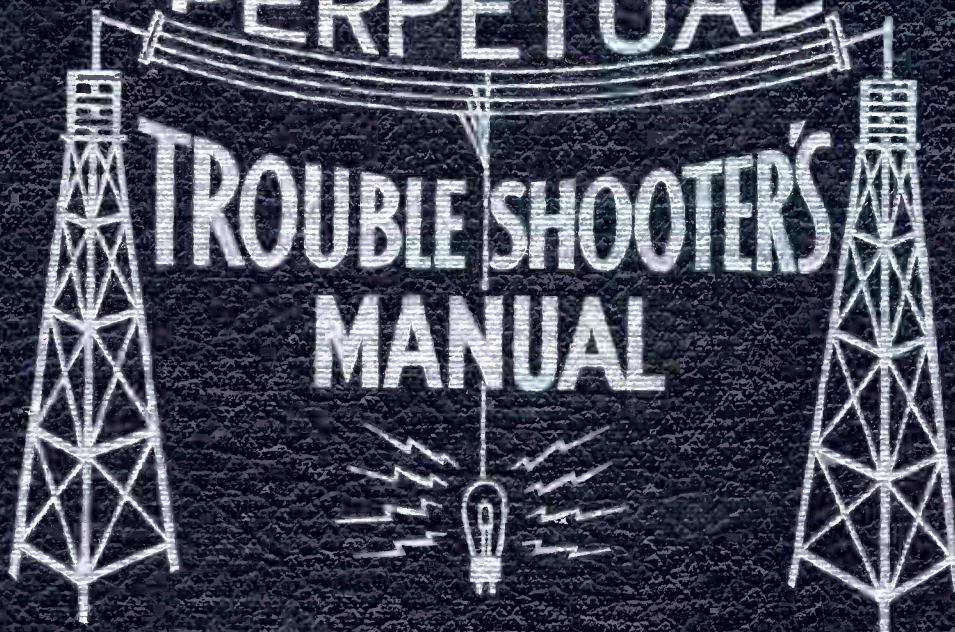
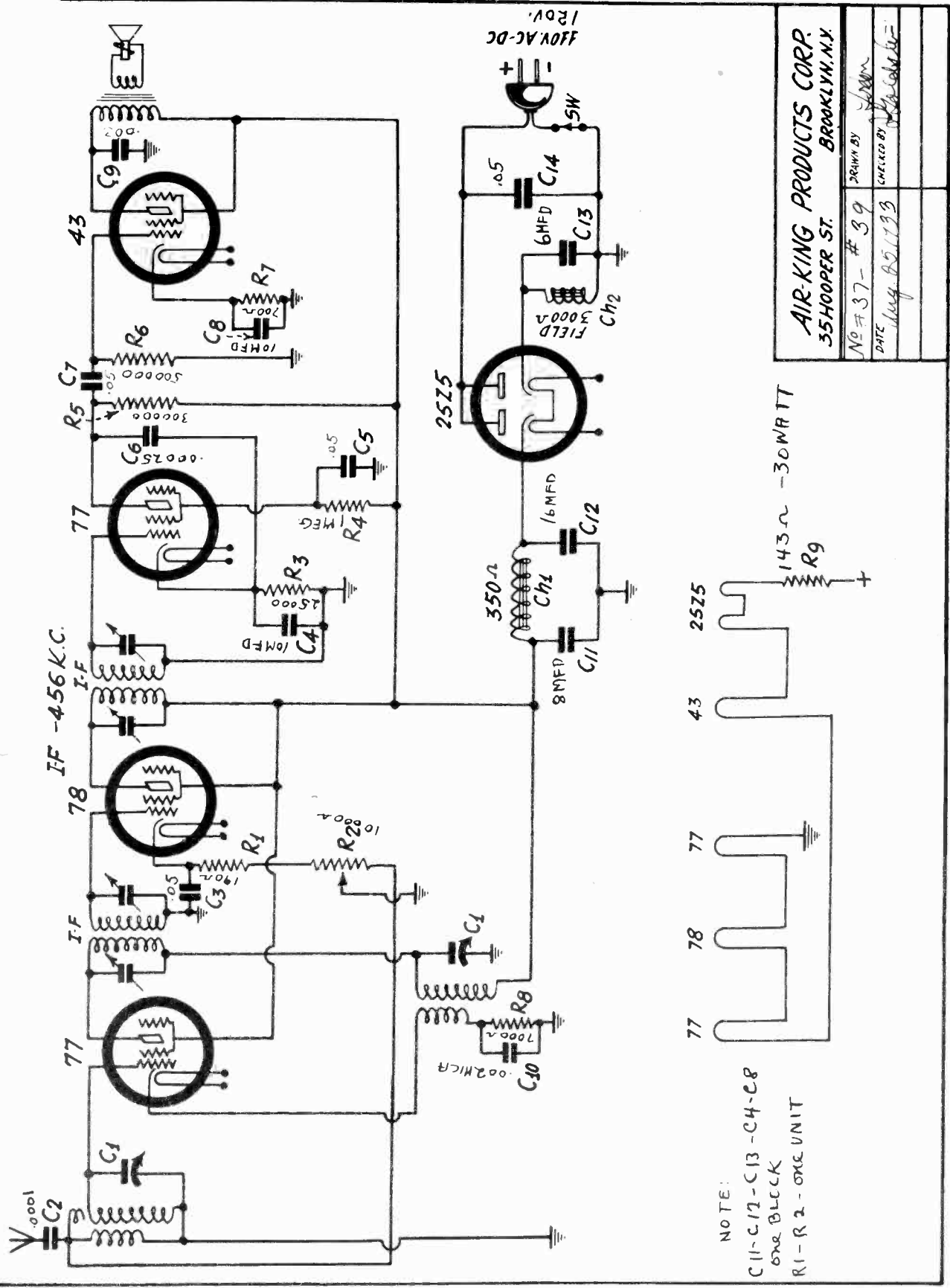


VOLUME IV
PERPETUAL
TROUBLE SHOOTER'S
MANUAL



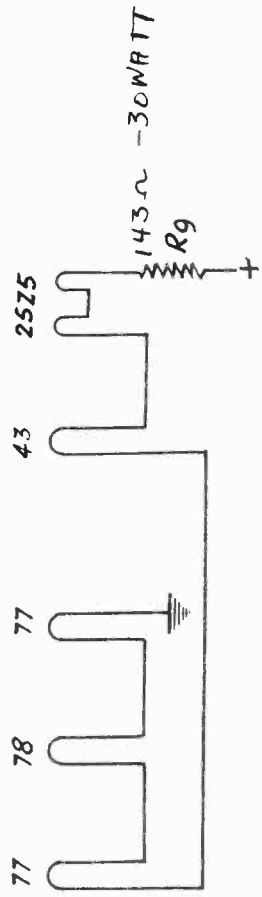
JOHN F. RIDER

AIR KING PRODUCTS CORP.



AIR-KING PRODUCTS CORP.
35 HOOPER ST. BROOKLYN, N.Y.

