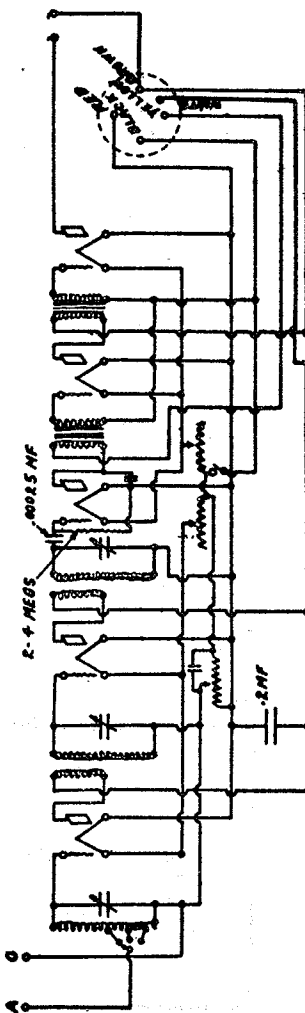
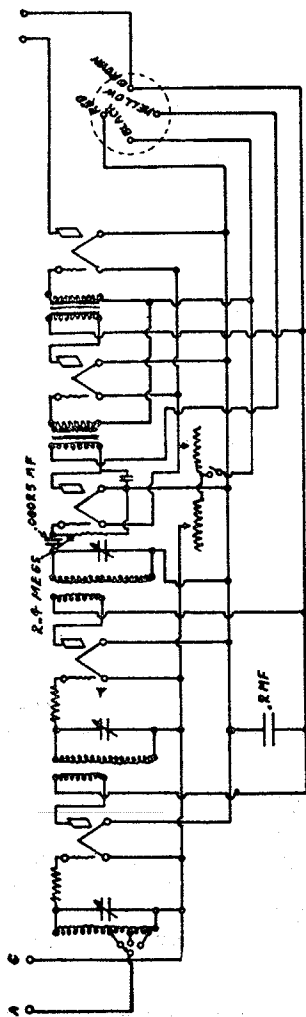
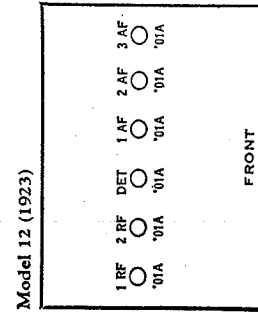
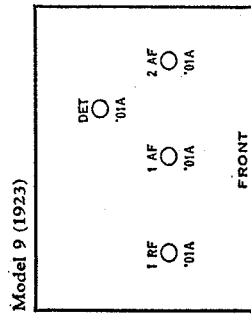
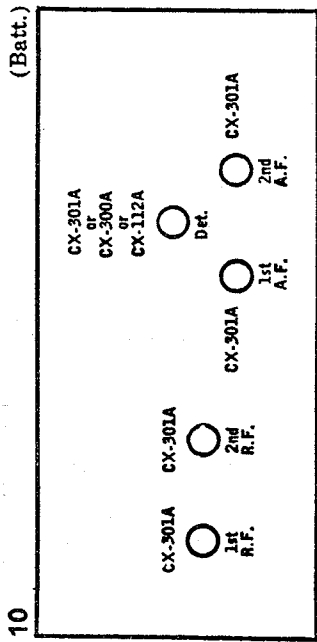
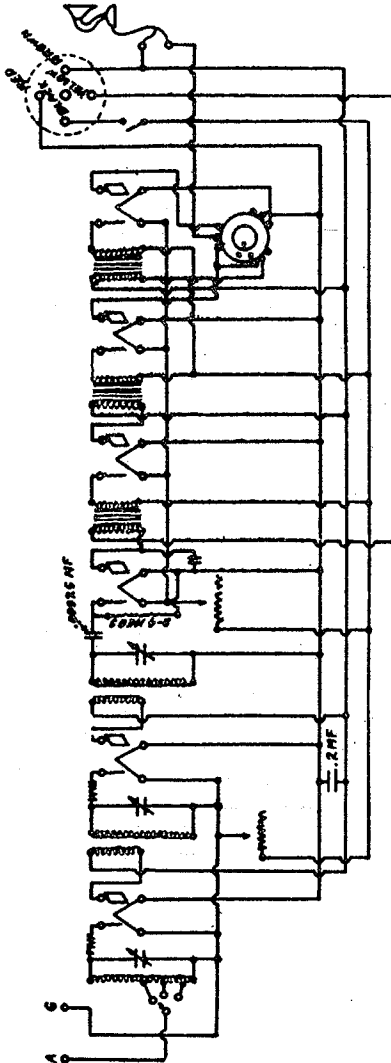


ATWATER KENT MFG. CO.

MODEL 10
MODEL 10-B
MODEL 12



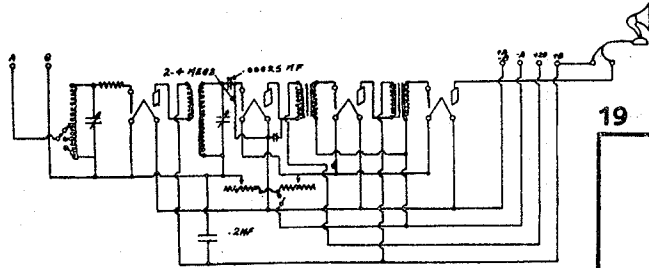
NOTE.—This set has two R.F. rheostats (one for each R.F. tube). —FIR connects to the slider lead of the 1st R.F. rheostat instead of to —F2R.



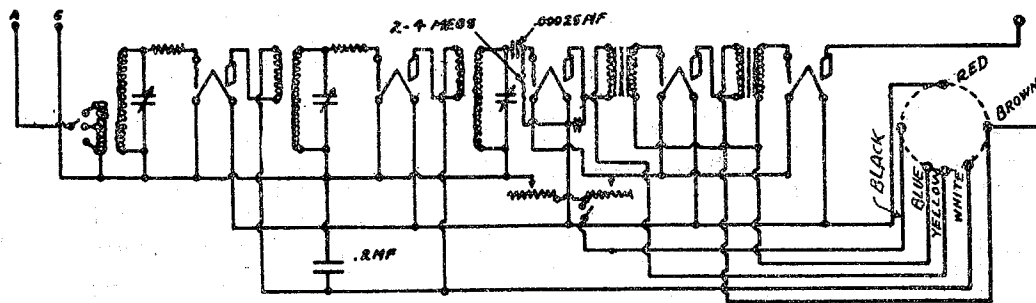
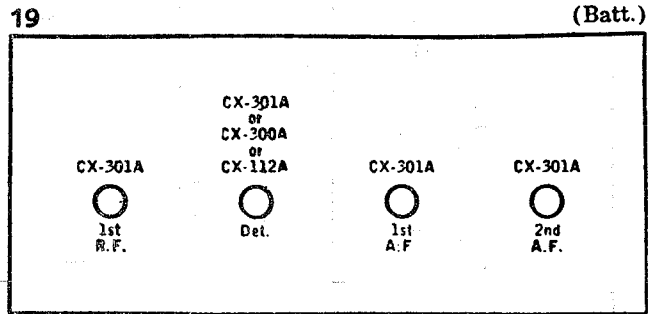
(Diagram shows one rheostat controlling detector and all three A.F. tubes. In actual set, rheostat controls detector and 1st audio only, 2nd and 3rd audio tubes being on separate fixed resistances.)

MODEL 19
 MODEL 20 # 7570
 MODEL 20 # 4640

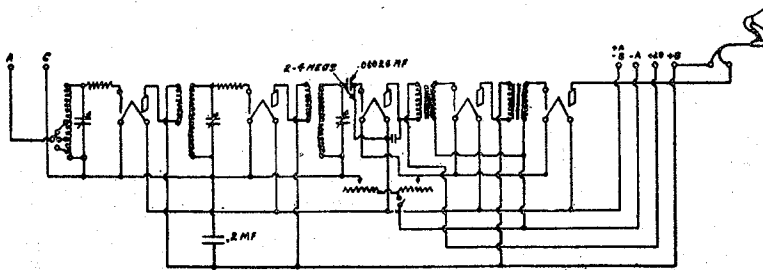
ATWATER KENT MFG. CO.



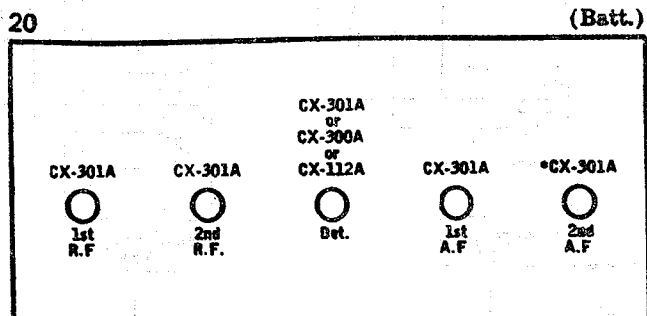
MODEL 19 SET No. 4880.



MODEL 20 COMPACT SET No. 7570. WIRING DIAGRAM.



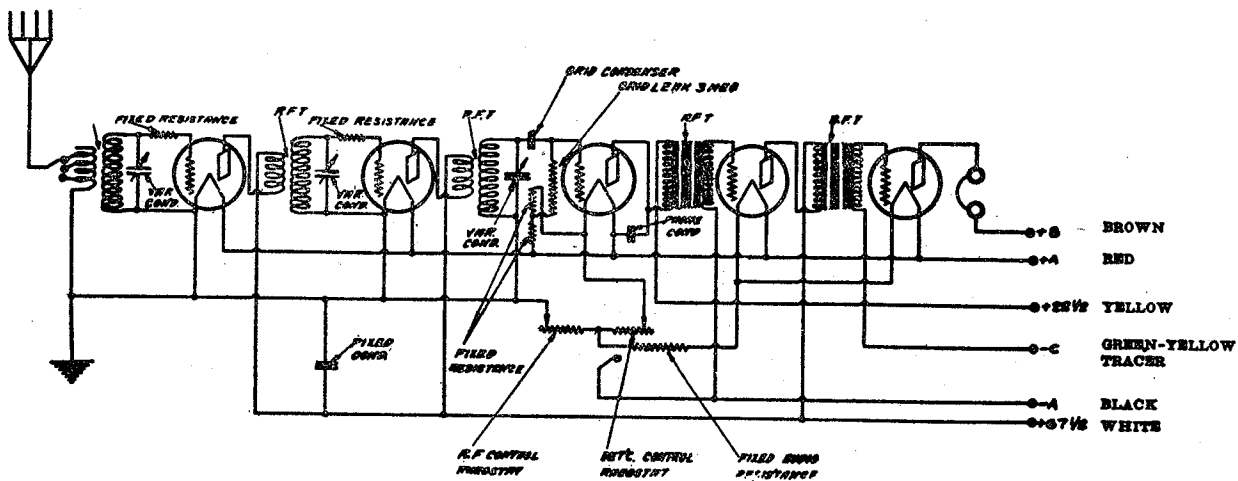
MODEL 20 SET No. 4640.



