

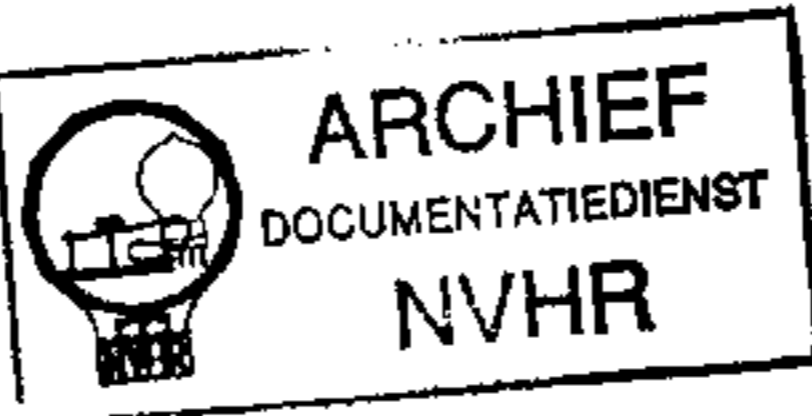
RCA MFG. CO., INC.  
Ned. Ver. v. Historie v/d Radio

MODELS IAX, IAX2

Ch. RC1003A

MODELS IX, IX2

Ch. RC-1003



APPROX. GAIN DATA USING RCA RIDER CHANNELYST

14X 400N  
50 L6 GT OUTPUT

40X 400N  
12 5A7 2ND DET. A.F. & AVC.