NO # 37-# 39	DRAWN BY
DATE Aug. 25, 1939	CHECKED BY

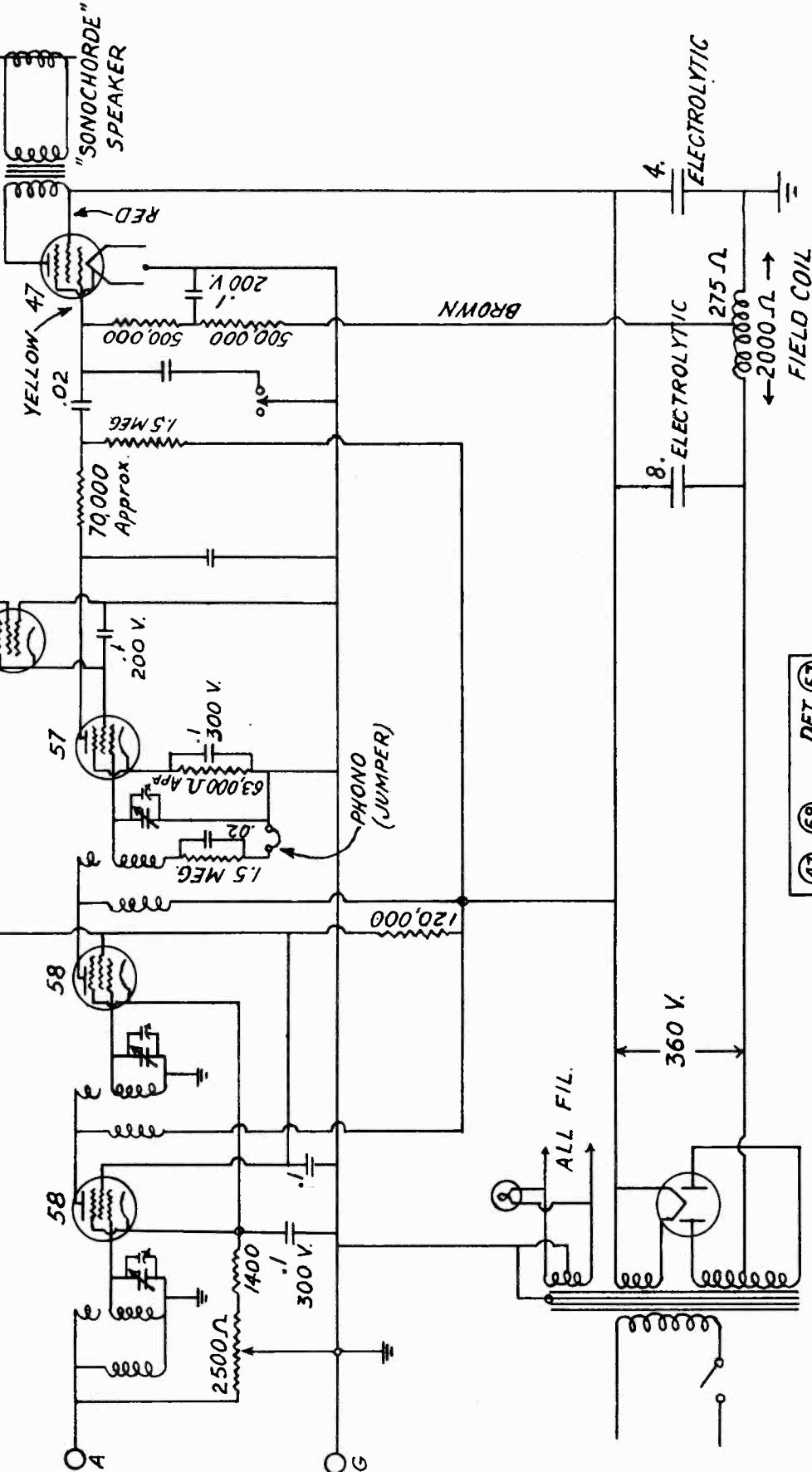


NOTE:
C11-C12-C13-C14-C8
ONE BLACK
R1-R2 - ONE UNIT

MODEL Bronswick
Schematic, Socket

BRONSWICK RADIO

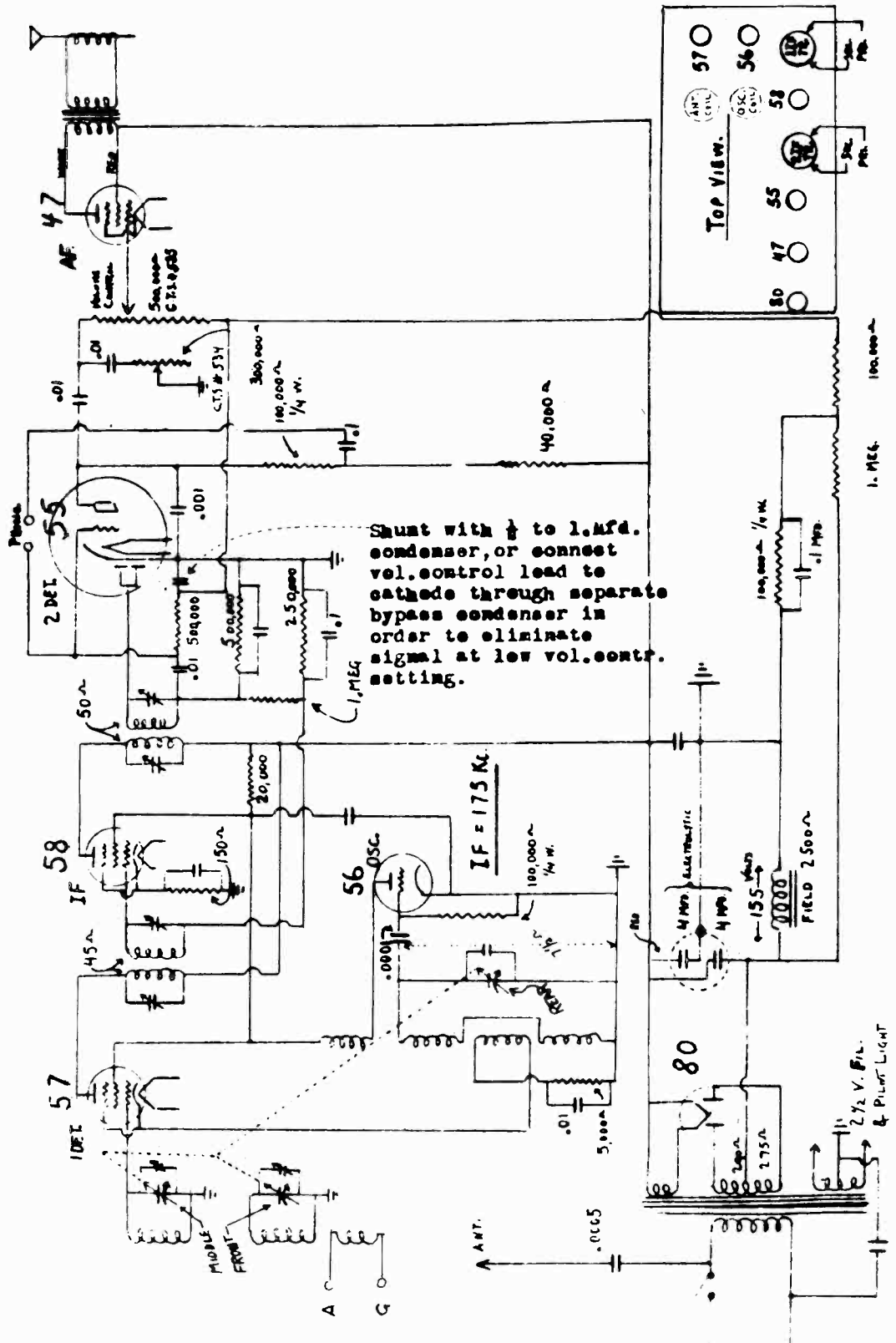
ESG ON DET. IS 40 TO 69 VOLTS
AT MAX. & MIN. VOL. CONTR. POSITIONS RESP.
(ON 300 V. SCALE - 2750 Ω P.Y. METER)
GREEN