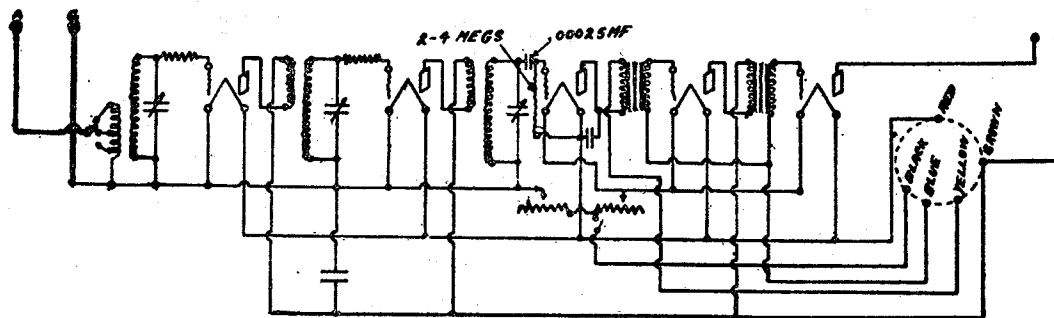
* This tube is a CX-371A in Model 20 compact.

MODRL 20 # 7960
 MODEL 21 # 7780

ATWATER KENT MFG. CO.

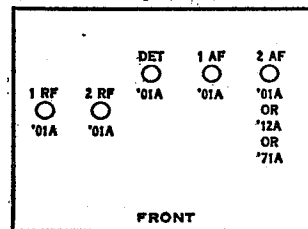


MODEL 20 COMPACT SET No. 7960. WIRING DIAGRAM.



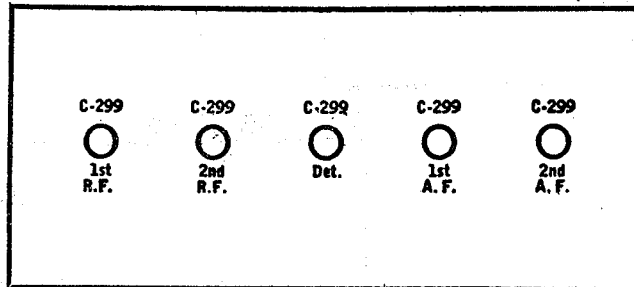
MODEL 21 DRY CELL SET No. 7780.

Model 20 Comp. (1925)



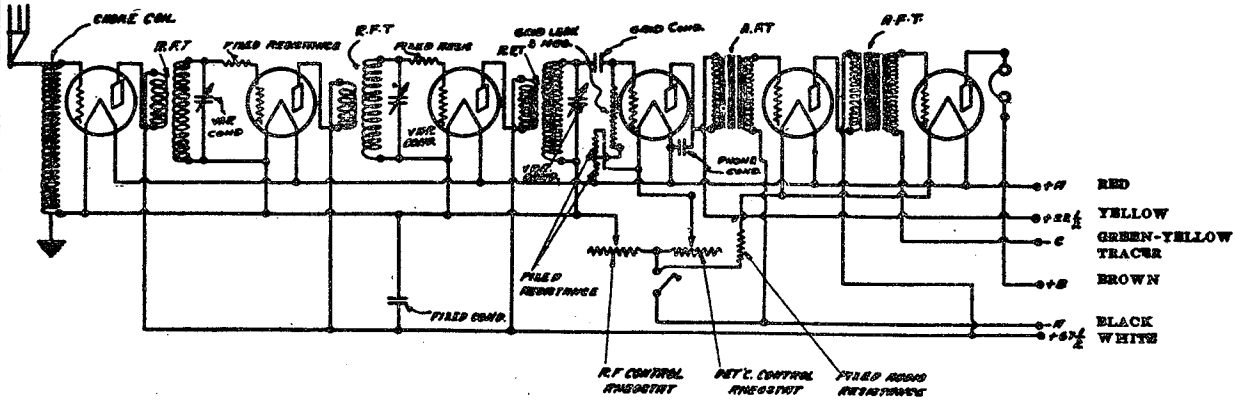
21

(Batt.)

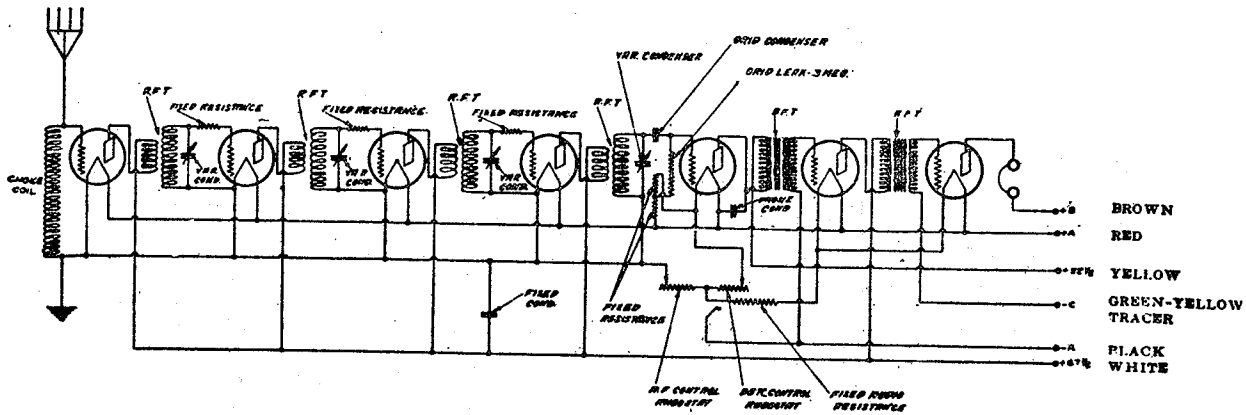


ATWATER KENT MFG. CO.

MODEL 30
MODEL 32
MODEL 35
MODEL 48



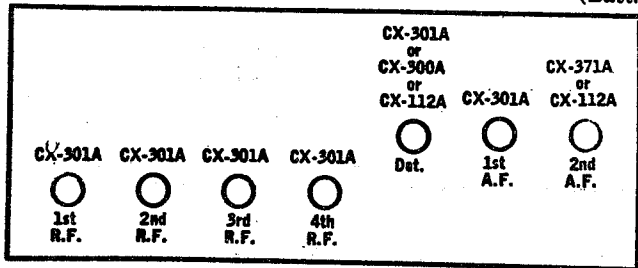
WIRING DIAGRAM OF MODELS 30, 35 AND 48. (In Model 35, one rheostat controls the three R.F. filaments and a fixed resistance is connected in series with the detector and two A.F. filaments.)



WIRING DIAGRAM OF MODEL 32.

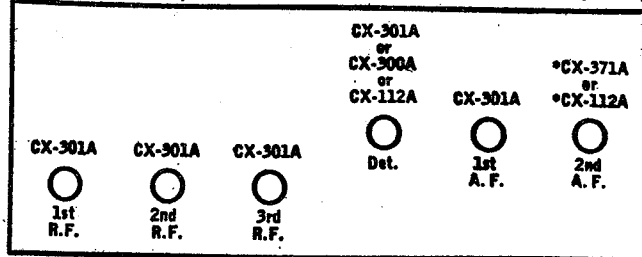
32

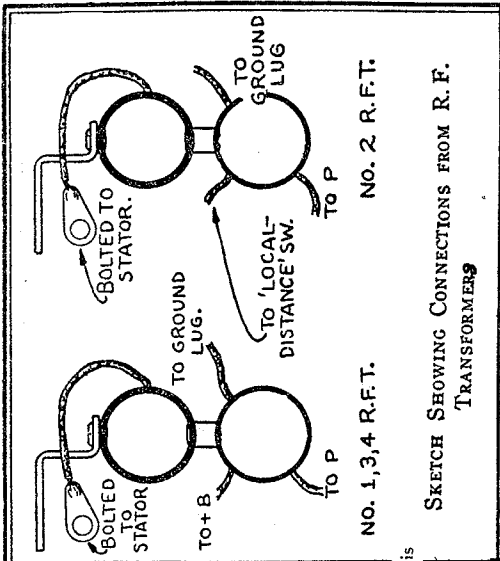
(Batt.)



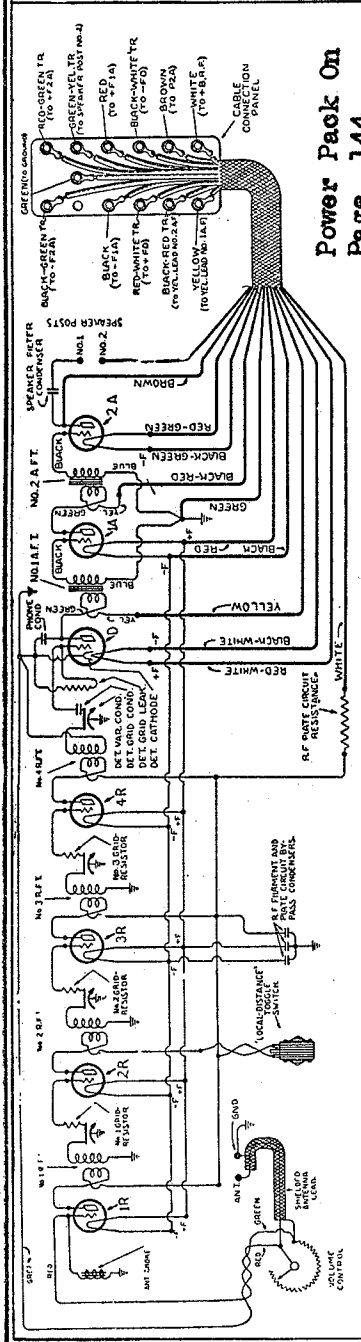
30, 33, 35, 48, 49

(Batt.)





