Allied Radio Corp.

	Model: 5E-457	Chassis:	Year: Pre 1951
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		

Resources
Riders Volume 20 - ALLIED 20-1

Courtesy Nostalgia Air

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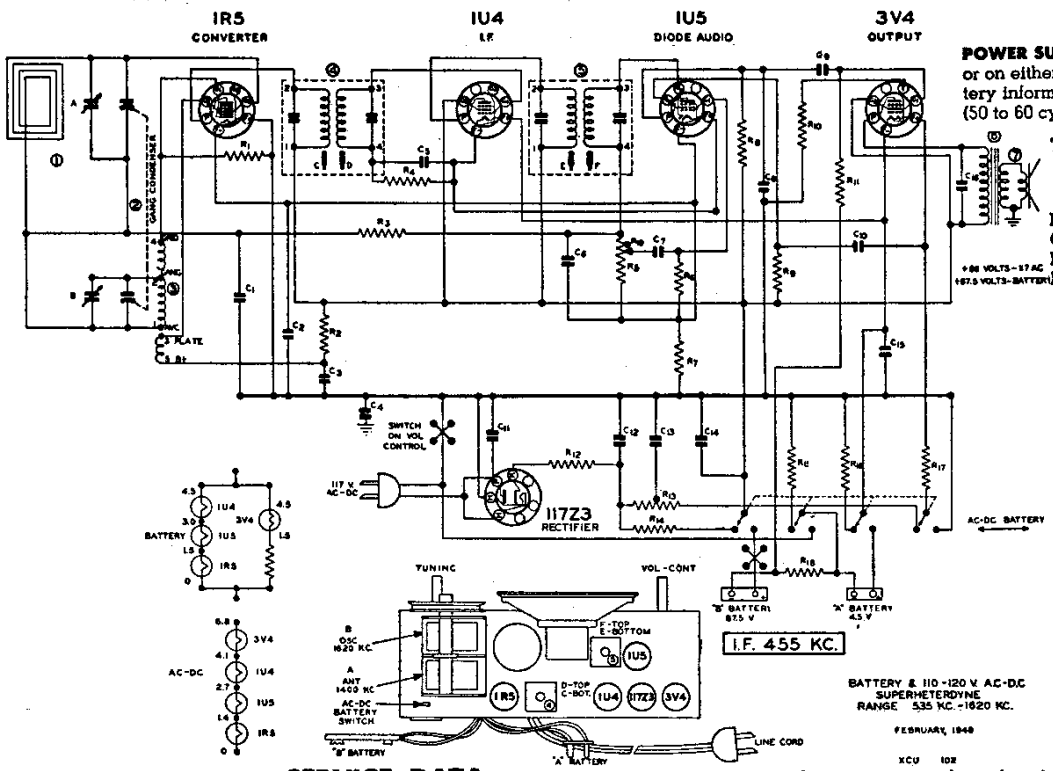

POWER SUPPLY. This receiver is designed to operate on self-contained batteries or on either an AC or DC power supply when such a supply is available. (For battery information, see section on batteries.) The receiver will operate on either AC (50 to 60 cycles) with a voltage of 110 to 120 or DC with a voltage from 110 to 120.

This receiver will accommodate any of the batteries listed below:

Manufacturer	Manufacturer's Type Number "A" Battery	"B" Battery
National Carbon	746	467
General Dry Battery	3H3	W45A
Ray-O-Vac	P63A	4367
Burgess Battery	G3	XX45