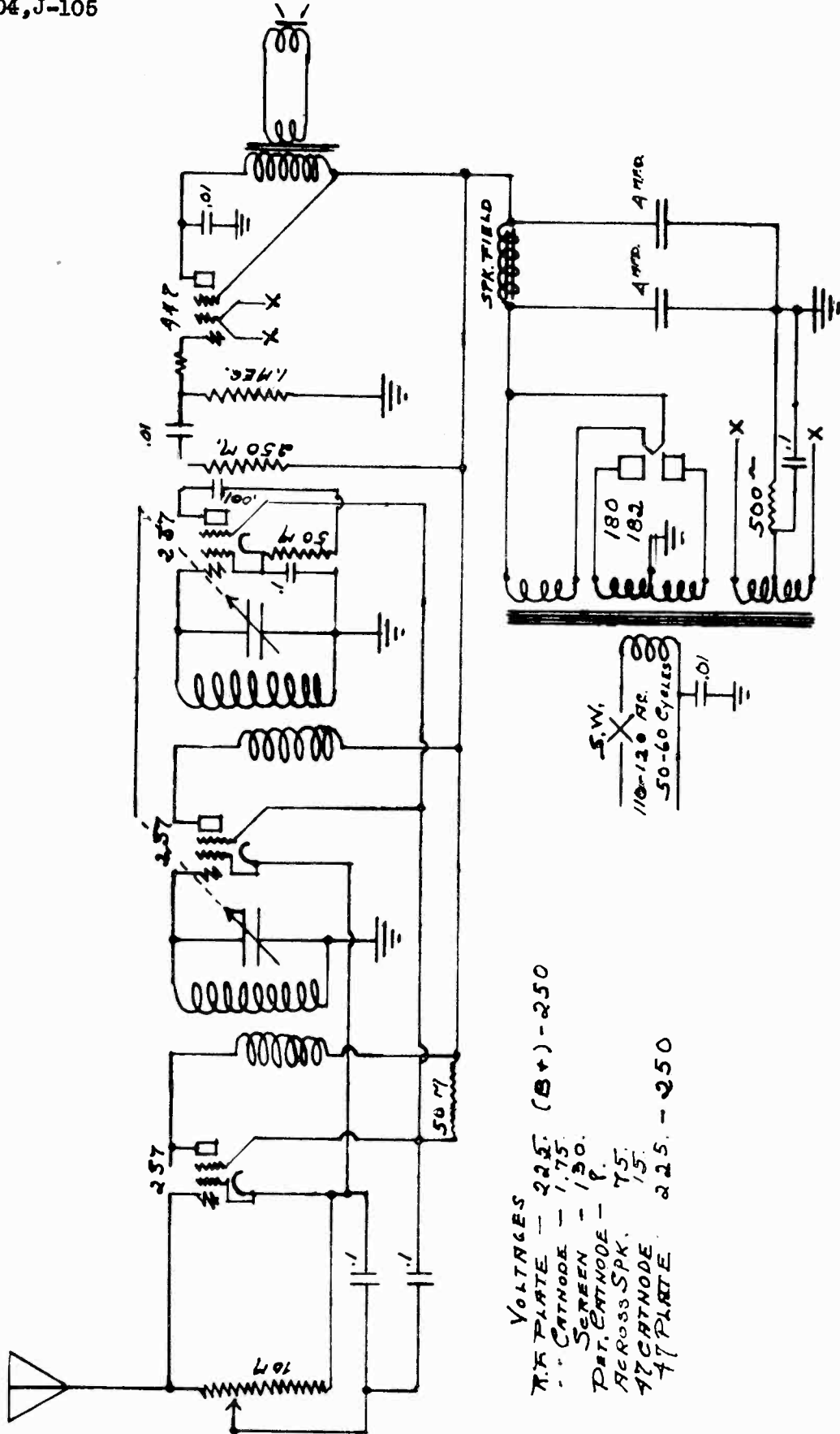
- | | | |
|-------|------|------|
| (47) | DET. | (57) |
| (58) | AVC | (58) |
| (58) | 2RF | (58) |
| (58) | 1RF | (58) |
| FRONT | | |

FEDERATED PURCHASER

MODEL Acratone 17
Schematic



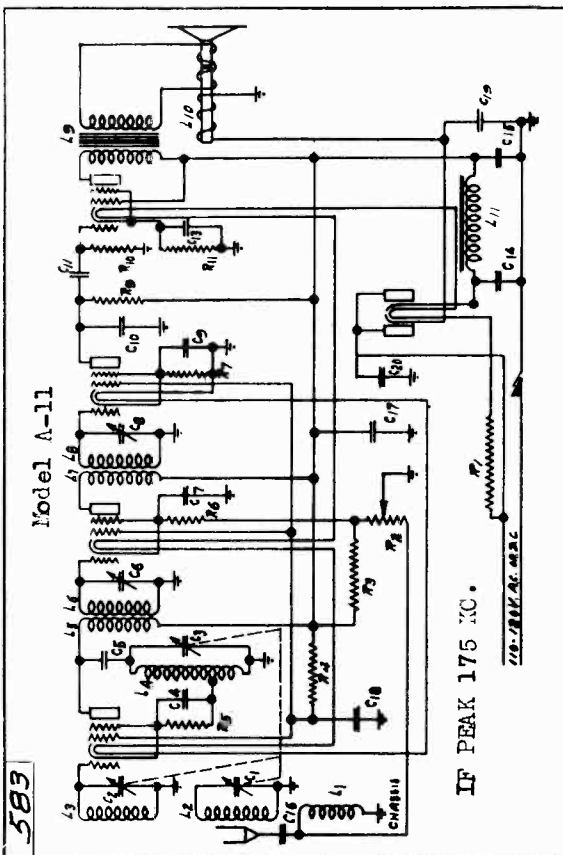
MODEL LK-447, SF-547,
 401-A, 504-B, JACKSON RADIO & TELEVISION CO.
 J-104, J-105



VOLTAGES
 R.F. PLATE - 225 (B+) - 250
 1st CATNODE - 175
 SCREEN - 150
 DET. CATNODE - 15
 ACROSS SPK. 75
 4th CATNODE 15
 A7 PLATE 225 - 250

LAFAYETTE RADIO & TELEVISION CORP.

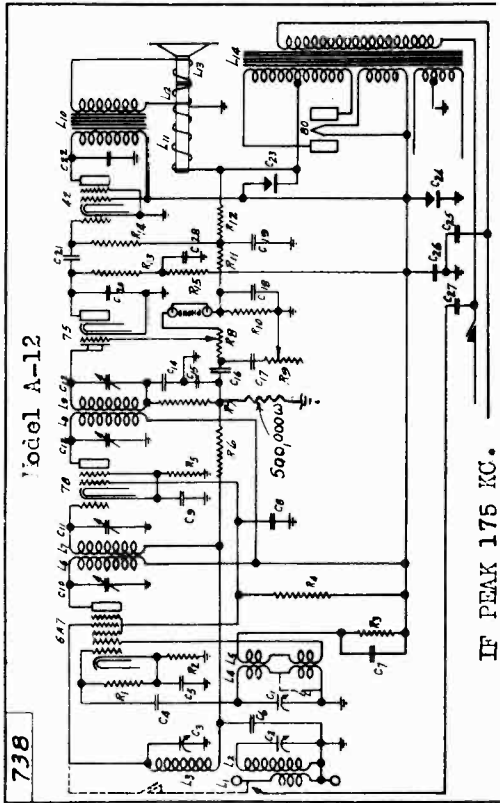
MODEL A-11
MODEL A-12
Schematics



Model A-11

IF PEAK 175 KC.

Code	Part No.	RESISTORS
R1	509	170 Ohm Filament Resistor
R2	853	10,000 Ohm Volume Control and Switch
R3	922	75,000 Ohm Resistor I.F. Cathode Feed
R4	921	40,000 Ohm Resistor Screen Cathode & Oscillator
R5	919	5,000 Ohm Resistor First Detector & Oscillator
R6	1063	500 Ohm Resistor I.F. Cathode Feed
R7	941	20,000 Ohm Resistor Second Detector Cathode
R8	924	250,000 Ohm Resistor Second Detector Cathode
R9	925	500,000 Ohm Resistor Output Grid Bias
R10	1063	500 Ohm Resistor 43 Bias
C1	853	365 MFD. Presetor Section of Variable Condenser
C2	853	365 MFD. Presetor Section of Variable Condenser
C3	853	350 MFD. Oscillator Section of Variable Condenser
C4	265	.001 MFD. First Detector & Oscillator Cathode Condenser
C5	264	.00005 MFD. Cathode Coupling Condenser
C6	477	75-150 MFD. First I.F. Trimmer Condenser
C7	272	.1 MFD. I.F. Cathode By-pass Condenser
C8	849	75-150 MFD. Second I.F. Trimmer Condenser
C9	569	.2 MFD. Second Detector Cath-
C10	265	.001 MFD. Second Detector Plate R.F. Filter
C11	269	.01 MFD. Audio Feed Condenser
C12	928	75 MFD. C. Bias By-pass Condenser
C13	965	12 MFD. Voltage Filter Condenser
C14	965	4 MFD. Voltage Filter Condenser
C15	265	.001 MFD. Antenna Series Condenser
C16	265	.5 B Supply By-pass Condenser
C17	267	1 200 Volt Screen By-pass Condenser
C18	272	4 MFD. Voltage Filter Condenser
C19	965	4 MFD. Voltage Filter Condenser
C20	272	.1 MFD. 200 Volt Line By-pass Condenser
L1	847	INDUCTANCES Presetor Primary 178 Turns #56 S.S.E.
L2	847	Presetor First Secondary 128 Turns #36 S.S.E. U.V.
L3	847	Presetor Second Secondary 135 Turns #36 S.S.E. U.V.
L4	939	Oscillator Coil 98 Turns Tap-Head 15 Turns #36 S.S.E. U.V.
L5	939	First I.F. Primary 650 Turns #36 S.S.E. U.V.
L6	938	First I.F. Secondary 650 Turns #36 S.S.E. U.V.
L7	937	Second I.F. Primary 650 Turns #36 S.S.E. U.V.
L8	937	Second I.F. Secondary 650 Turns #36 S.S.E. U.V.
L9	917	Stacle #45 Output Transformer 3,040 Ohm Speaker Field
L10	917	32 Henry Choke
L11	940	32 Henry Choke