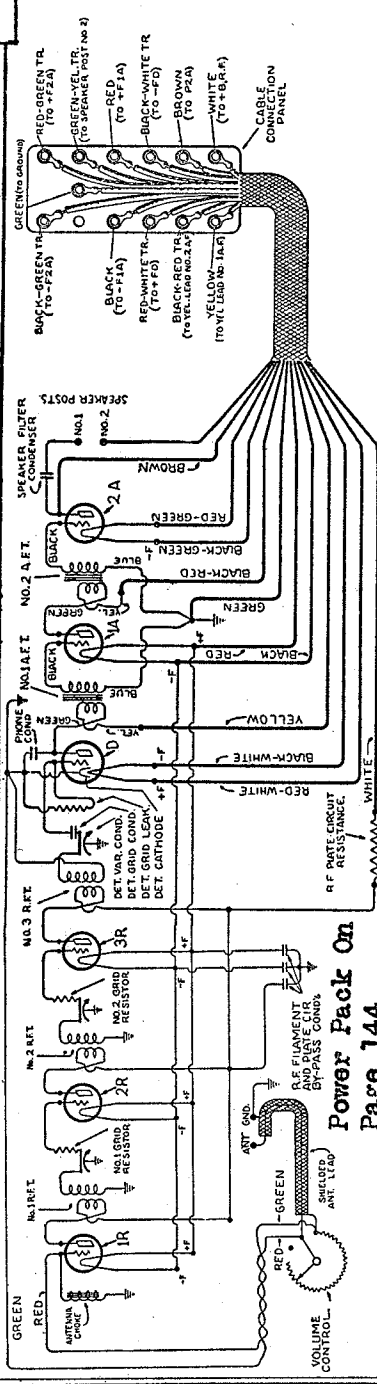
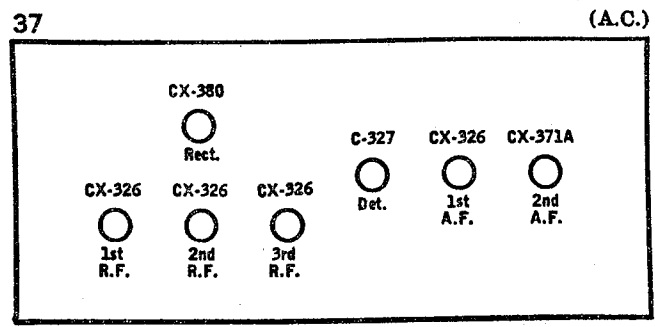
SKETCH SHOWING CONNECTIONS FROM R.F. TRANSFORMERS



WIRING DIAGRAM OF MODEL 38. A 2nd-A.F. filament-shunt resistor is used before Serial No. 1,752,000 and the green-yellow tracer cable lead is not used. Connections for this resistor are shown in dotted lines in the diagram on page 61. A schematic diagram of the volume control is shown in Fig. 78.

ATWATER KENT MFG. CO.

MODEL 37
MODEL 38
(A.C.)



WIRING DIAGRAM OF MODEL 37-F, 37-C. A 2nd-A.F. filament-shunt resistor is used before Serial No. 1,385,000, in which case speaker post No. 2 connects to the centre-tap of this resistor. The R.F. plate circuit resistor is used after Serial No. 1,385,000. In Model 37-C the on-off switch is connected to the two terminals on either side of the ground eyelet. A 2nd-A.F. filament shunt resistor is used in the chassis of all Model 37-C receivers.

ATWATER-KENT—Models 37-38
Line Voltage 115—On Early Models "B" and "C"
Voltages Are Lower Than Shown

TYPE NO. OF ORDER	TYPE OF TUBE	POSITION OF TUBE IN CHASSIS	RESIDUAL PLUS IN SOCKET OF SET		TUBE OUT		TUBE IN TESTER		PLATE TEST CHARGE	PLATE TEST CHARGE	
			VOLTS	RESISTANCE	VOLTS	RESISTANCE	VOLTS	RESISTANCE			
1	226	1st. R.F.	1.3	175	1.25	165	10	—	4.8	8.4	3.6
2	226	2nd. R.F.	1.3	175	1.25	165	10	—	4.8	8.4	3.6
3	226	3rd. R.F.	1.3	175	1.25	165	10	—	4.8	8.4	3.6
4	227	Detector	2.25	80	2.0	22.5	—	—	2.2	2.2	0.0
5	226	1st. A.F.	1.3	175	1.25	165	10	—	4.8	8.4	3.6
6	171	2nd. A.F.	4.6	192	4.6	160	36	—	18.0	19.5	1.5
7	230	Rectifier	—	—	—	—	—	—	—	—	—
8											
9											
10											

MODEL 37
Power Pack
Early and Late
Data
Schematic

ATWATER KENT MFG. CO.

RESISTORS	Early	Late
Detector plate	100000 ohms #8919 Green paint	65000 ohms # 15592 1 watt black or bl. and gr.
1st a-f plate	12500 ohms #15941 red	12500 ohms # 15941 red or purple and yellow or red.
R-f and 1st a-f bias	1100 ohms # 9691 elliptical	625 ohms # 13128 elliptical
2nd a-f bias	1750 ohms # 9692 elliptical	2200 ohms # 13289 elliptical
Filament shunt	20 ohms # 9434	20 ohms # 9434 flat, wire
Speaker choke	500 ohms	500 ohms
Filter chokes	1600 ohms total	1600 ohms total
CONDENSERS	See schematic	See Schematic. Condenser unit is # 13315. Also houses transformer.

Special Note.

A 1. mfd condenser is also contained in the transformer-condenser housing but this condenser is not connected in the model 37 power pack.

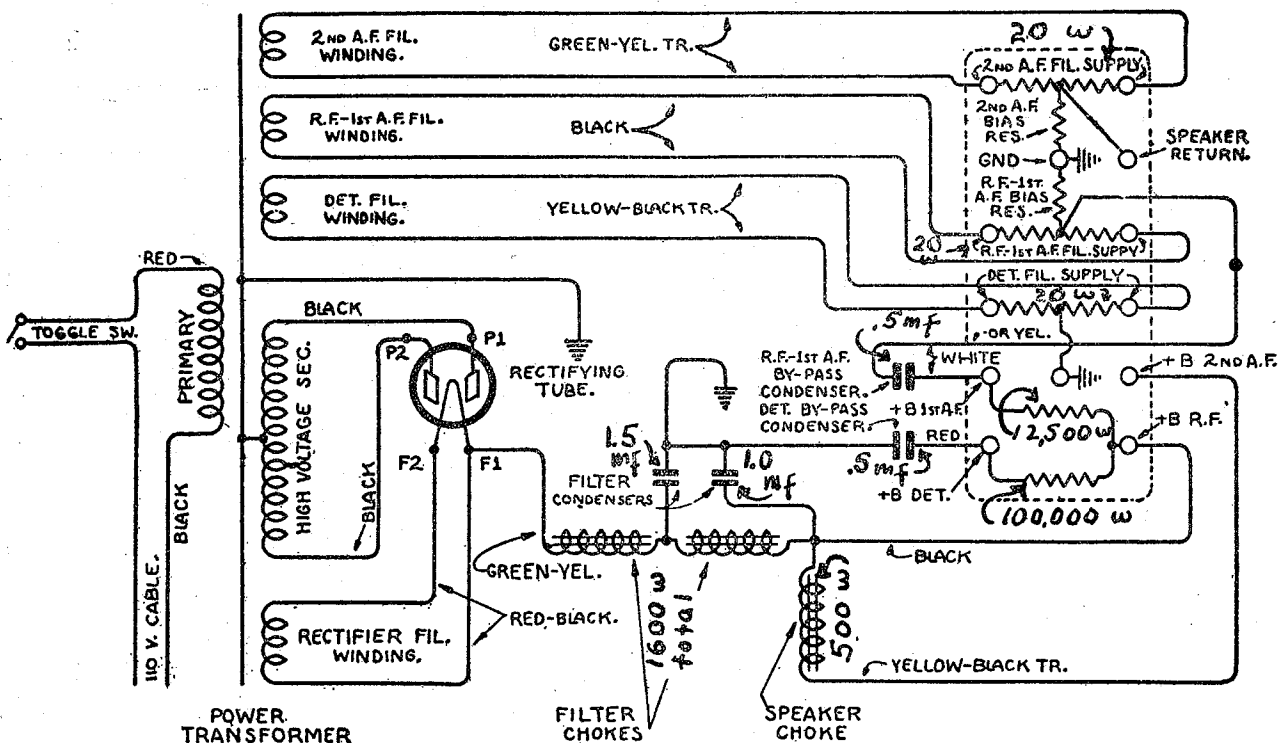


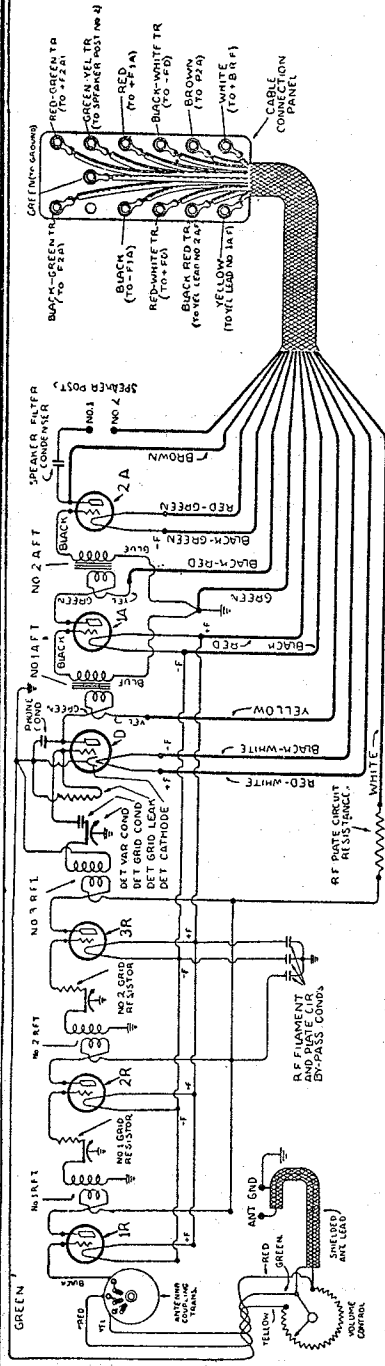
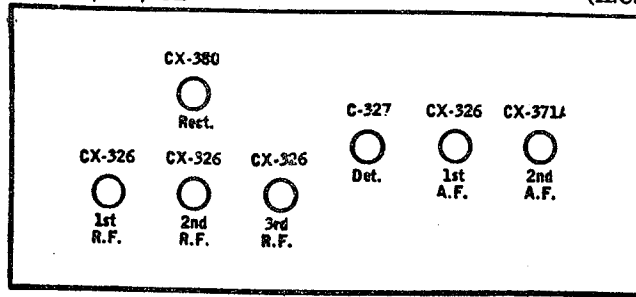
DIAGRAM OF POWER UNIT IN MODELS 37 AND 38

ATWATER KENT MFG. CO.