1X (455 KC.)  
200X (455 KC.)  
15X (600-455 KC.)  
MEASURED WITH -3V. FIXED BIAS ON AVC. BUS

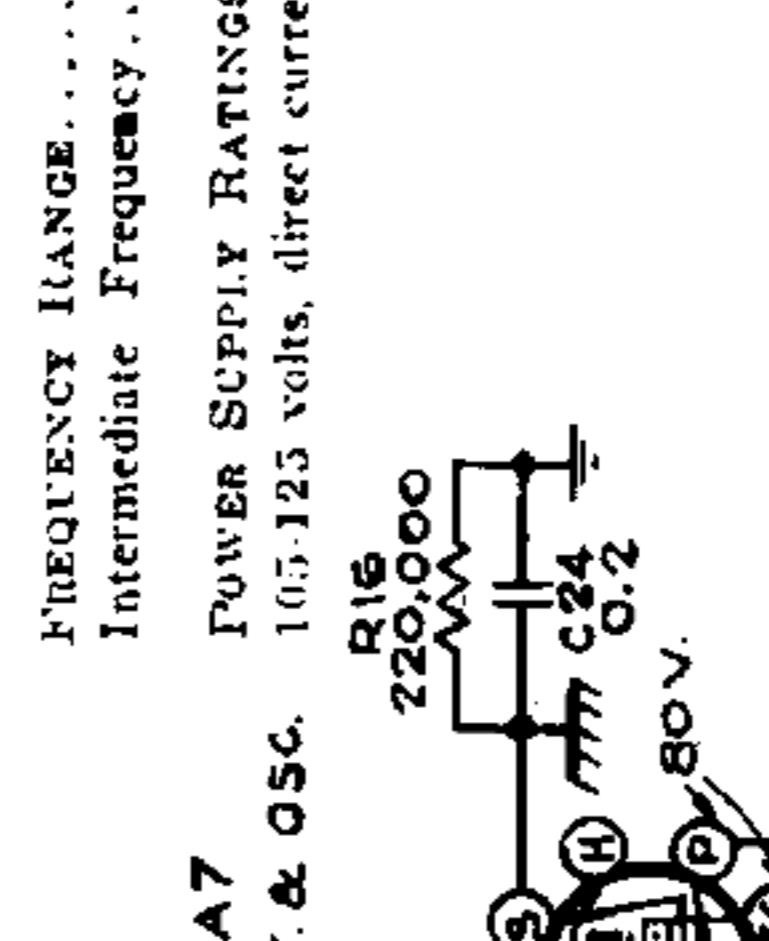
