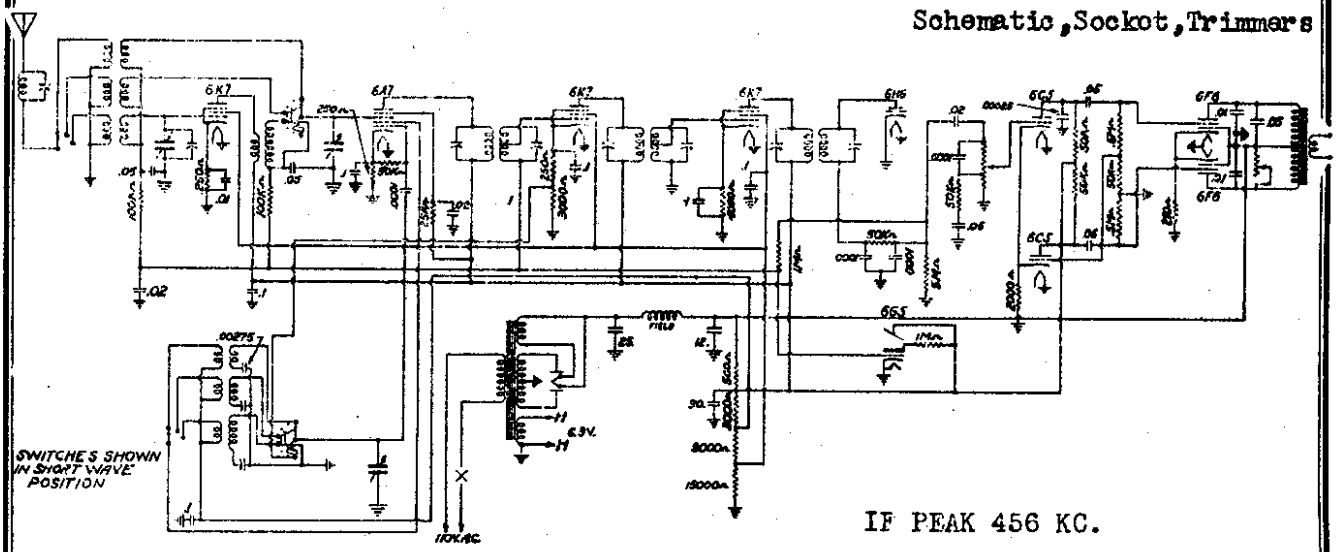
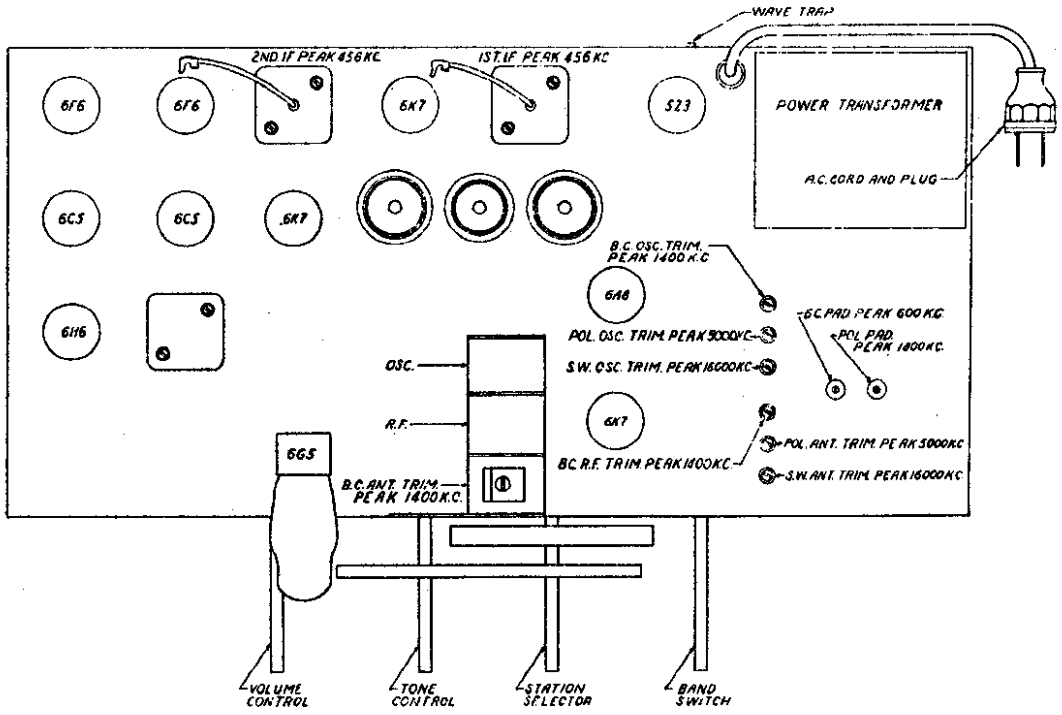
ALLIED RADIO CORP.