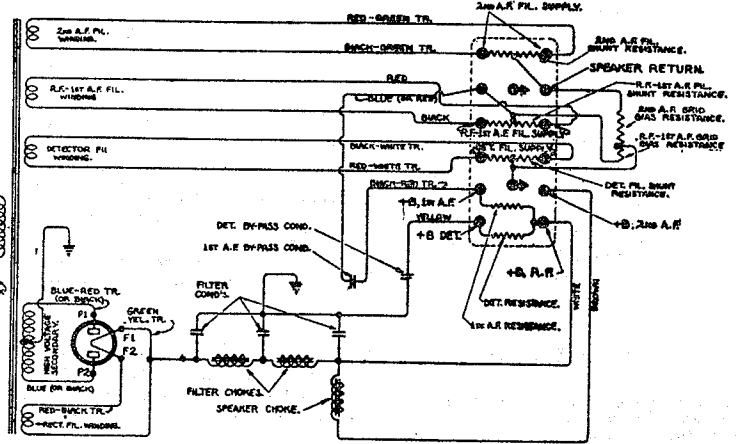
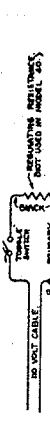
MODEL 40
MODEL 42
MODEL 52

40, 42, 52

(A.C.)



Model 52 does not have the shielded antenna lead, but is provided with two twenty-foot leads which are connected to the volume control, black for antenna and black-green tracer for ground. Model 56 and 57 have antenna and ground posts at the bottom of the cabinet.



SCHEMATIC DIAGRAM OF POWER UNIT IN MODELS 40, 42, 44, AND 52. NOTE THAT COLORS AS NOW STANDARDIZED CORRESPOND WITH THE COLORS OF SET-CABLE LEADS.

ATWATER-KENT—Model 40
Line Voltage 115

TUBE NO. IN ORDER	TYPE OF TUBE	POSITION OF TUBE (1ST R.F., DET., ETC.)	READINGS PLUG IN SOCKET OF SET									
			TUBE OUT					TUBE IN TESTER				
			A VOLTS	B VOLTS	A VOLTS	B VOLTS	C VOLTS	CATHODE VOLTS	NORMAL PLATE S.A. TEST	PLATE S.A. TEST	PLATE S.A. CHARGE	
226	1st. R.F.	1.3	145	1.25	138	10	-	4.8	8.4	3.6		
226	2nd. R.F.	1.3	145	1.25	138	10	-	4.8	8.4	3.6		
226	3rd. R.F.	1.3	145	1.25	138	10	-	4.8	8.0	3.6		
227	Detector	2.25	157	2.0	40	-	-	3.2	2.2	0.0		
226	1st. A.F.	1.3	172	1.25	130	8	-	5.0	7.6	3.8		
171A	2nd. A.F.	4.2	210	4.1	148	32	-	14.4	15.4	1.0		
280	Rectifier	-	-	4.5	-	-	-	16.5	-	-		

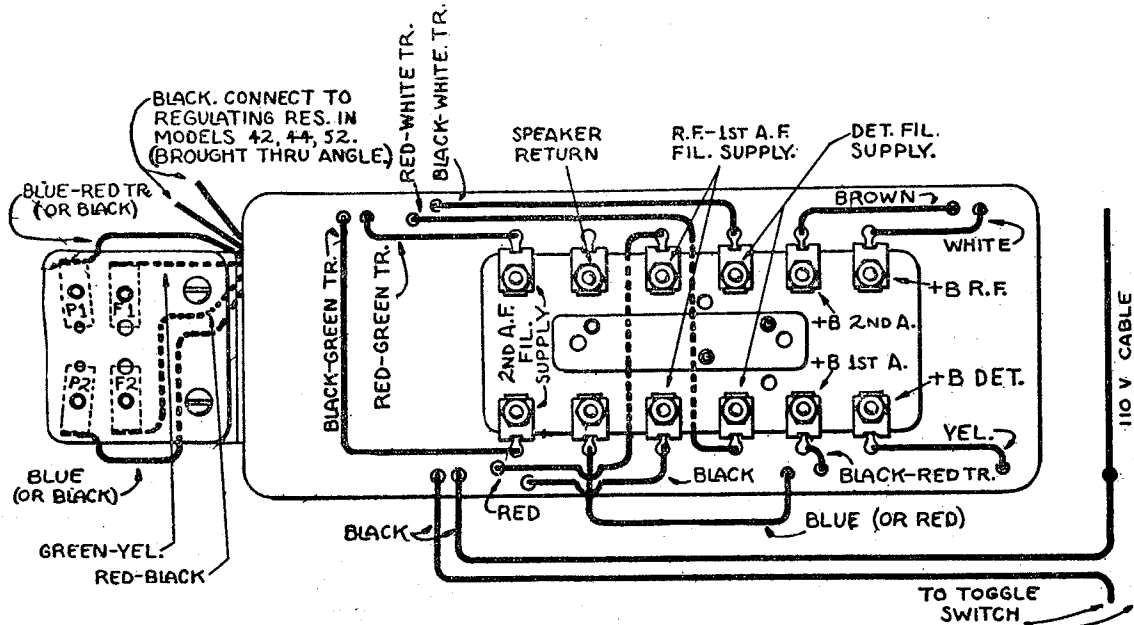
ATWATER-KENT—Models 42-44-52-56
Line Voltage 115—4th R. F.—Tube in Model 44 Only

TUBE NO. IN ORDER	TYPE OF TUBE	POSITION OF TUBE (1ST R.F., DET., ETC.)	READINGS PLUG IN SOCKET OF SET									
			TUBE OUT					TUBE IN TESTER				
			A VOLTS	B VOLTS	A VOLTS	B VOLTS	C VOLTS	CATHODE VOLTS	NORMAL PLATE S.A. TEST	PLATE S.A. TEST	PLATE S.A. CHARGE	
226	1st. R.F.	1.55	164	1.4	152	12	-	5.4	9.1	3.7		
226	2nd. R.F.	1.55	164	1.4	152	12	-	5.7	9.2	3.6		
226	3rd. R.F.	1.5	156	1.4	152	11.5	-	5.4	9.1	3.7		
227	Det.	2.25	174	2.15	38	0	-	2.2	2.4	0.0		
226	1st. A.F.	1.5	192	1.4	150	10.5	-	5.0	8.7	3.7		
171A	2nd. A.F.	4.7	232	4.5	162	35	-	15.0	16.0	1.0		
280	Rectifier	-	-	4.8	-	-	-	18.0	-	-		

MODEL 40,42,44,52
 Power Unit Layout
 MODEL 40,45
 2nd Type Power Unit

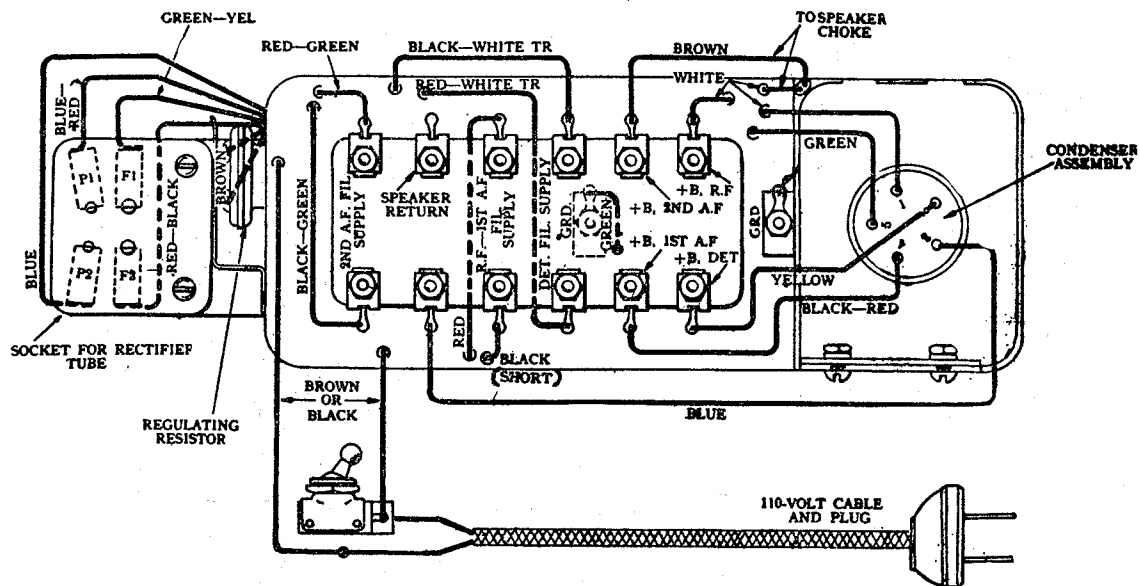
ATWATER KENT MFG. CO.

Schematic



POWER UNIT IN MODELS 40, 42, 44 AND 52, SHOWING CONNECTIONS FROM SEALED CONTAINER TO PANEL ASSEMBLY, RECTIFIER SOCKET AND REGULATING RESISTANCE

This view shows the approximate position of leads from sealed container. In Models 42, 44 and 52, a hole is cut in the rectifier-socket mounting angle and the two black leads are brought up through the hole and connect to the regulating resistance, which is mounted upright at the left-hand end of the sealed container.