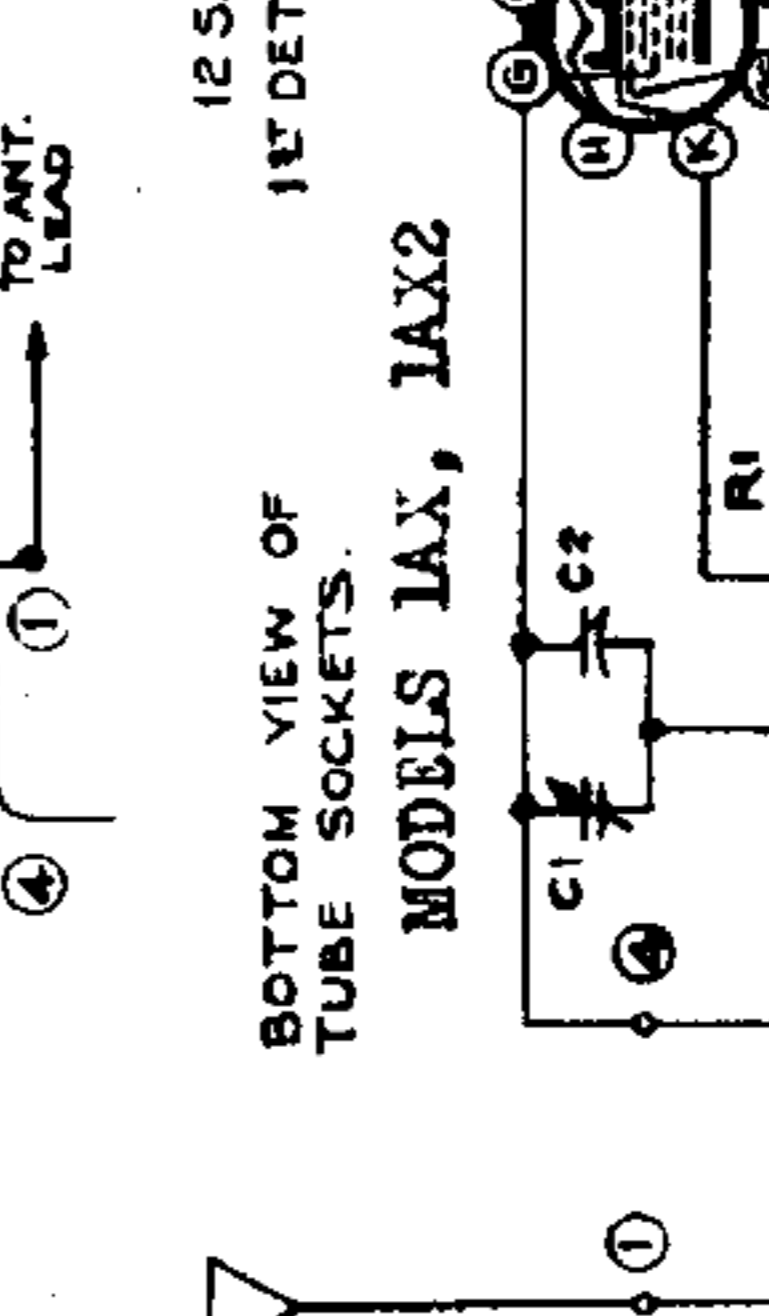
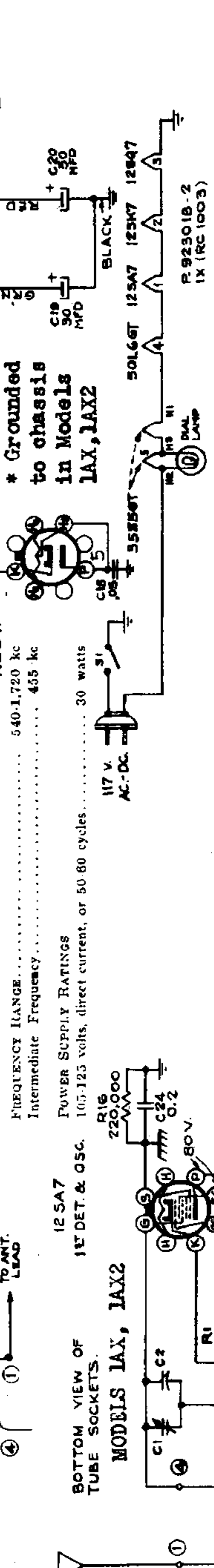
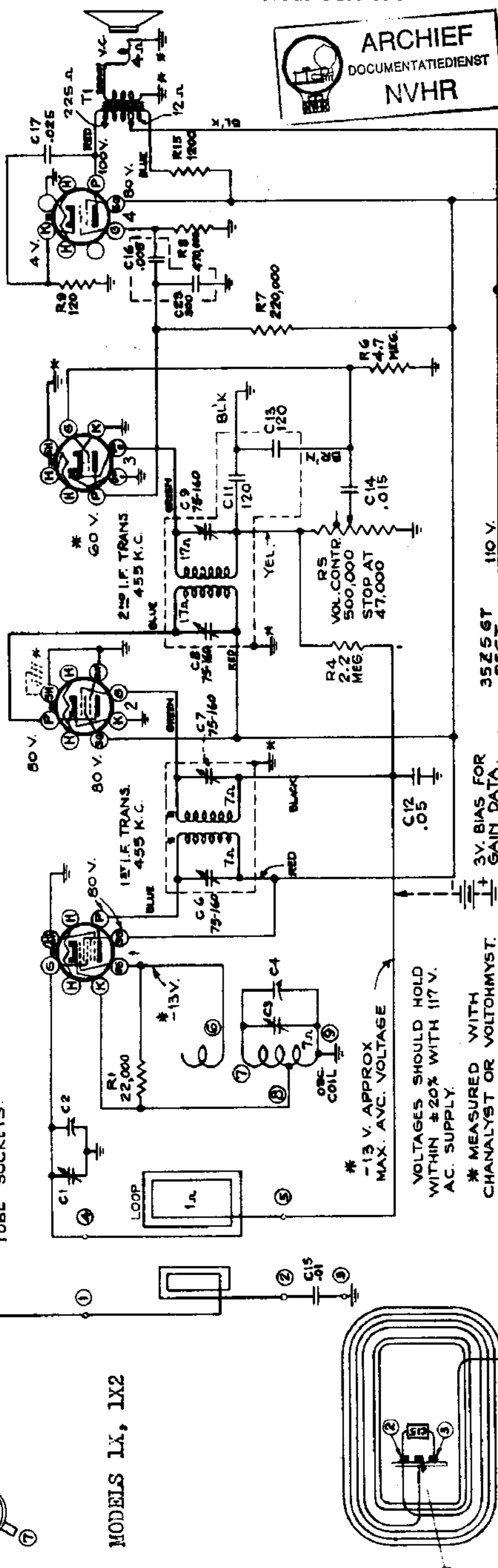
12 5A7 I.F.  
12 5A7 1ST DET. & OSC.