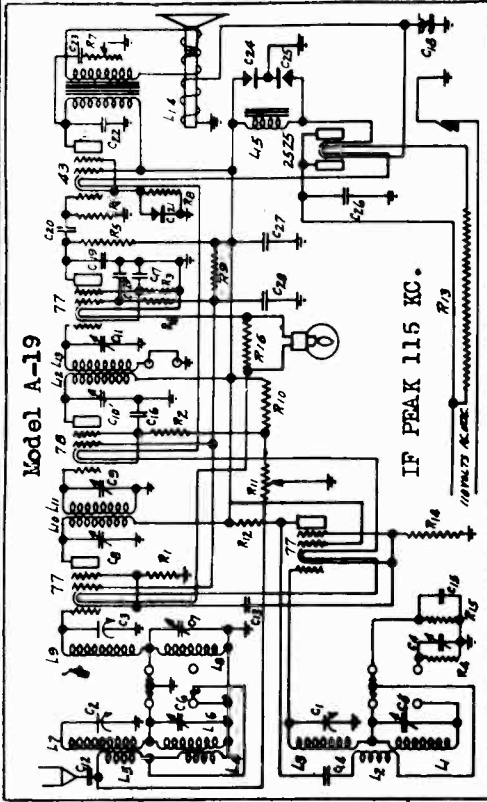
Model A-12

IF PEAK 175 KC.

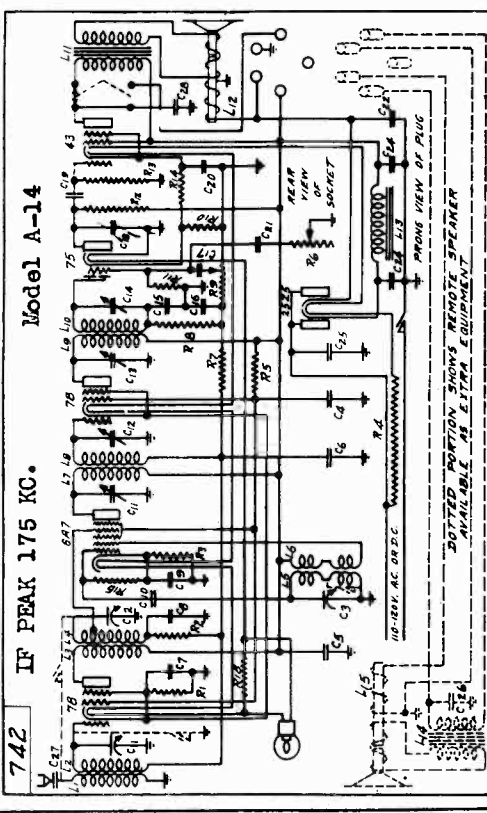
Code	Part No.	RESISTORS
R1	509	170 Ohm Filament Resistor
R2	853	10,000 Ohm Volume Control and Switch
R3	922	75,000 Ohm Resistor I.F. Cathode Feed
R4	921	40,000 Ohm Resistor Screen Cathode & Oscillator
R5	919	5,000 Ohm Resistor First Detector & Oscillator
R6	1063	500 Ohm Resistor I.F. Cathode Feed
R7	941	20,000 Ohm Resistor Second Detector Cathode
R8	924	250,000 Ohm Resistor Second Detector Cathode
R9	925	500,000 Ohm Resistor Output Grid Bias
R10	1063	500 Ohm Resistor 43 Bias
R11	535	500,000 Ohm Bias Network Resistor
R12	250,000	Ohm Bias Network Resistor
R13	500,000	Ohm Plate Resistor
R14	500,000	Ohm Plate Resistor
R15	500,000	Ohm Plate Resistor
C1	853	365 MFD. Presetor Section of Variable Condenser
C2	853	371 MFD. Presetor Section of Tuning Condenser
C3	853	371 MFD. Presetor Section of Variable Condenser
C4	266	.00025 MFD. Oscillator Coupling Condenser
C5	272	.1 MFD. 647 Cathode By-pass Condenser
C6	272	.1 MFD. .87 & .78 Screen By-pass Condenser
C7	272	.1 MFD. Oscillator Feed By-pass Condenser
C8	272	.1 MFD. .87 & .78 Screen By-pass Condenser
C9	272	.1 MFD. 78 Cathode By-pass Condenser
C10	1104	70-200 MFD. First I.F. Primary Trimmer Condenser
C11	1105	70-200 MFD. Second I.F. Primary Trimmer Condenser
C12	1106	70-200 MFD. Second I.F. Primary Trimmer Condenser
C13	1107	70-200 MFD. Second I.F. Secondary Trimmer Condenser
C14	339	.001 MFD. Voltage Filter Condenser
C15	339	.001 MFD. Voltage Filter Condenser
C16	269	.01 MFD. Second Detector Feed Condenser
C17	269	.01 MFD. Tone Control Condenser
C18	928	75 MFD. C. Bias By-pass Condenser
C19	569	2 MFD. 42 Bias By-pass Condenser
C20	516	.001 MFD. 75 Plate Filter Condenser
C21	269	.01 MFD. Audio Feed Condenser
C22	1132	.002 MFD. 42 Plate Filter Condenser 600 Volt
C23	496	4 MFD. B Filter Condenser
C24	269	.01 MFD. Line By-pass Condenser
C25	269	.01 MFD. Line By-pass Condenser
C26	794	1 MFD. B Supply By-pass Condenser
C27	307	.0005 MFD. Sub. Antenna Condenser
C28	272	.1 MFD. 75 Plate Rim Filter Condenser
L1	1109	INDUCTANCES Antenna Coil Primary 178 Turns #56 S.S.E.
L2	1109	Antenna Coil Secondary 136 Turns #36 S.S.E. U.V.
L3	1109	Presetor Primary 128 Turns #36 S.S.E. U.V.
L4	1111	Oscillator Secondary 72 and 50 Turns #36 S.S.E. U.V.
L5	1111	Oscillator Primary 15 Turns #36 S.S.E. U.V.
L6	1101	8,000 Microhenries First I.F. Primary
L7	1101	8,000 Microhenries Second I.F. Primary
L8	1101	8,000 Microhenries Second I.F. Secondary
L9	1101	8,000 Microhenries Second I.F. Secondary
L10	1111	Single #2 Output Transformer 3,000 Ohm Speaker Field
L11	1111	32 Henry Choke
L12	1111	32 Henry Choke
L13	1068	Power Transformer 115 Volts A.C. 60 Cycles

LAFAYETTE RADIO & TELEVISION CORP.