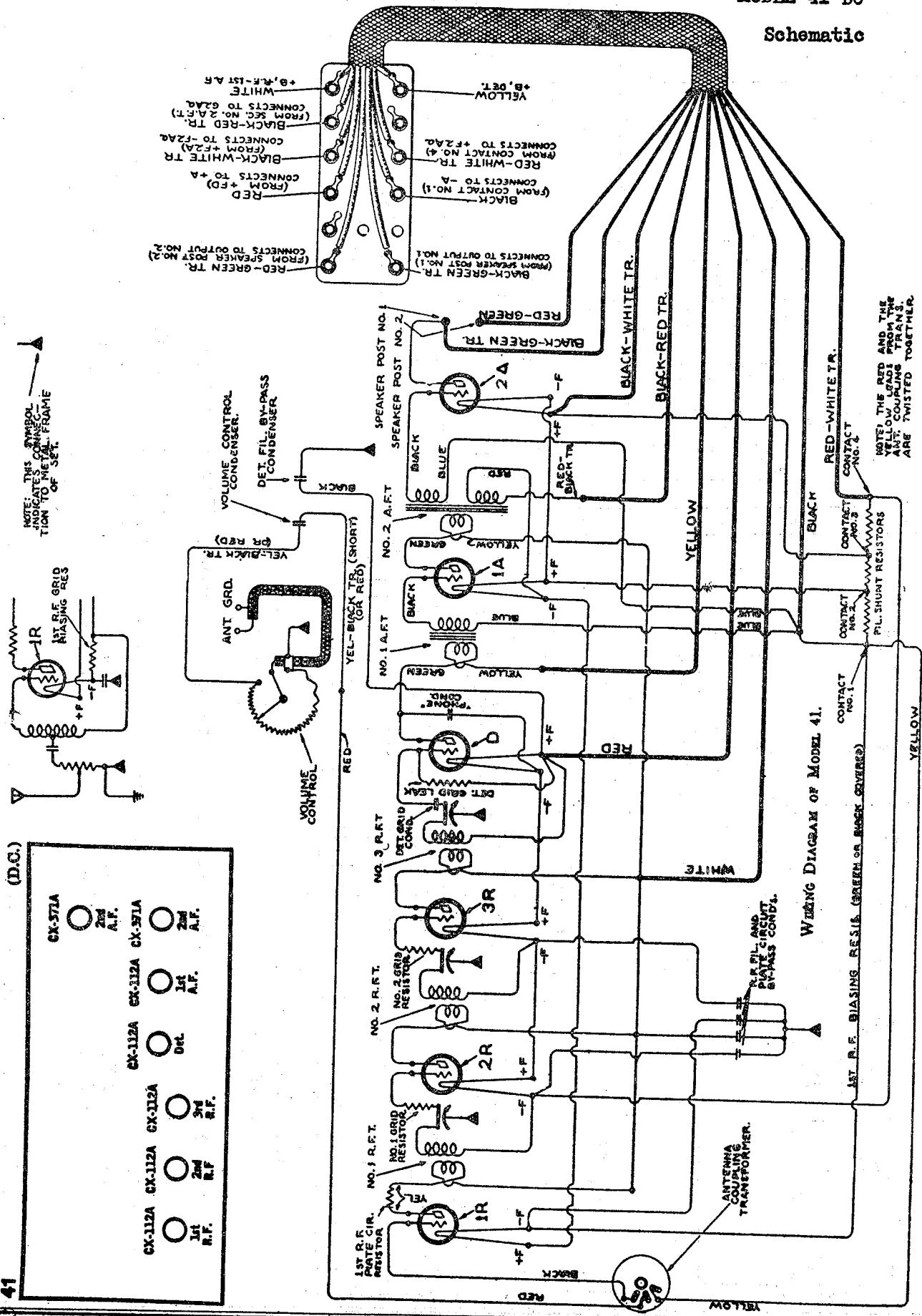
VIEW SHOWING CONNECTIONS IN 2ND TYPE OF POWER UNIT FOR MODELS 40 AND 45.

This view shows the panel assembly moved to left of normal position.
 The regulating resistor is not used in these models.

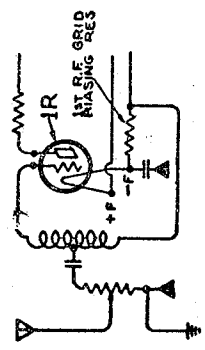
ATWATER KENT MFG. CO.

MODEL 41 DC

Schematic



NOTE: THIS SYMBOL INDICATES CONNECTION TO METAL FRAME OF SET.



- (D.C.)
- | | | | | | | | | | | | | |
|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-------------|----|----|----|----|
| 1st R.F. R.T. NO. 1 | 1st R.F. R.T. NO. 2 | 1st R.F. R.T. NO. 3 | 2nd R.F. R.T. NO. 2 | 3rd R.F. R.T. NO. 3 | DET. GRID COND. NO. 2 | DET. GRID COND. NO. 3 | DET. GRID COND. NO. 4 | PHONE COND. | 1A | 2R | 3R | IR |
| 1st R.F. R.T. NO. 1 | 1st R.F. R.T. NO. 2 | 1st R.F. R.T. NO. 3 | 2nd R.F. R.T. NO. 2 | 3rd R.F. R.T. NO. 3 | DET. GRID COND. NO. 2 | DET. GRID COND. NO. 3 | DET. GRID COND. NO. 4 | PHONE COND. | 1A | 2R | 3R | IR |

NOTE: THE RED AND THE YELLOW LEADS FROM THE ANT. COUPLING TRANS. ARE TWISTED TOGETHER.

WIRING DIAGRAM OF MODEL 41.

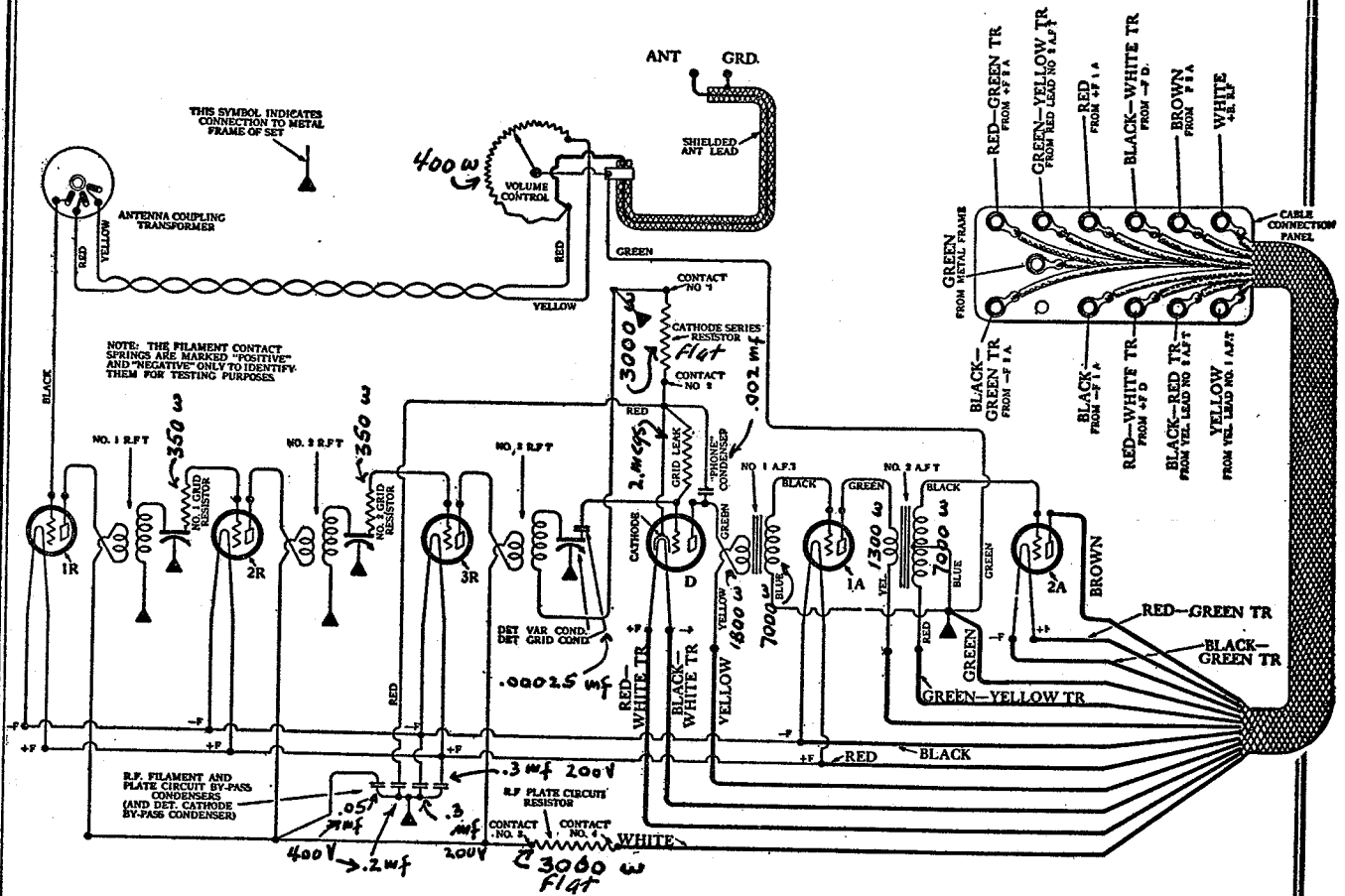
1ST R.F. BIASING RES. (GREEN OR BLACK COVERS)

YELLOW

ATWATER KENT MFG. CO.

MODEL 43 Receiver

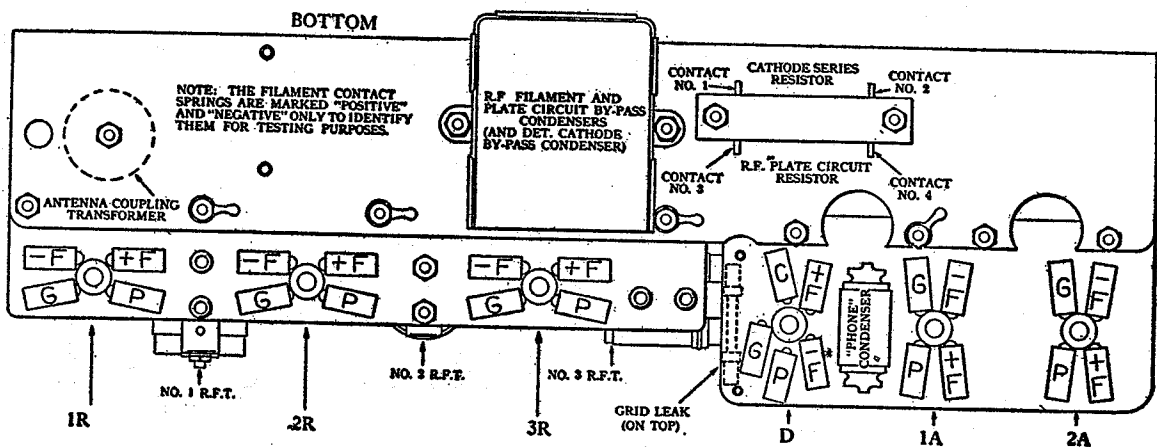
Schematic



WIRING DIAGRAM OF MODEL 43 SET.

The +B, 1st A.F. cable lead is black with a red tracer.