DIA. NO.	PART NO.	DESCRIPTION
C1	N-1343	.05 MFD 200V 20%
C2	N-1351	.1 MFD 200V -10% +20%
C3	N-1345	.05 MFD 200V 20%
C4	N-1345	.05 MFD 200V 20%
C5	N-1344	.01 MFD 400V 20%
C6	N-8015	100 MMFD 500V 20%
C7	N-4884	.005 MFD 600V -15% +40%
C8	N-8015	100 MMFD 500V 20%
C9	N-4884	.005 MFD 600V -15% +40%
C10	N-1344	.01 MFD 400V 20%
C11	N-1346	.05 MFD 400V 20%
C12	N-8861	50 MFD 150V ELECTRO
C13		20 MFD 150V LYTIC
C14		20 MFD 150V
C15		100 MFD 25V
C16	N-4377	.002 MFD 600V -15% +40%
R1	N-2973	100,000 OHM .5 W 10%
R2	N-8580	22,000 OHM .5 W 10%
R3	N-4081	4.7 MEGOHM .5 W 20%
R4	N-4028	6.8 MEGOHM .5 W 20%
R5	N-2778	10 MEGOHM VOL. CONT.
R6	N-4028	6.8 MEGOHM .5 W 20%
R7	N-4088	470 OHM .5 W 10%
R8	N-2876	1.0 MEGOHM .5 W 10%
R9	N-5473	3.9 MEGOHM .5 W 10%
R10	N-8793	1200 OHM .5 W 10%
R11	N-4277	2.2 MEGOHM .5 W 20%
R12	N-8113	56 OHM 1.5 W 10%
R13	N-8842	1820 OHM 5.0 W
R14	N-8793	1200 OHM .5 W 10%
R15	N-4028	220,000 OHM .5 W 20%
R16	N-8793	1200 OHM .5 W 10%
R17	N-8782	37 OHM .5 W 10%
R18	N-8121	270 OHM .5 W 10%
R19		47,000 OHM IN VOL. CONT.
1	N-8781	ANTENNA LOOP COIL
2	N-9938	2 GANG CAPACITOR
3	N-8603	OSCILLATOR COIL
4	N-8865	1ST I.F. COIL
5	N-8866	2ND I.F. COIL
6	N-8781	OUTPUT TRANSFORMER
7	N-8861	4" P.M. SPEAKER

SERVICE DATA

Lack of sensitivity and poor tone quality may be due to any one or a combination of causes such as weak or defective tubes or speaker, open or grounded bias resistor, bypass condenser, etc. Never attempt to realign set until all other possible sources of trouble have been first thoroughly investigated and definitely proved not to be the cause.

NOTE: IT IS ABSOLUTELY NECESSARY THAT AN ACCURATELY CALIBRATED TEST OSCILLATOR WITH SOME TYPE OF OUTPUT MEASURING DEVICE BE USED WHEN ALIGNING THE RECEIVER AND THAT THE PROCEDURE BE CAREFULLY FOLLOWED, OTHERWISE THE RECEIVER WILL BE INSENSITIVE AND THE DIAL CALIBRATION WILL BE INCORRECT. THE TRIMMERS WILL BE REFERRED TO BY THEIR FUNCTION AS INDICATED ON THE PARTS DIAGRAM.

ALIGNMENT PROCEDURE

GENERAL DATA. The alignment of this receiver requires the use of a test oscillator that will cover the frequencies of 455, 600, 1400 and 1620 KC and an output meter to be connected 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 be adjusted.

I.F. ALIGNMENT: Remove the chassis and batteries from the cabinet and remove the bottom enclosure plate from the chassis. With the gang condenser set at minimum, adjust the test oscillator to 455 KC and connect the output to the grid of the first detector tube (1R5) through a .05 or .1 MFD condenser. The ground of the test oscillator should be connected to the buss. Align all four I.F. slugs to peak or maximum reading on the output meter. Each I.F. has an adjustment at the top and bottom of the can. The peaks on the slugs must be the ones farthest out of the coils.

R.F. ALIGNMENT: Place the cabinet on its face and open cabinet back to a 90° angle. Lay a board across the body of cabinet ahead of the loop. Replace the bottom chassis enclosure and set the chassis and batteries on the board so that they occupy the same relative position to the loop as they do in the cabinet. Care should be taken to have no iron or other metal near the loop.

Connect the test oscillator to a dummy loop which can be made by coiling 2 turns of hookup wire about 6" in diameter. Place this dummy loop about a foot from the loop on the receiver and in the same plane as the receiver loop. With the gang condenser set at minimum capacity, set the test oscillator at 1620 KC, and adjust the oscillator (or 1620 KC trimmer) on the gang condenser. Next set the test oscillator at 1400 KC, and tune in the signal on the gang condenser. Adjust the antenna trimmer (or 1400 KC trimmer) for maximum signal. Next set the test oscillator at 600 KC. and tune in signal on condenser to check alignment of coils.