MODEL A-14
MODEL A-19
Schematics



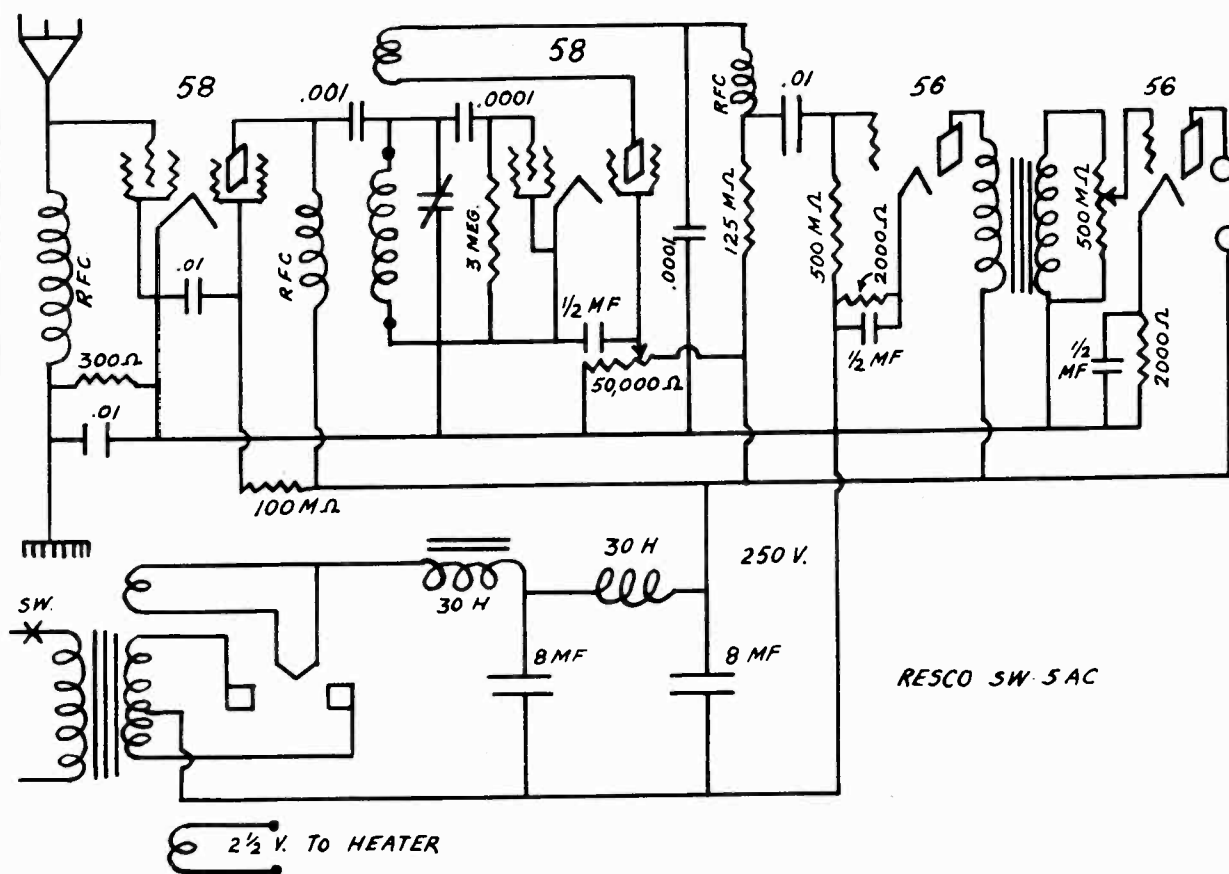
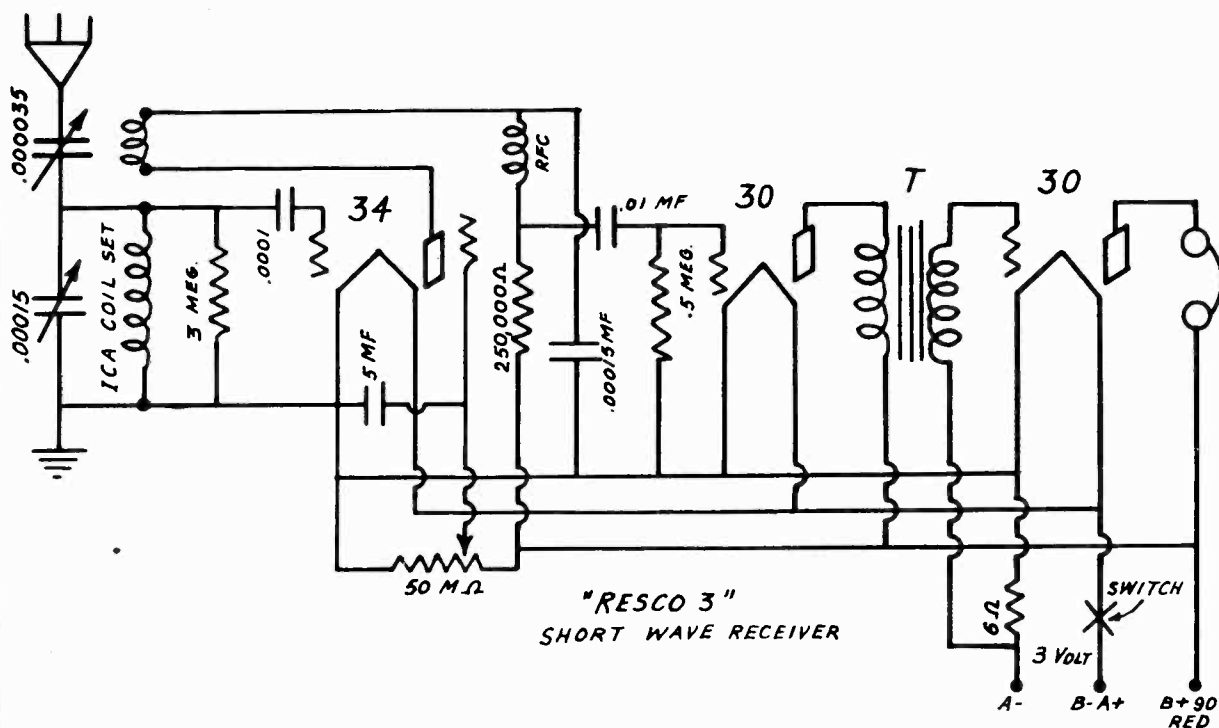
Part	Code	Description	Value
R1	519	5,000 Ohm First Detector Cathode Resistor	5,000 Ohm
R2	1062	250 Ohm I.F. Cathode Resistor	250 Ohm
R3	1003	15,000 Ohm Second Detector Cathode Resistor	15,000 Ohm
R4	1042	25,000 Ohm Long Wave Oscillator Plate	25,000 Ohm
R5	924	250,000 Ohm Second Detector Cathode Resistor	250,000 Ohm
R6	925	800,000 Ohm 43 Grid Resistor	800,000 Ohm
R7	926	250,000 Ohm Tone Control Resistor	250,000 Ohm
R8	1043	40,000 Ohm Screen Plate Resistor	40,000 Ohm
R9	927	75,000 Ohm I.F. Cathode Feed Resistor	75,000 Ohm
R10	928	10,000 Ohm Volume Control Resistor	10,000 Ohm
R11	512	10,000 Ohm Volume Control Resistor	10,000 Ohm
R12	941	20,000 Ohm Oscillator Plate Resistor	20,000 Ohm
R13	1125	130 Ohm Resistance in Power Cord	130 Ohm
R14	1044	600 Ohm Oscillator Cathode Resistor	600 Ohm
R15	1042	25,000 Ohm Broadcast Oscillator Grid Resistor	25,000 Ohm
R16	924	250,000 Ohm Second Detector Cathode Resistor	250,000 Ohm
R17	1119	36 Ohm Pilot Light Shunt Resistor	36 Ohm
C1	833	25 Microfarads, 35 V.D.C. Preset Resistor	25 Microfarads
C2	833	25 Microfarads, 35 V.D.C. Preset Resistor	25 Microfarads
C3	833	25 Microfarads, 35 V.D.C. Preset Resistor	25 Microfarads
C4	784	4 Plate Long Wave Oscillator Trimmer	4 Plate
C5	972	2 Plate Long Wave Oscillator Trimmer	2 Plate
C6	971	2 Plate First Preset Resistor Trimmer	2 Plate
C7	971	2 Plate Second Preset Resistor Trimmer	2 Plate
C8	993	75 - 150 MFD, First I.F. Preset Resistor	75 - 150 MFD
C9	994	75 - 150 MFD, First I.F. Preset Resistor	75 - 150 MFD
C10	995	75 - 150 MFD, Second I.F. Preset Resistor	75 - 150 MFD
C11	996	75 - 150 MFD, Second I.F. Preset Resistor	75 - 150 MFD
C12	269	.01 Antenna Coupling Condenser	.01 Microfarad
C13	269	.01 Oscillator Feed Condenser	.01 Microfarad
C14	269	.01 MFD, Oscillator Plate Condenser	.01 Microfarad
C15	503	.004 MFD, Broadcast Oscillator Condenser	.004 Microfarad
C16	272	.1 MFD, I.F. Cathode By-pass Condenser	.1 Microfarad
L1	1138	Preset Resistor, 35 V.D.C., Primary 450 Turns	35 V.D.C. Preset Resistor
L2	1130	Preset Resistor, Secondary 144 Turns, 35 V.D.C.	35 V.D.C. Preset Resistor
L3	1137	Detector Coil, Primary 750 Turns, 35 V.D.C.	35 V.D.C. Preset Resistor
L4	1137	Detector Coil, Secondary 118 Turns, 77 Turns #36	35 V.D.C. Preset Resistor
L5	1111	Oscillator, Secondary 72 Turns, 30 Turns #36 D.C.	35 V.D.C. Preset Resistor
L6	1111	Oscillator, Primary 35 Turns, 15 Turns #36 S.S.E.	35 V.D.C. Preset Resistor
L7	1101	9,000 Microhenries First I.F. Transformer	9,000 Microhenries
L8	1101	9,000 Microhenries First I.F. Transformer	9,000 Microhenries
L9	1101	9,000 Microhenries Second I.F. Transformer	9,000 Microhenries
L10	1101	9,000 Microhenries Second I.F. Transformer	9,000 Microhenries
L11	940	43 Output Transformer	43 Output Transformer
L12	940	2,500 Ohm Speaker Field	2,500 Ohm Speaker Field
L13	940	43 Output Transformer	43 Output Transformer
L14	940	2,500 Ohm Speaker Field	2,500 Ohm Speaker Field
L15	940	43 Output Transformer	43 Output Transformer