50X (600 KC.)  
15X (600-455 KC.)  
0.6X (455 KC.)

ANT. TO GRID  
50X (600 KC.)

BOTTOM VIEW OF TUBE SOCKETS.

MODELS IAX, IAX2



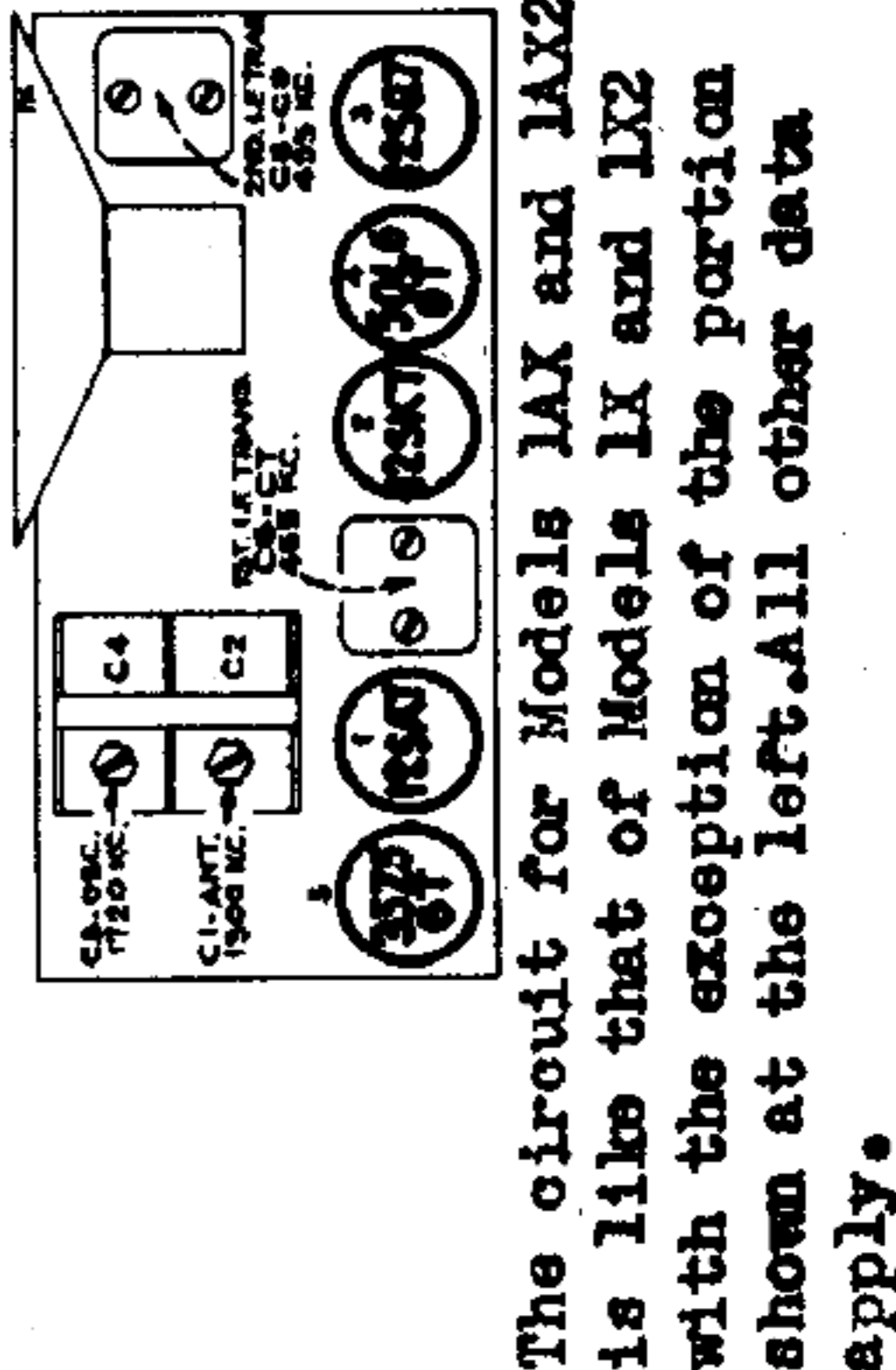
3V. BIAS FOR GAIN DATA.  
35Z5GT RECT.  
540-1,720 kc  
Intermediate Frequency  
455 kc  
POWER SUPPLY RATINGS  
105-125 volts, direct current, or 50-60 cycles, or 30 watts  
117 V. AC-DC.  
50L6GT 12SA7 12SK7 12SK7 12SA7  
P. 92301B-2 1X (RC 1003)

\* Grounded to chassis in Models IAX, IAX2

VOLTS SHOULD HOLD WITHIN ±20% WITH 117 V. AC. SUPPLY.  
\* MEASURED WITH CHANNELYST OR VOLTOHMYST.