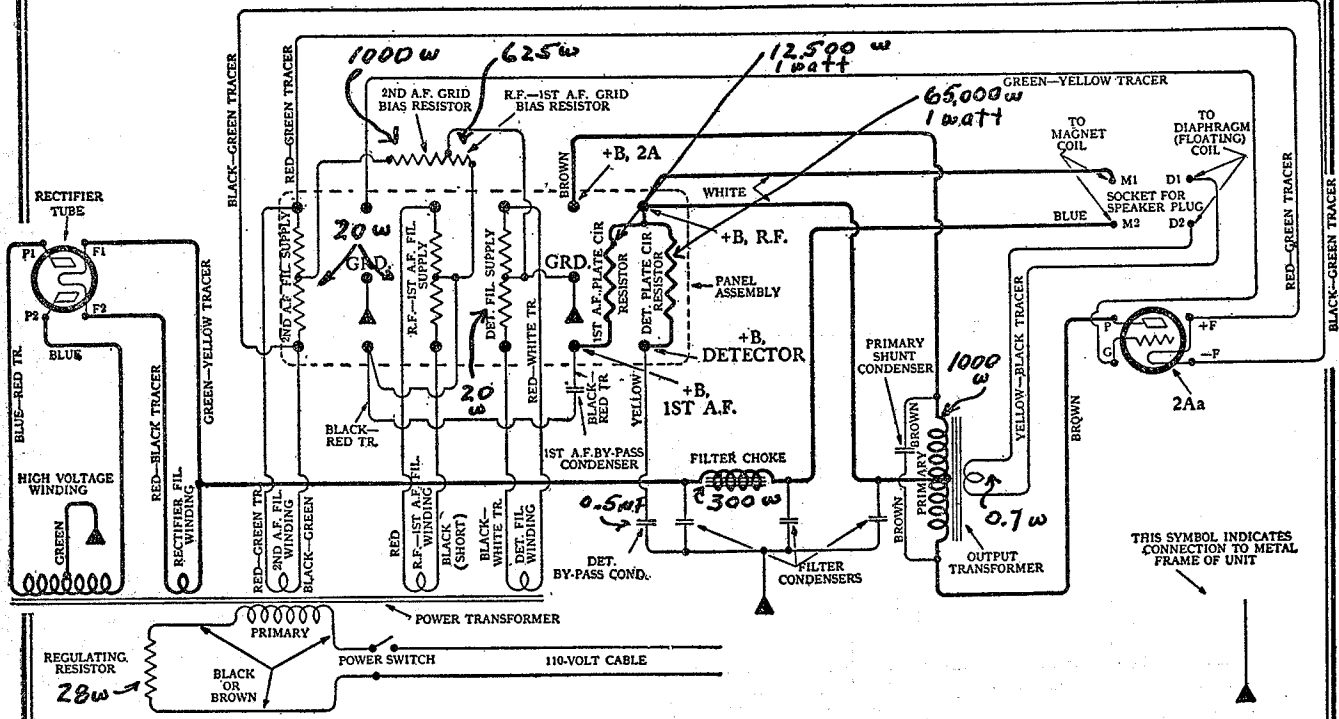
Wiring diagram of Model 43 power pack is shown on 152



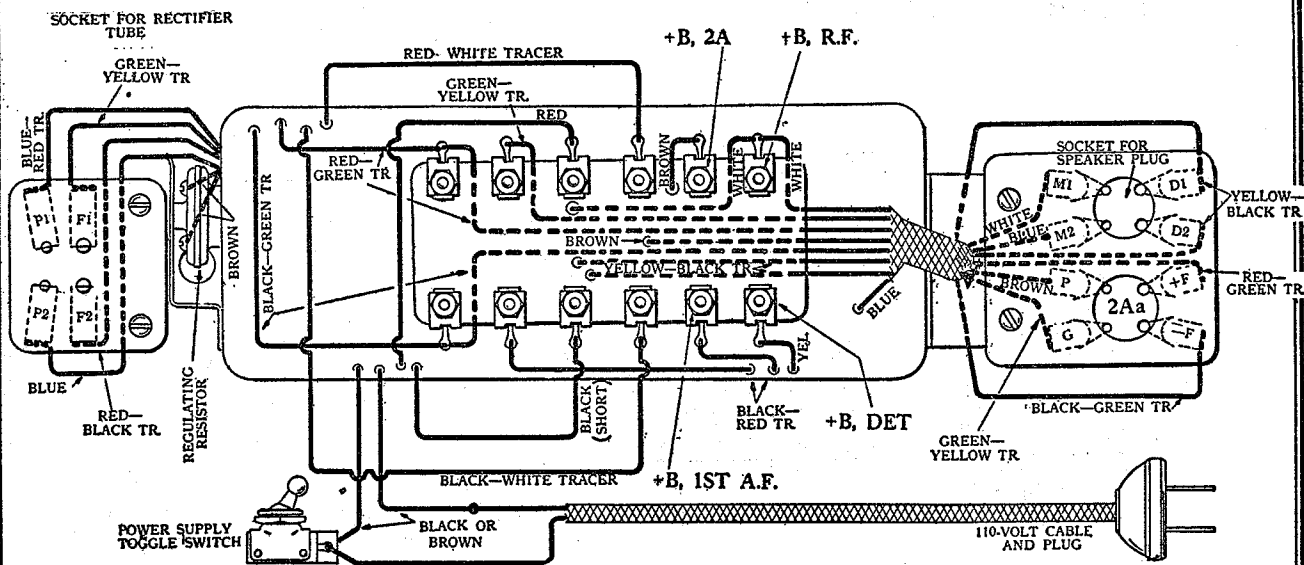
TEST CHART FOR MODEL 43.

MODEL 43
Power Pack
Schematic

ATWATER KENT MFG. CO.



WIRING DIAGRAM OF POWER UNIT IN MODEL 43.



SHOWING CONNECTIONS AND APPROXIMATE POSITION OF LEADS FROM SEALED CONTAINER IN MODEL 43 POWER UNIT.

early type of power unit for Model 43, two brown leads from the primary-shunt condenser connect to the +B, 2A terminal and to the brown P2Aa lead respectively. In later models these connections are made internally.

MODEL 44 and 45

ATWATER KENT MFG. CO.

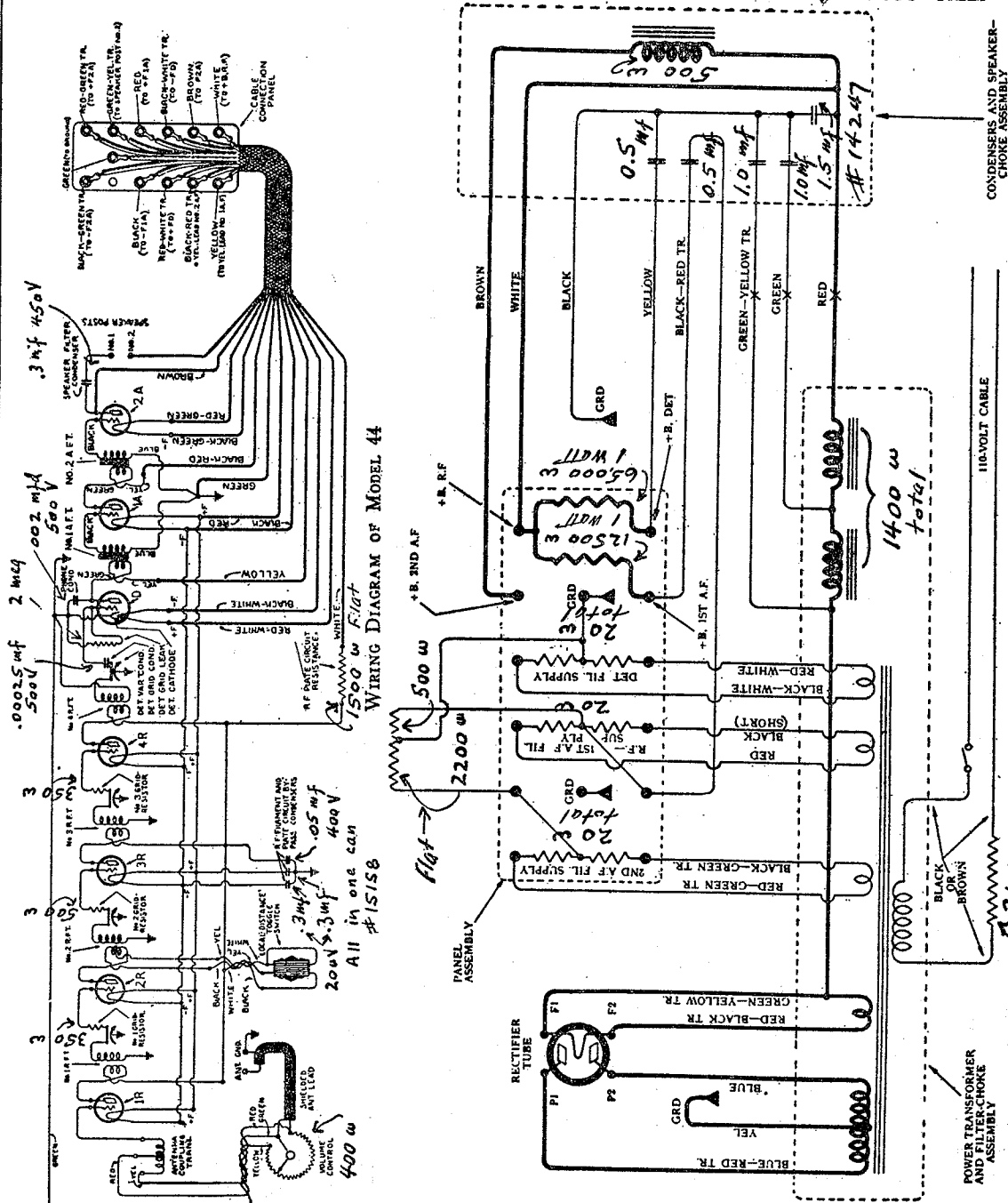
SPECIAL NOTE.

1st type power unit for Model 44 is shown on page 145. Second type power unit for Model 45 is shown on page 148.

TRANSFORMERS IN MODELS 44 and 45

1st a-f primary 1000 ohms # 8060
1st a-f secondary 7000 ohms

2nd a-f primary 1700 ohms # 7661
2nd a-f secondary 3250 ohms



WIRING DIAGRAM OF MODEL 44

WIRING DIAGRAM OF 2ND TYPE OF POWER UNIT FOR MODEL 44

MODEL 50

ATWATER KENT MFG. CO.