MODELS A9788, A9789, A9852
A9854
Chassis AM7
Schematic, Socket, Trimmers





The dial is calibrated with each band covering 340 degrees of tuning scale length and are each concentric with the center of the dial face. The innermost scale is calibrated from 150 to 375 K.C. (2000 to 800 meters) and covers the range necessary for receiving governmental time and weather reports. The second band from the center is for standard broadcasts covering from 550 to 1700 K.C. (175 to 545 meters). The third band from the center covers the intermediate short wave length broadcasts of Police, Amateur, Aircraft and ships and extends from 1700 to 5400 K.C. (55 to 180 meters). The fourth band covers all of the principle short wave channels for reception from countries all over the world. This band carries a calibration of from 5.5 to 18 megacycles (16.4 to 55 meters.) This short wave scale is the one which includes the five internationally assigned bands—the 19, 25, 31, 39 and 49 meter channels.

MODELS A9788, A9789, A9852
A9854

ALLIED RADIO CORP.

Chassis AM7
Alignment, Parts

GENERAL DATA

The alignment of this receiver requires the use of a test oscillator which will cover the frequencies of 456, 600, 1400, 1800, 4000, 6000, and 14,000 KC and an output meter which is to be connection across the primary or secondary of the output transformer. If possible, all alignments should be made with the volume control on maximum and the test oscillator output as low as possible, to prevent the AVC from operating and giving false readings.

CORRECT ALIGNMENT PROCEDURE

The intermediate frequency (I.F.) stages should be aligned properly as the first step. After the I.F. transformers have been properly adjusted and peaked, the Broadcast Band should always be the next procedure; after which, either or both of the Short Wave Bands may be aligned.

I.F. ALIGNMENT

Adjust the test oscillator to 456 KC and connect the output to the grid of the first detector tube (6A8) through a .05 or .1 mfd. condenser. The ground on the test oscillator can be connected to the chassis ground. Align all five I.F. trimmers to peak or maximum reading on the output meter. As there are two stages of I.F. in this receiver, there will be consequently three I.F. transformers to align.

BROADCAST BAND ALIGNMENT

Adjust the oscillator to 1400 KC and connect the output to the antenna post marked "A" through a .001 md. mica condenser to give the equivalent of an antenna about 60 feet. Set the receiver pointer to 1400 KC and adjust the broadcast oscillator trimmer to peak. (See drawing for location.) After this has been carefully done, the next step is to adjust the front trimmer of the gang condenser to peak. The front condenser section tunes the pre-amplifier stage. Then adjust the Broalcast Band R. F. trimmer to peak. This trimmer aligns the grid or input circuit of the 6A8 tube. (See drawing for position of Broadcas R. F. trimmer). Next, re-set the dial pointer on the receiver and the test oscillator to 600 KC. Slowly increase or decrease the B. C. oscillator padding condenser and at the same time continuously tune back and forth across the signal with the receiver until the maximum reading is obtained on the output meter. This adjustment may seem a little complicated but is the easiest way to adjust the oscillator to the R.F. section. (For location of B.C. padding condenser see drawing.) Return to 1400 KC and again go over the adjustments of this frequency to be certain that they were not put slightly out of alignment when adjustment was made at 600 KC.

This completes the correct sequence of operations in properly aligning the receiver for the Broadcast Band.

FOREIGN BAND ALIGNMENT

The Foreign Band of 19 to 49 meters can be adjusted by the two trimmers marked and illustrated in the drawing as S.W. oscillator and S.W. trimmer. In preparing the test oscillator for alignment of this band, connect a 400 ohm carbon resistor in series with the .0001 mfd. condenser on the output lead of the test oscillator. Set the receiver pointer to 14,000 KC (also test oscillator).

Then proceed to adjust these two trimmers for peak at 14,000 KC (adjust oscillator trimmer first) and as the inherent design of the circuit has been expressly developed for simplicity in servicing, only these two adjustments are necessary for aligning this band. NOTE: Always start this procedure by having the oscillator coil trimmer loose (out all the way), and the antenna coil trimmer fairly tight (in all the way); otherwise it is possible to make a false alignment on the image frequency. In order to prevent alignment on the image frequency, it is suggested that the following check be made: Readjust the pointer to 13,100 KC where the image frequency should be found. If properly aligned, the image frequency will be found to be weaker. If, however, the signal at 13,100 KC is found to be stronger than the signal at 14,000 KC, it signifies that alignment was incorrectly made on the image frequency.

POLICE BAND

In preparing the test oscillator for alignment of this band, connect a 400 ohm carbon resistor in series with a .0001 mfd. condenser on the output lead of the test oscillator. This resistor is used with the test oscillator only on the Short Wave Bands and should not be used for Broadcast Band alignment.

Set the receiver pointer to 4000 KC (also test oscillator) and adjust the Police Band oscillator circuit trimmer to peak.