OSC. COIL

Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. peak output
1	I-F grid, in series with .01 mfd.	455 kc	Quiet point 1,600 kc end of dial	C8, C9 2nd I-F Transformer
2	1st Det. grid in series with .01 mfd.	1,720 kc	Gang at minimum	C6, C7 1st I-F Transformer
3	Ant. terminal in series with 100 mmfd.	1,720 kc	Signal Frequency	C3 (osc.)
4	Radiated signal 1300 kc			C1 (ant.)
5	Repeat steps 3 and 4.			



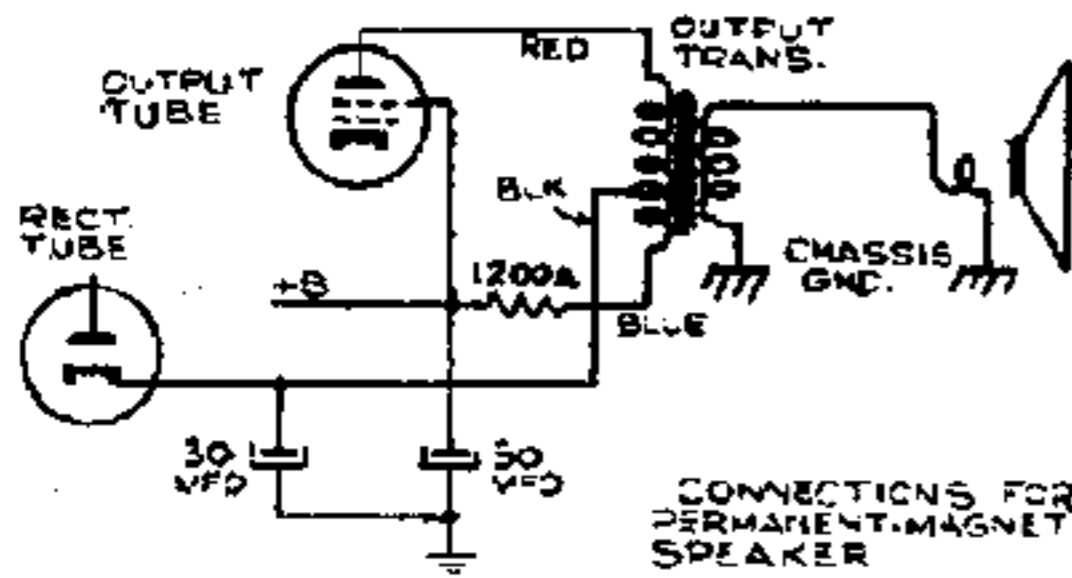
The circuit for Models IAX and IAX2 is like that of Models IX and IX2 with the exception of the portion shown at the left. All other data apply.