Part	Code	Description	Value
R1	1062	250 Ohm R.F. I.F. Cathode Resistor	250 Ohm
R2	925	100,000 Ohm V.I.C. Network Resistor	100,000 Ohm
R3	1062	250 Ohm 6.7 Cathode Resistor	250 Ohm
R4	1125	130 Ohm Resistor in Power Cord	130 Ohm
R5	941	20,000 Ohm 78 & 6.7 Screen Plate Resistor	20,000 Ohm
R6	524	250,000 Ohm Feed Resistor	250,000 Ohm
R7	926	100,000 Ohm V.I.C. Network Resistor	100,000 Ohm
R8	998	50,000 Ohm A.V.C. Network Filter Resistor	50,000 Ohm
R9	535	800,000 Ohm A.V.C. Control Resistor	800,000 Ohm
R10	1122	40 Ohm Bias Network Resistor	40 Ohm
R11	925	500,000 Ohm Grid Leak Resistor	500,000 Ohm
R12	925	500,000 Ohm 75 Plate Resistor	500,000 Ohm
R13	925	500,000 Ohm 43 Grid Resistor	500,000 Ohm
R14	1063	250 Ohm Resistor	250 Ohm
R15	921	40,000 Ohm Oscillator Grid Leak Resistor	40,000 Ohm
R16	1119	36 Ohm Pilot Light Shunt Resistor	36 Ohm
C1	833	371 MFD, Preset Resistor Section of Tuning Condenser	371 MFD
C2	833	371 MFD, Preset Resistor Section of Tuning Condenser	371 MFD
C3	833	336 MFD, Oscillator Section of Tuning Condenser	336 MFD
C4	272	.1 MFD, 78 & 6.7 Screen By-pass Condenser	.1 Microfarad
C5	766	.1 MFD, A.V.C. Network By-pass Condenser	.1 Microfarad
C6	272	.1 MFD, A.V.C. Network By-pass Condenser	.1 Microfarad
C7	272	.1 MFD, First Detector R.F. By-pass Condenser	.1 Microfarad
C8	272	.1 MFD, 6.7 Cathode By-pass Condenser	.1 Microfarad
C9	272	.1 MFD, 6.7 Cathode By-pass Condenser	.1 Microfarad
C10	266	.00025 MFD, Oscillator Coupling Condenser	.00025 Microfarad
C11	1104	70-500 MFD, First I.F. Preset Resistor	70-500 MFD
C12	1105	70-500 MFD, First I.F. Preset Resistor	70-500 MFD
C13	1106	70-500 MFD, Second I.F. Preset Resistor	70-500 MFD
C14	1107	70-500 MFD, Second I.F. Preset Resistor	70-500 MFD
C15	433	.0001 MFD, I.F. Cathode By-pass Condenser	.0001 Microfarad

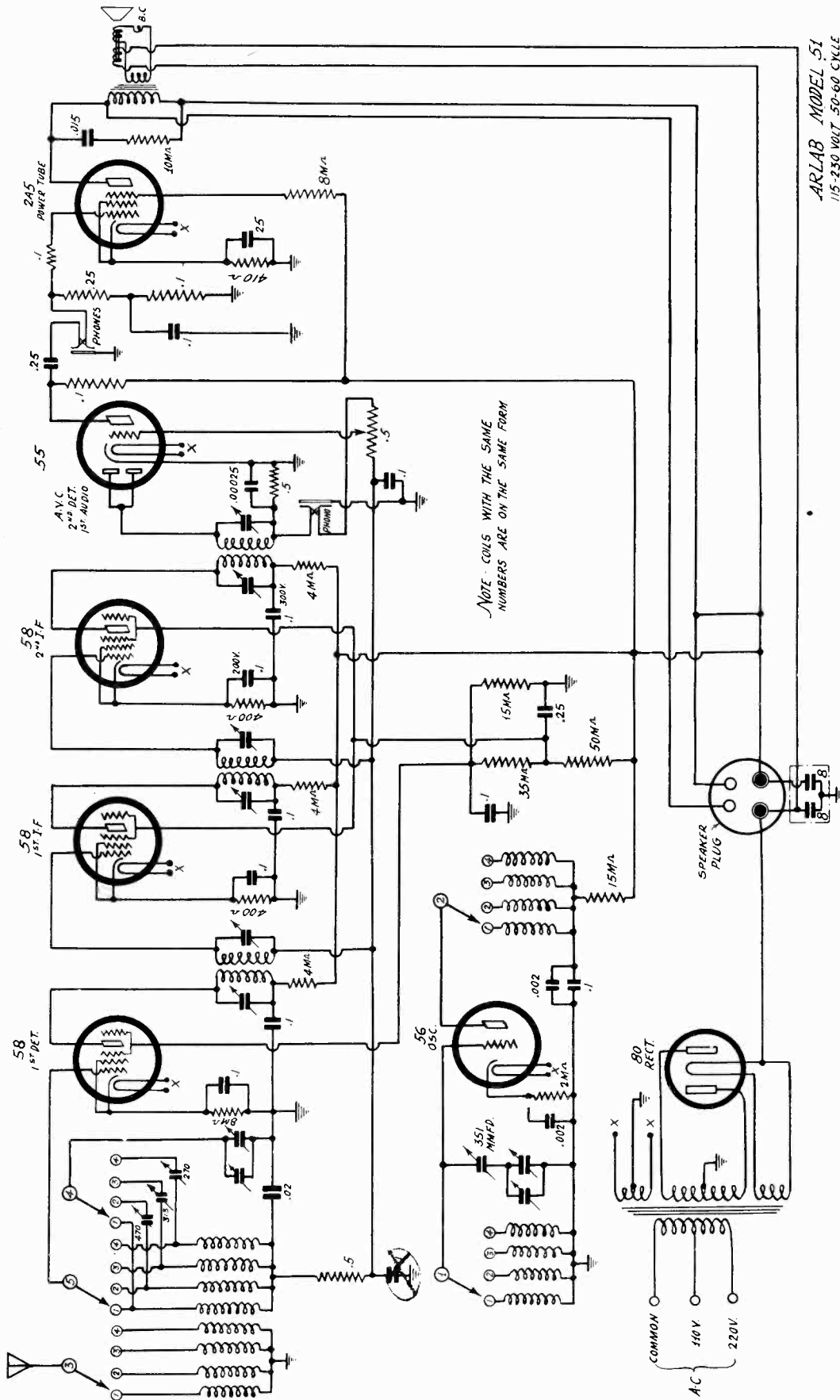
RADIO ELECTRIC SERVICE CO.

MODEL Resco 3
MODEL Resco SW-5-AC
Schematic



MODEL Arlab 51
Schematic

ROCKE INTERNATIONAL ELECTRIC CORP.

