

**MODEL S 409, 410, 411**  
**Chassis U4C**  
**Schematic, Voltage**  
**Alignment, Parts**

**EMERSON RADIO & PHONO. CORP.**

**Chassis Model U4C**

Voltage rating ..... 105 to 130 volts a-c, or d-c.  
 Current drain ..... 0.88 amps.  
 Frequency range ..... 540 to 1650 kc.

**TUBE COMPLIMENT**

The tubes used are as follows:  
 1 - 6D6, r-f. amplifier.  
 1 - 6C6, biased detector.  
 1 - 43, power output pentode.  
 1 - 25Z5, dual half-wave rectifier.

**VOLTAGE ANALYSIS**

Readings should be taken with a 1000 ohms-per-volt meter. Voltages listed below are from point indicated to ground (chassis) with volume control turned on full and no signal. The line voltage for these readings was 117.5 volts, 60 cycles, a-c.

Tube	Plate	Screen	Cathode	File
6D6	100	102	3	6.3
6C6	30	21	2	6.3
43	95	101	13	25.0

Voltage across speaker field (25Z5 cathode to chassis) - 118 volts.  
 Voltage across choke (25Z5 cathode to 43 screen) - 16.5 volts.

**ALIGNMENT PROCEDURE**

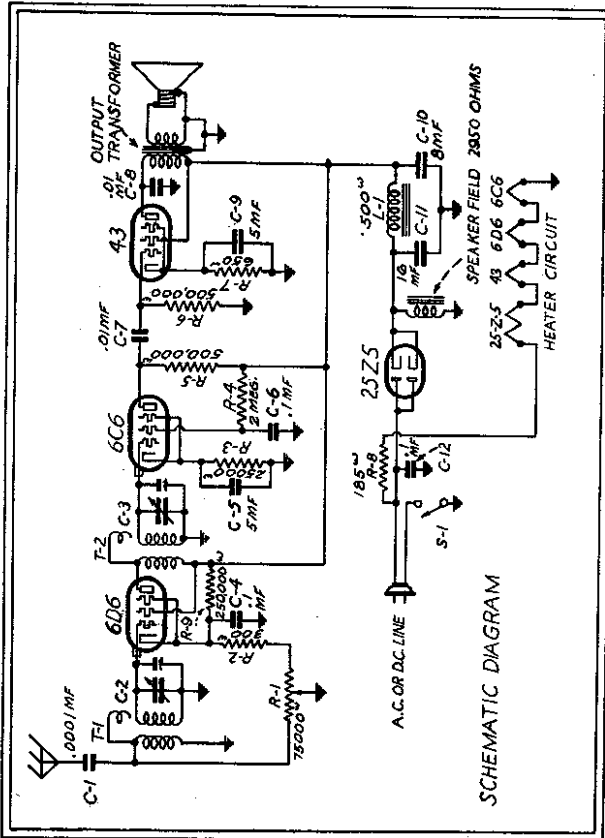
An oscillator with a frequency of 1425 kc. is required. Rotate the variable condenser shaft 25 degrees from the minimum capacity position. (This may be done by affixing a protractor, or a similarly calibrated scale, to the condenser shaft.) With the condenser in this position, feed 1425 kc. to the antenna and adjust both trimmers on the variable condenser for maximum response. Use as weak a test signal as possible.

Range: The receiver is designed to operate over the broadcast range from 540 to 1650 kilocycles. This range covers all of the standard American broadcast stations and some of the low-frequency police transmitters. The power supply for this receiver should be either a. c. 50 to 60 cycles, or d. c. of any voltage between 105 and 180 volts. With special external line cord ballast resistors this receiver may be operated on higher voltages.

**THE RECEIVER WAS DESIGNED TO OPERATE WITHOUT A GROUND. UNDER NO CIRCUMSTANCES SHOULD A GROUND WIRE BE PERMITTED TO COME IN CONTACT WITH ANY METAL PART OF THE RECEIVER.**

**PRODUCTION CHANGES**

In early production receivers—  
 a. R9 was omitted.  
 b. R4 was a 500,000 ohm 1/4 watt carbon resistor.



**SCHEMATIC DIAGRAM**

**REPLACEMENT PARTS**

ITEM	PART NO.	DESCRIPTION	PRICE List Price Minimum \$ .45
L1	ZFT-106	Prop-core filter choke—500 ohms	.60
L2	2W-243	Antenna coil	.55
R1	2W-243	Variable coil with line switch—15,000 ohms	.16
R2	2W-218	300 ohm 1/2 watt wire-wound resistor	.16
R3	AAR-119	25,000 ohm 1/2 watt carbon resistor	.16
R4	OR-78	2 megohm 1/2 watt carbon resistor	.16
R5	HR-42	500,000 ohm 1/2 watt wire-wound resistor	.16
R6	XR-66	500,000 ohm 1/2 watt carbon resistor	.16
R7	2W-243	250,000 ohm 1/2 watt carbon resistor	.16
R8	AKP-154A	250,000 ohm 1/2 watt carbon resistor	.16
R9	KR-65	Two-gang variable condenser	.16
C1	AAC-114	0.001 mf tubular condenser	.16
C2	RC-79	0.01 mf, 200 volt tubular condenser	.16
C3	AC-5	Combination filter and by-pass electrolytic condenser block	.16
C4	2WC-289	C10—5 mf, 25 volts	1.55
C5	CGC-127	0.01 mf, 200 volt tubular condenser	.16
C6	KC-68	0.01 mf, 400 volt tubular condenser	.16
C7	2WC-240	16 mf, 160 volt dry electrolytic condenser block	1.00
C8	2VC-242	0.1 mf, 250 volt a-c tubular condenser	.16
C9	2VS-167	5- dynamic speaker	6.25
C10	KKW-46A	Line cord with built-in resistance wire	.70

† See Production Changes below.  
 \* Item number locates the article on the schematic diagram.  
 WHEN ORDERING REPLACEMENT PARTS SPECIFY PART NUMBERS WITHOUT NOTICE  
 PRICES ARE SUBJECT TO CHANGE