**CHANGES, NOTES**

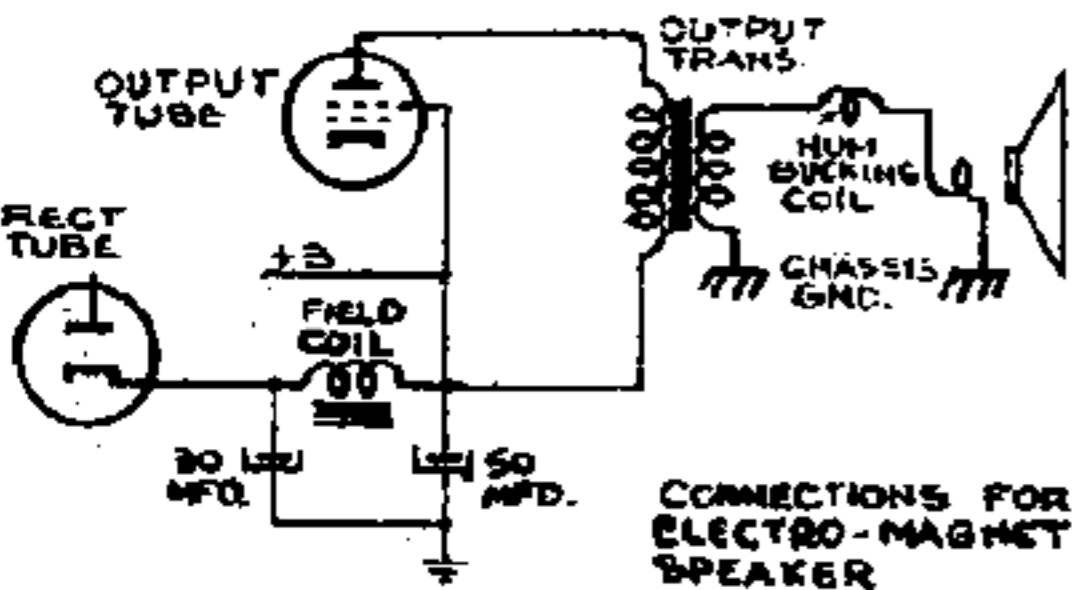
**1X, 12X, 14X SERIES**

Speaker changed from "PM" to "EM":

First Production of the following models use RL-81-B2 "PM" (permanent-magnet) speaker. In 2nd Production, the speaker is changed to RL-86-A3 "EM" (electro-magnet) speaker. The circuit for each type of speaker is shown in the accompanying diagrams.



CONNECTIONS FOR PERMANENT-MAGNET SPEAKER



CONNECTIONS FOR ELECTRO-MAGNET SPEAKER

Circuit for "PM" and "EM" Speakers in 1X, 12X, and 14X Series.

Replacement Parts for the RL-86-A3 "EM" speaker are as follows:

Model Number	Chassis Number	Cone and Voice Coil No.	Output Transformer No.
1X, 1X2	RC-1003	35570	35056
1AX, 1AX2	RC-1003A	35570	35056
12X, 12X2	RC-1001B	35570	38994
12AX, 12AX2	RC-1001C	35570	38994
14X, 14X2	RC-1001D	35570	38994
14AX, 14AX2	RC-1001E	35570	38994

Unit List Price: No. 35570, \$1.20  
No. 35056, 1.30  
No. 38994, 1.30

The Field Coil for RL-86-A3 Speaker is Stock No. 39543.

**1X, 1X2, 1AX, 1AX2, 45X5**

Line Bypass Capacitor:

In some production, the .005 mfd. line bypass is connected from plate to cathode on the rectifier tube, instead of from plate to chassis.

**1X, 1X2, 1AX, 1AX2**

2nd Production:

The tuning-knob shaft and its "C" washer are changed as follows:

	Shaft	"C" Washer
1st Prod...	No. 35343 (1 1/8-in.)	No. 34373
2nd Prod...	No. 38846 (1 1/8-in.)	No. 38726

Capacitor Changes:

C14 changed from .015 to .02 mfd., No. 36248  
C17 changed from .085 to .02 mfd., No. 36248  
C24 (1AX, 1AX2) changed from .2 to .1 mfd., No. 43763  
R4 changed from 2.2 to 8.3 meg., No. 12928

**QB2, QB6**

I-F or A-F Transformer Breakdown:

In 2nd production, a 10-megohm, 1/2-watt resistor is connected across the +B circuit electrolytic capacitor to discharge the capacitor when the set is tuned "off." This eliminates any voltage difference (retained by capacitor) between the chassis and I-F and A-F transformer primaries while the set is "off" and therefore reduces transformer breakdown due to electrolysis in humid climates.

**CV-112X CONVERTER**

AC Power Unit for QB2, QB5, QB6:

The CV-112X is designed to convert Models QB2, QB5, and QB6 from battery to a-c operation. It differs from the CV-112 in that it has a tapped filament winding to provide correct filament voltage with 4- and 5-tube, or 6-tube receivers. A plug, which fits in a socket on the side of the unit, is used to select the correct tap, as shown in accompanying diagram.

**RCA MFG. CO., INC.**

**QB3 (RC-539)**

C15, 66 mfd., Stock No. 36072:

In 2nd Production of QB3, C15 is changed to 66 mfd. (Stock No. 36072, List Price \$.30) to improve tracking.