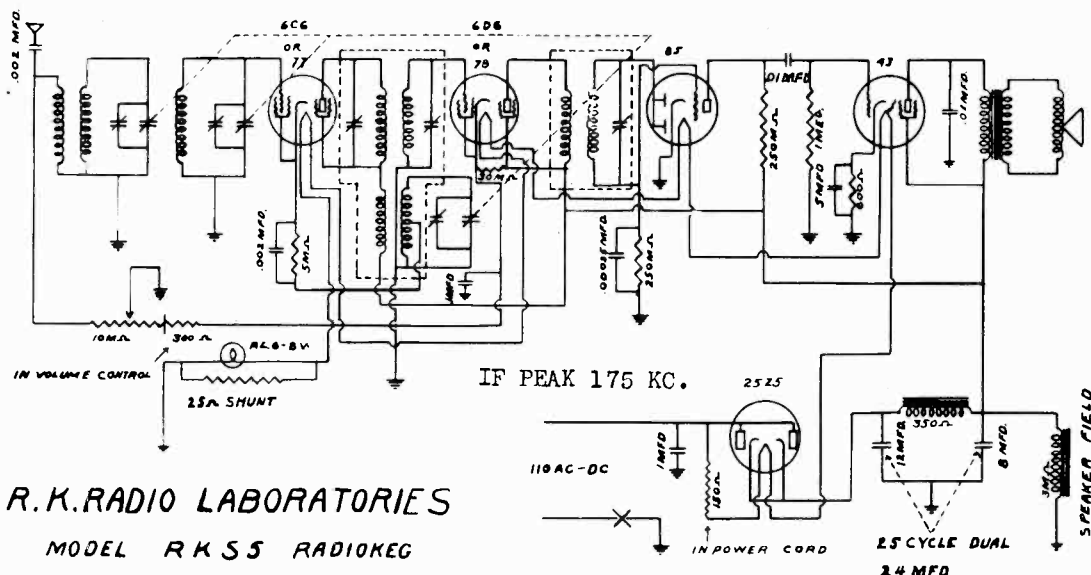


NOTE - COILS WITH THE SAME
NUMBERS ARE ON THE SAME FORM

ARLAB MODEL 51
115-230 VOLT 50-60 CYCLE

CLAGO RADIO CORP.
RK RADIO LABORATORIES, INC.

MODEL RK-S-5 Radiokeg
MODEL Radiochron "B"



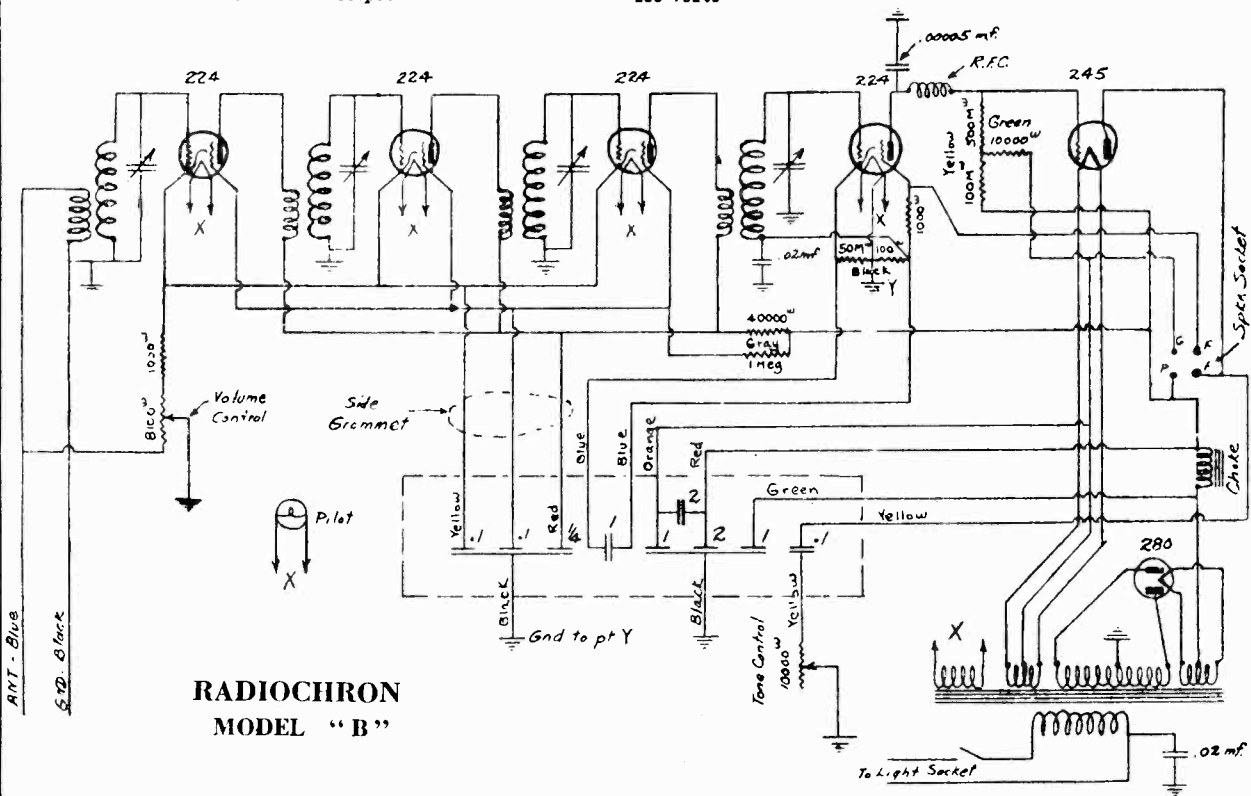
R.K. RADIO LABORATORIES
MODEL RK S5 RADIOKEG

ENGINEER J. ZOLOVCHICK

DRAWN BY ASSISTANT ENG. S.R. MAKO

VOLTAGE ANALYSIS: The following voltage analysis was taken with a 1000 ohms per volt meter. Socket to ground on chassis. Volume control set at maximum and line potential 115.

	Filament volts	Screen Grid volts	Bias volts	Plate Voltage volts
77	6.3	105	5	105
78	6.3	105	3.5	105
85	6.3	--	--	15
43	25	106	15	98
2525	25	output	--	115 volts



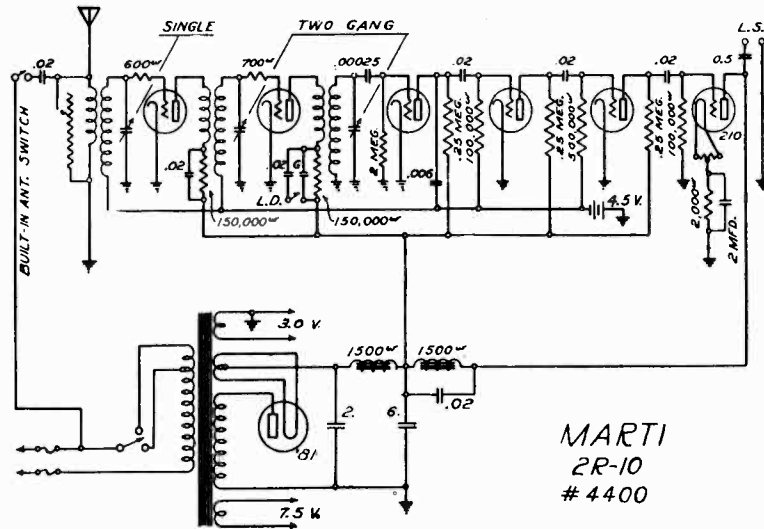
RADIOCHRON
MODEL "B"

MODEL Marti 2R-10
 MODEL Marti "T"
 MODEL Shamrock "28-29"

MARTI RADIO SHAMROCK RADIO

Marti Model 2R-10

Numerous requests have been received for circuit diagrams of Marti receivers. In Figure 8 you will find the schematic wiring diagram of the Marti Model 2R-10. It has often been repeated by service men that many changes were made in these receivers and that no two of them are alike in every respect. The values and circuit shown in Figure 3 were obtained from receiver bearing the serial number 4400. Oscillation and low volume are the chief troubles encountered with this model. Excepting the terminals of the transformer, choke and volume control assembly there are few if any soldered connections, the leads being comprised of straps secured by bolts and nuts. It is imperative that all nuts and bolts are tightened securely to avoid oscillation. Low volume is usually attributed to defective coupling resistors. The model 2R-10 employs Kellogg type tubes in the r. f., detector, first and second audio stages.