MODEL 50

Model 50

CONDENSERS

Detector grid	.00025 mfd	# 8593	500 volts
Detector phone	.002 mfd	# 8590	500 volts
Plate bypass	.3 mfd	# 14902	450 volts

RESISTORS

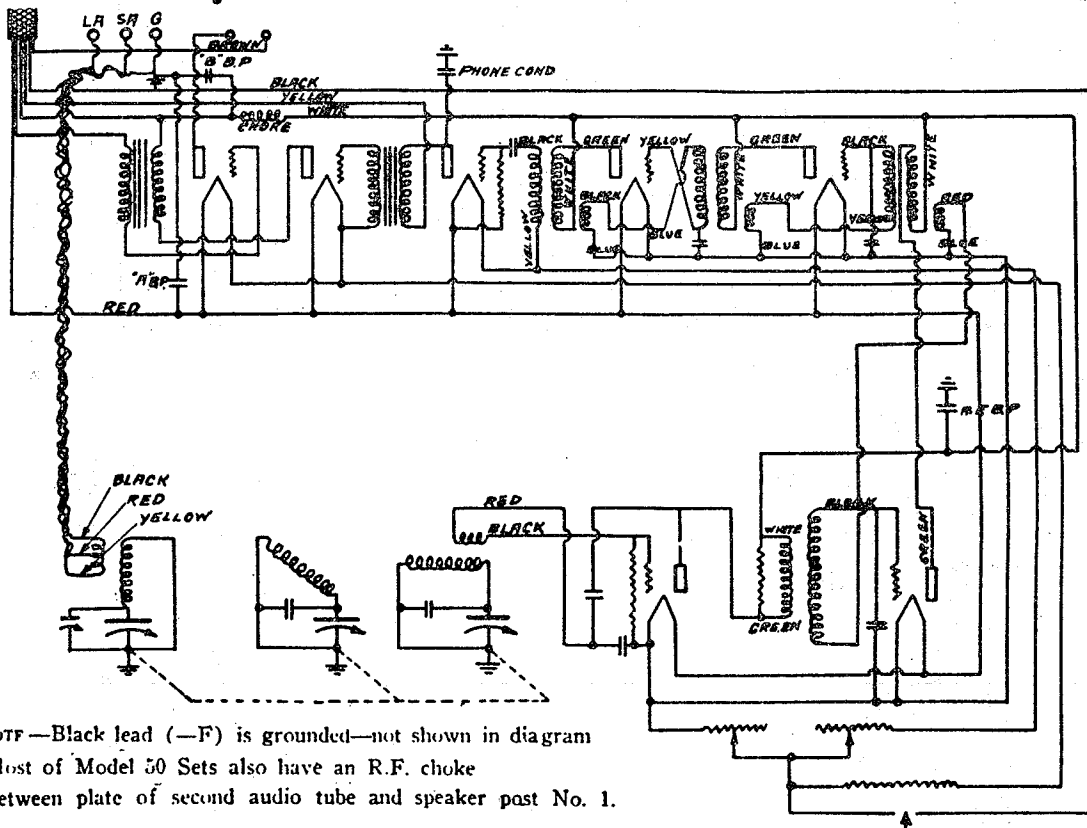
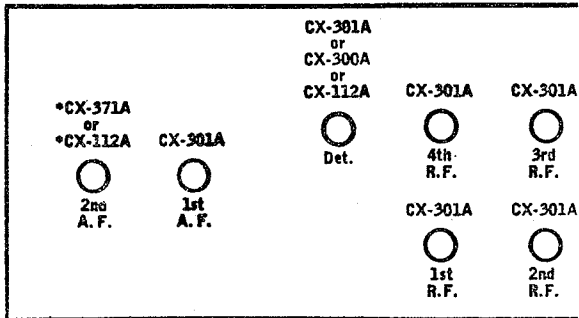
Detector grid leak	2.0 megs	# 15892 (8195)	1 watt
1st r-f plate	12500 ohms	# 8796	yellow glass
A-f filament	1.5 ohms	# 8627	black covered, flexible
Detector rheostat	20 ohms	# 8310	
R-f rheostat	5 ohms	# 8599	
R-f grid leak	2.0 megs	# 15892 (8195)	1 watt

CHOKES

A-f plate	35 ohms	# 8332
-----------	---------	--------

TRANSFORMERS

1st a-f primary	1000 ohms	# 8650
1st a-f secondary	7000 ohms	
2nd a-f primary	1400 ohms	# 8940
2nd a-f secondary	7000 ohms	



NOTE—Black lead (—F) is grounded—not shown in diagram
 Most of Model 50 Sets also have an R.F. choke
 between plate of second audio tube and speaker past No. 1.

WIRING DIAGRAM OF MODEL 50.

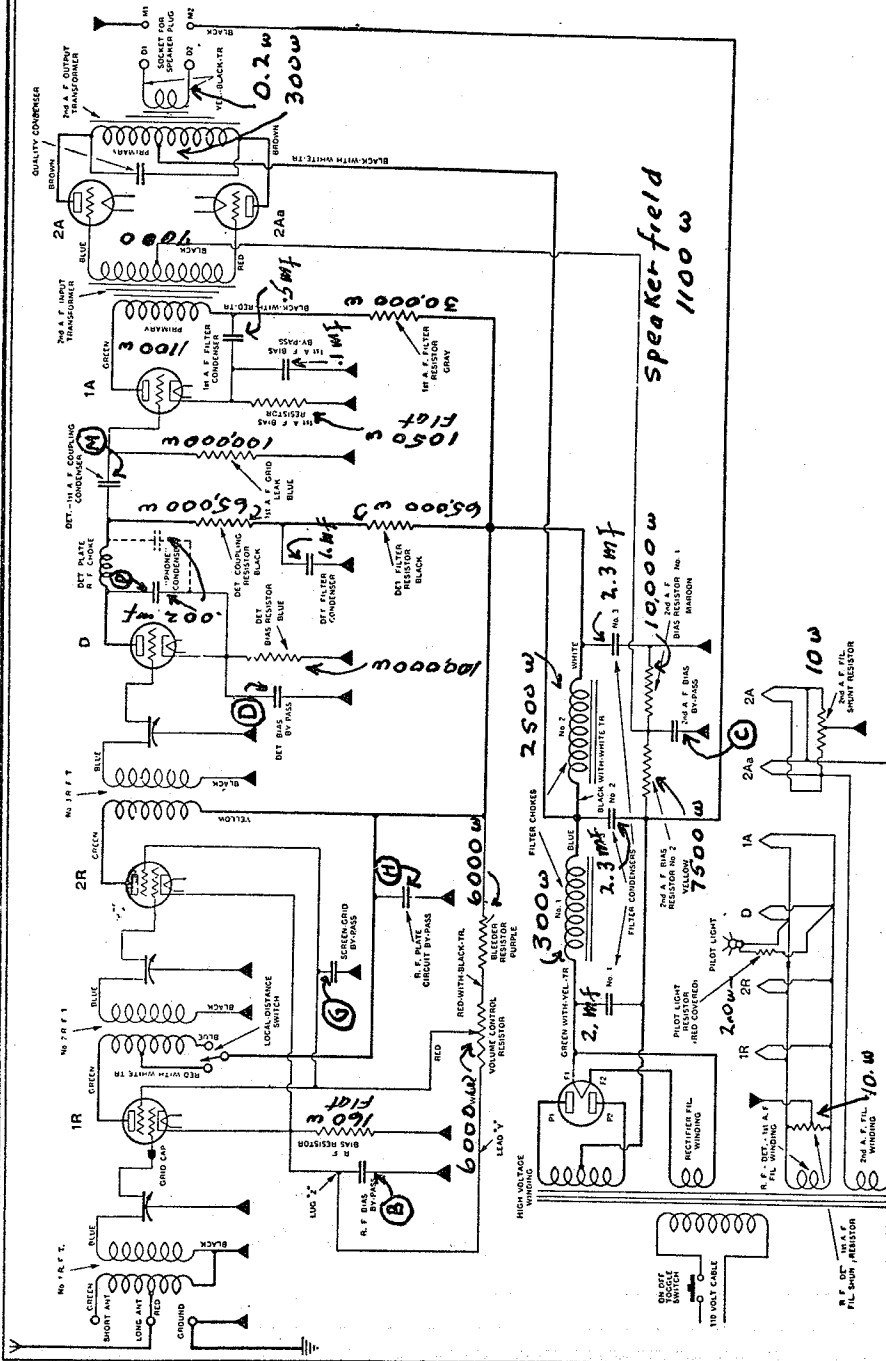
ATWATER KENT MFG. CO.

MODEL 55, 55-C
Early

VOLTAGE TABLE

Tube	Filament		Plate		Grid		Screen	
	Early	Late	Early	Late	Early	Late	Early	Late
R-F	2.2	2.2	160	160	2.8	3.7	78	96
Det	2.2	2.2	101	101	11.	11.		
1st A-F	2.2	2.2	64	69	1.8*	2.8*		
2nd A-F	2.2	2.2	213	230	39.	46		
Rec	4.5	4.5						

* Measured voltage, not operating voltage. Line voltage 110 V.



FILTER CONDENSER CONNECTIONS. See chassis
These numbers refer to the figures shown within the circle
representing the filter condenser can.

- 1st a-f filter .5 mfd
 - Detector filter 1. mfd
 - 1st a-f bias .5 mfd
 - Filter #1 2.0 mfd
 - Filter #2 2.3 mfd
 - Filter #3 2.3 mfd
- connected between centre stud and terminal (3)
 - connected between terminal (4) and can
 - connected between centre stud and can
 - connected between terminals (1) and (4)
 - connected between terminals (2) and (4)
 - connected between terminals (6) and can.