After this has been carefully done, the next step is to adjust the Police Band antenna trimmer to peak.

Now reset the dial pointer and the test oscillator to 1800 KC in preparation for adjusting the police band padding condenser.

Slowly increase or decrease the oscillator padding condenser and at the same time continuously tune back and forth across the signal with the receiver until the maximum reading is obtained on the output meter. This adjustment may seem a little complicated, but is the easiest way to correctly adjust the oscillator to the R.F. or antenna section. Return to 4000 KC and again go over the adjustments of this frequency to be certain that they were not put slightly out of alignment when adjustment was made 1800 KC.

If it is found that in returning to 4000 KC the pointer is accurately on scale, no further adjustment should be necessary (in this recheck). If the pointer is found off scale, it may be corrected and put on scale by readjustment of the police band oscillator trimmer. Alignment of the pointer can only be corrected by adjustment of the oscillator trimmer.

IMPORTANT: The Police Band Oscillator Trimmer, Police Band Antenna Trimmer Police Band Padding Trimmer are the only three adjustments required in aligning this band.

WAVE TRAP ADJUSTMENT

At the rear of the chassis near the Antenna and Ground posts is an adjustment screw connected to a trap circuit for elimination of code interference when operating on the broadcast band. If code interference is encountered adjustment of this screw will filter it out. It is to be used only if such interference is experienced in broadcast reception. It's use prevents code transmitters operating on a frequency around 456 K. C. from being received by the I. F. amplifier which is tuned to 456 K. C.

This receiver is designed to operate from a power supply main of 110-120 volts, 60 cycle alternating current (AC). Never plug into a DC outlet.

AM 7,11 Tube Radio

Part No.	DESCRIPTION
P 124	Pilot Light
P1165	Output Audio Transformer
P1038	Knob Large
P1040	Knob Small
P1047	Broadcast Interstage Coil
P1046	Broadcast Antenna Coil
P1162	Wave Trap Coil
P1150	Power Transformer
P 176	AC Cord and Plug
P1149	1st I.F. Transformer
P1151	2nd I.F. Transformer
P1152	Double Tuned I.F. Transformer
P1129	3 Gang Variable Condenser
P1146	Tilt Dial Complete
P 907	Escutcheon Plate and Glass
P 480	6H6 Tube Socket
P 483	6F6 Tube Socket
P 522	6C5 Tube Socket
P 489	6K7 Tube Socket
P 488	6A8 Tube Socket
P1153	5Z3 Tube Socket
P1041	6G5 Tube Socket
P 945	Speaker Socket
P 879	Speaker Plug
P1157	Gang Candohm Resistor
P1158	Volume Control and Switch
P1159	Tone Control
P1135	Wave Switch
P1180	6 Gang Trimmer Condenser
P 617	500 Mmfd. Padding Condenser
P1139	1500 Mmfd. Padding Condenser
P1145	Straight Dial Complete
P1166	Volume Control and Switch (S. Dial)
P1167	Tone Control (S. Dial)
P1143	Wave Switch (S. Dial)
P906	Escutcheon Plate (S. Dial)
P1154	30 Mfd. 300 V. Electrolytic Con.
P1155	12 Mfd. 300 V. Electrolytic Con.
P1156	25 Mfd. 450 V. Electrolytic Con.
P 142	.10-200 V. Condenser
P 278	.10-400 V. Condenser
P 334	.05-400 V. Condenser
P 143	.02-400 V. Condenser
P 671	.01-200 V. Condenser
P 335	.01-600 V. Condenser
P1055	.00275 Mica 5% Condenser
P 480	.0001 Mica Condenser
P 137	500,000 ¼ Watt Resistor
P 147	50,000 ¼ Watt Resistor
P 278	1,000 ¼ Watt Resistor
P 162	1 Meg. ¼ Watt Resistor
P 756	2,000 ¼ Watt Resistor
P1169	15,000 1 Watt Resistor
P 136	250 ¼ Watt Resistor
P 280	100,000 ¼ Watt Resistor
P1186	600 ¼ Watt Resistor
G1187	Short Wave Antenna Coil Comp.
G1188	Short Wave Oscillator Coil Comp.
G1189	Middle Band Antenna Coil Comp.
G1190	Middle Band Oscillator Coil Comp.
G1195	12" Speaker Complete (Less Output)

If it is suspected that the oscillator has stopped but is doubtful due to the presence of the usual amount of noise level, it is suggested that the oscillator plate voltage be checked. To ascertain whether the tube is oscillating, ground the oscillator grid of the 6A8 (short stator and rotor plates of oscillator section on gang condenser). If oscillating properly, grounding the grid will cause an appreciable drop in oscillator voltage. Grounding or shorting the stator and grid components should be accomplished by grounding the stator mounting nut to the frame of the condenser with a screw-driver or any metallic conductor.