MARTI
 2R-10
 # 4400

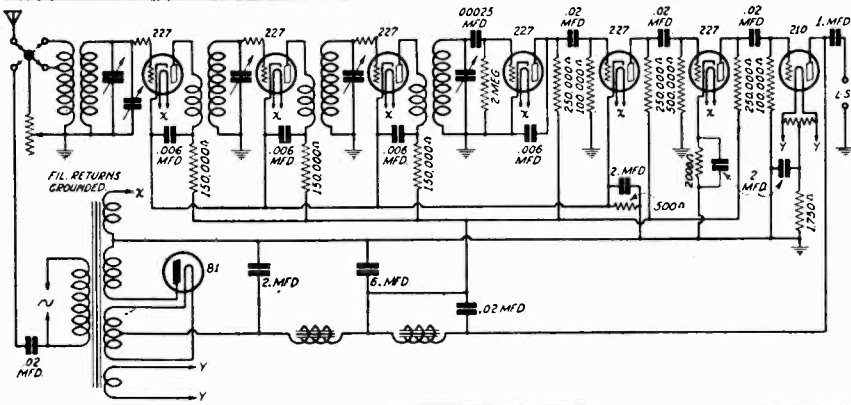
Model 2R-10 Marti and the Shamrock diagrams reproduced by courtesy of RADIO MERCHANT, November 1933.

Marti Model T

The schematic diagram of the Marti Model T is shown on this page. This, of course, is an early model receiver, but the diagram has not been easily obtainable.

It is seen to consist of three stages of tuned r-f, detector of the grid leak and condenser type, two stages of resistance coupled a-f and a single type 210 tube in the power stage. The power unit employs a type 81 half-wave rectifier and a double filter with the second section tuned to resonance in the vicinity of 60 cycles.

The volume control is seen to be in the antenna circuit. In the same circuit is a switch which permits changing from a regular antenna installation to the use of the light line as an antenna.



Shamrock Wiring Diagram

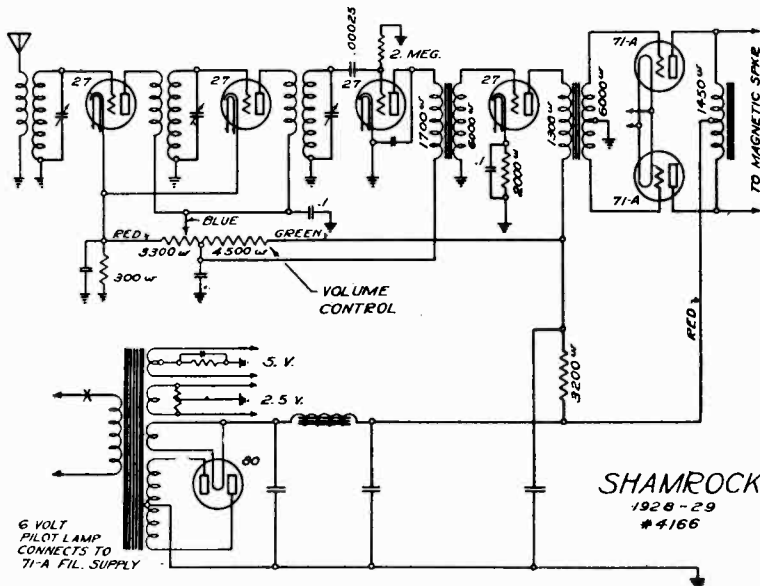
Two requests have been received for information regarding the connection of the volume control unit in the Shamrock receiver. The total resistance of the volume control assembly is approximately 7,800 ohms with a fixed tap at 4,500 ohms to

SOCKET VOLTAGES

VOLUME CONTROL IN MAX. VOLUME POSITION

SOCKET	TYPE	E _F	E _K	E _P	E _{CG}	I _P
1st. R.F.	27	2.1	5	100	6	4
2nd. R.F.	27	2.1	5	100	6	4
DET.	27	2.1		40		2.5
1st. A.F.	27	1.9	4.5	100	4	4
P.P.	71-A	5.0		150	32	150
RECT.	80	4.4				2.5/2.75

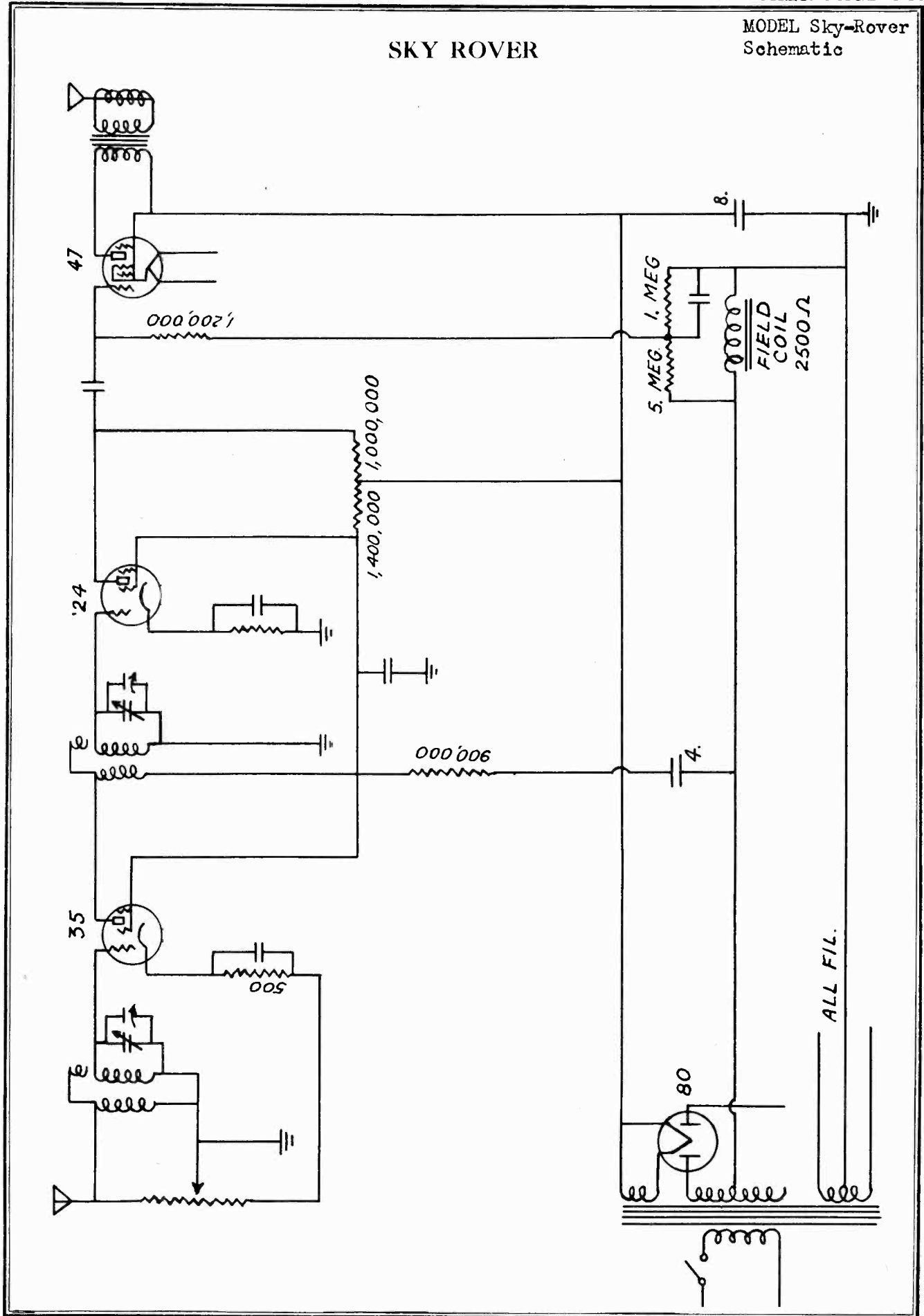
supply the detector plate voltage.



SHAMROCK
 1928-29
 # 4166

SKY ROVER

MODEL Sky-Rover
Schematic



MODEL Supreme 1931
Schematic

SUPREME RADIO