**QB6 (RC-529D)**

Service Data:

Model QB6 is essential the same as Model QB2, except for the following parts which are used in the QB6:

Stock No.	Description	Unit List Price
37976	Bracket—Tone control support bracket	.25
37999	Dial—Glass dial scale	.75
36103	Decal—Power-volume decal.	.05
37839	Decal—Range switch decal.	.15
85392	Decal—Trade mark decal.	.05
35391	Decal—Tuning decal	.05
37838	Frame—Dial frame complete, less dial and pointer	1.25
35650	Knob—Tone control knob	.25
34861	Knob—Tuning knob	.35
34862	Knob—Vol. control or range switch knob	.35

**10X, 2ND PRODUCTION**

Chassis No. RC-1001-B:

The 1st production of Model 10X has chassis No. RC-1001, with an "EM" speaker.

In 2nd production, the chassis is No. RC-1001-B, with RL-81B2 "PM" speaker.

The circuit in 2nd production is the same as shown in the Service Note for Model 12X.

For replacement parts, refer to the 10X Service Note, and the following parts which are used in the 2nd production:

Stock No.	Description	Unit List Price
36301	Capacitor—Electrolytic, comprising 1 section of 50 mfd., 150 volts, and 1 section of 30 mfd., 150 volts	1.25
11315	Capacitor—.015 mfd.	.20
30189	Resistor—120 ohms, 1/2 watt	.20
6134	Resistor—1,200 ohms, 1/2 watt	.22
30492	Resistor—22,000 ohms, 1/2 watt	.20
14583	Resistor—220,000 ohms, 1/2 watt	.20
36800	Transformer—Output transformer	1.30
<b>SPEAKER ASSEMBLIES (RL-81B-2)</b>		
35570	Cone—Cone complete with voice coil	1.20
36153	Fastener—Push-on fastener for back	.10
35078	Knob—Volume control or tuning knob	.15

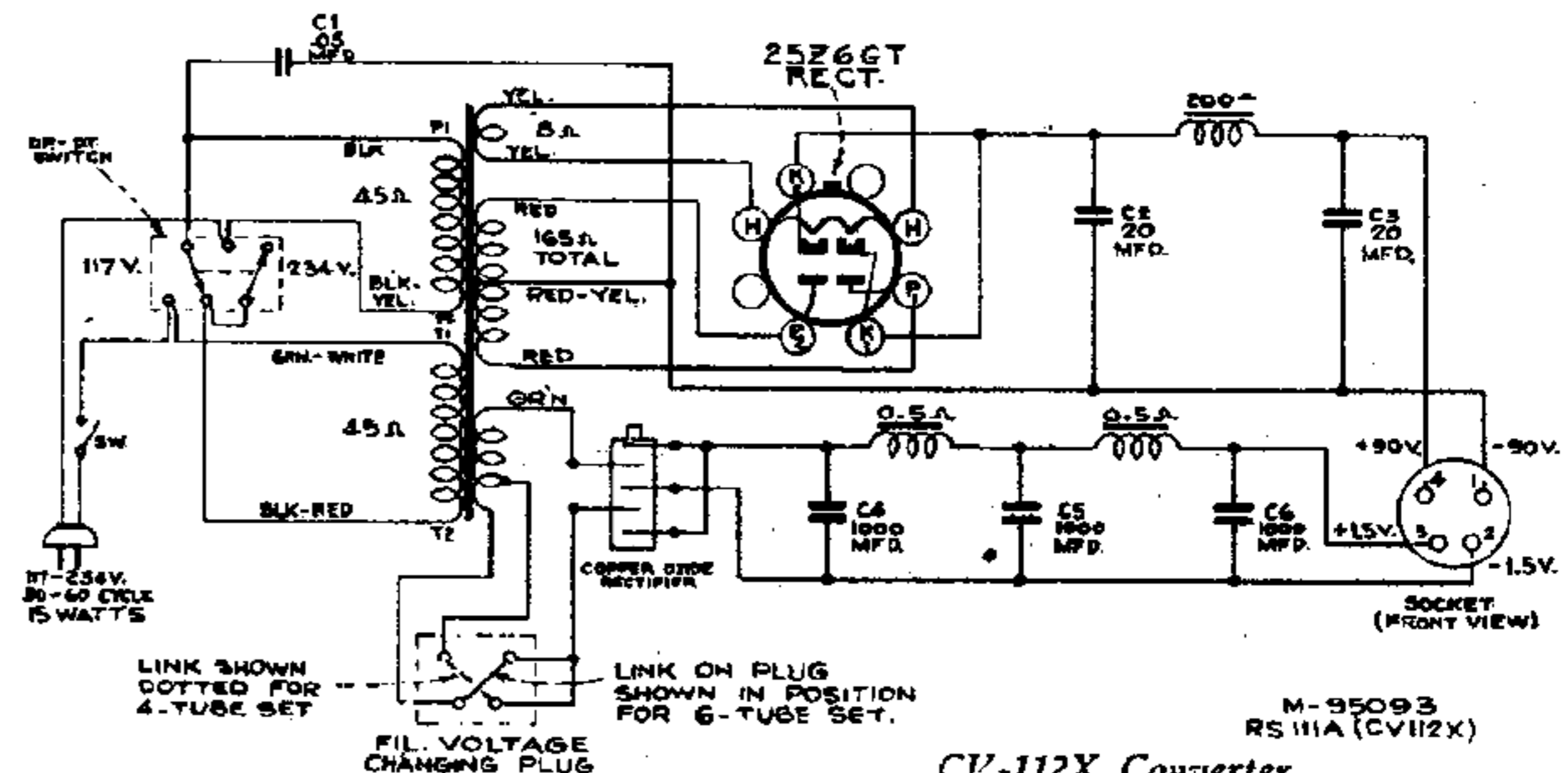
**LOCATING INTERFERENCE**

With a Model BP-10:

The Model BP-10 "Personal" loop receiver has been used successfully in tracking down the source of electrical interference, and the location of local rectification in stubborn cases of local cross-modulation and hum-modulation.

The directional pattern of the BP-10 is essentially a figure "8," with a sharp minimum at right angles to the plane of the loop.

The small size, light weight, and high sensitivity of this battery-operated receiver makes it ideally suited for this work.



**BP-10 AND 15BP**

Oscillator Coil Color Code:

The correct color code for the oscillator coil in these models is as follows:  
Lead to oscillator plate..... Blue  
Lead to +B..... Red  
Lead to oscillator grid..... Green  
Lead to chassis..... White

**SPEAKER GAUGE No. 39598**

For BP-10 Elliptical Speaker:

A special gauge, No. 39598, is now available for centering the voice coil in Model BP-10 with elliptical speaker.

**CONE CENTERING GAUGE**

For BP-10 Round Speakers:

A cone centering gauge for the BP-10 round speaker (Stock No. 36504, Part No. 84991-501) is now available. The gauge is carried as Stock No. 70003.

The cone centering gauge for the BP-10 elliptical speaker is Stock No. 39598 (see Supplementary Information 6 and 7).



Stock No. 70003—Cone Centering Gauge

**12X, 12X2, 12AX, 12AX2**

Antenna Coupling Coil:

In 2nd production, the shunt resistor R7 across the primary of the antenna coupling coil is omitted, and the antenna coupling coil is changed from Stock No. 37356 to 37962, list price \$.75.

**14AX, 14AX-2**

Changes in 2nd Production:

C3, in grid circuit of 12SQ7, is changed from .015 to .02 mfd., Stock No. 36248.

C5, in 50L6GT plate circuit, is changed from .025 to .02 mfd., Stock No. 36248.

C21, chassis ground to power ground, is changed from .2 to .1 mfd., Stock No. 4839.

**14AX2 (RC-1001E)**

Service Data:

The Service Data for Model 14AX applies to Model 14AX2, except for the following parts used in 14AX2:

Stock No.	Description	Unit List Price
36801	Coil—Oscillator coil	.65
37353	Condenser—Variable tuning condenser	2.75
38816	Back—Cabinet back	.25
Y1140	Cabinet	4.50
35071	Knob—Control knob	.15

RL-86-A3 "EM" speaker is used in some production of 14AX2, as specified elsewhere in this supplement.