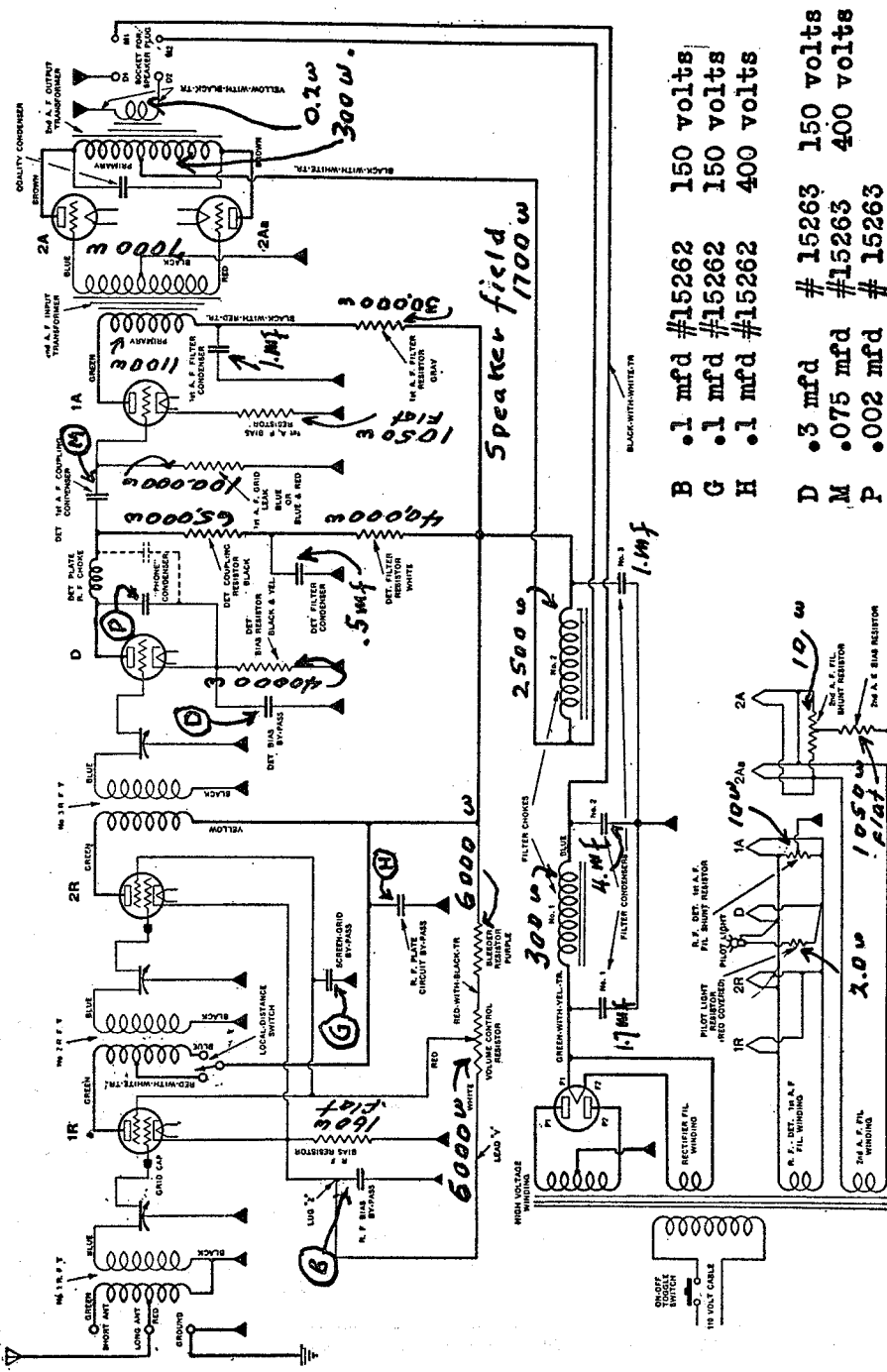
MODEL 55-F and 55-FC
Early

ATWATER KENT MFG. CO.

VOLTAGE TABLE

Tube	Filament	Plate	Grid	Screen
R-F	2.2	160	3.7	96
Det	2.2	101	11.	
1st A-F	2.2	69	2.8*	
2nd A-F	4.5	174	41.	
Rect.	4.5			

* Measured voltage, not operating voltage. Line voltage 110 V.

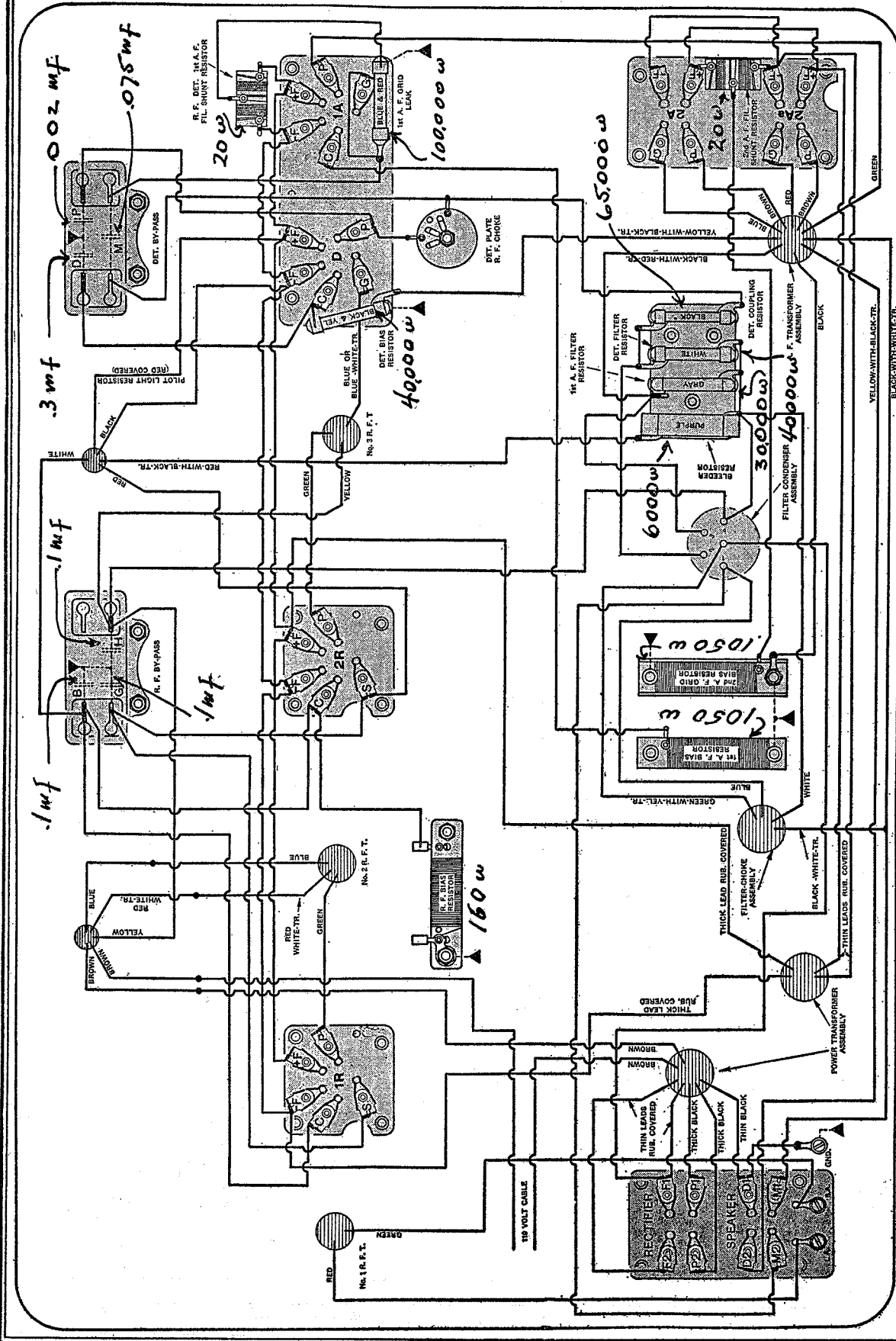


FILTER CONDENSER CONNECTIONS. (See chassis layout
The numbers and connections stated are marked upon the filter unit can and are
also shown on the chassis layout within the circle designating the filter con-
denser can.

- Filter #1 1.7 mfd connected between the center stud and can
- Filter #2 4.0 mfd connected between terminal (1) and can
- Filter #3 1.0 mfd connected between terminal (4) and can
- Detector filter .5 mfd connected between terminal (2) and can
- A-f filter 1.0 mfd connected between terminal (3) and can

DIAGRAM OF EARLY-TYPE MODEL
55-F AND 55-FC.

ATWATER KENT MFG. CO. MODEL 55-F and 55-FC Chassis Early



BOTTOM WIRING OF EARLY-TYPE MODEL 55-F AND 55-F-C.
Some of these sets had a combination resistor, No. 15274, which is superseded by two separate resistors, No. 16988 being used as $\frac{1}{2}$ A. F. bias resistor, and No. 17077 as filament shunt resistor.

ATWATER KENT MFG. CO.

MODEL 60 and 60-C

VOLTAGE DATA FOR MODELS 60 and 60-C (1st and 2nd Types)

Line voltage 110. Tube	Filament	120 volt line is Plate	10 percent higher. Grid	Screen
R-F (1st)	2.2	160	7.3	119 119
R-F (2nd-3rd)	2.2	160	3.7	83
Det.	2.2	101	11.	
A-F (1st)	2.2	69	1.8*	
A-F (2nd)	2.2	230	44.	
Rect.	4.5			

* Measured, not actual operating voltage.

VOLTAGE DATA FOR MODEL 60 and 60-C (3rd Type)

Line voltage 110. Tube	Filament	Volume control at minimum. Plate	Grid	Screen
R-F	2.3	170	16.5*	142
Det.	2.3	119	1.5	
A-F (1st)	2.3	73	1.9**	
A-B (2nd)	2.3	224	36.***	

* Local distance switch at distance

** Measured, not actual operating voltage.

*** If 2nd A-F bias resistor #1 is open, bias will be about 85 v.

Checking Sensitivity of Set

When checking the sensitivity of the set, it is necessary to use an oscillator, and a meter to indicate maximum output volume.

A local oscillator is necessary to ensure constancy of signal strength; signals from broadcast stations are not sufficiently constant for this work.

An output meter is necessary to ensure a reliable indication of output volume; the ear is not reliable enough for this purpose.

The oscillator feeds a weak signal into the receiver. The signal is amplified in the receiver and produces a reading on a meter which is connected to the output of the set. This meter indicates the strength of output volume. The reading on the output meter is greatest when all the tuned circuits

in the set are adjusted to the same frequency as the oscillator signal.

1. Oscillator.

The oscillator must provide modulated R. F. signals at four different frequencies in the broadcast range. *These four frequencies should correspond to dial settings of 5, 45, 65 and 95 on the dial of a 3rd type Model 60-C which has the original factory synchronism.*

Each of the four R. F. oscillators should have an adjustable pick-up so that the strength of each oscillator may be controlled independently of the other three.

2. Output Measuring Circuit.

The output measuring circuit is shown and described

Adjusting Trimmer Condensers

1. Connect the common pick-up lead from the four R. F. oscillators to one end of a No. 8112 condenser. Connect the other end of this condenser to the Long-Antenna post. Connect the oscillator container to the Ground 5. post.
2. Put plug "A" of the output measuring circuit in the speaker-plug socket on the set. Plug an F-4 type speaker in socket "B." Throw switch "D" to the right.
3. Put all tubes in the set; power switch on; volume control at maximum; local-distance switch at distance. Break away the sealing wax on the trimmer-condenser screws
4. Tune set exactly to 5 on dial. Reduce or increase the

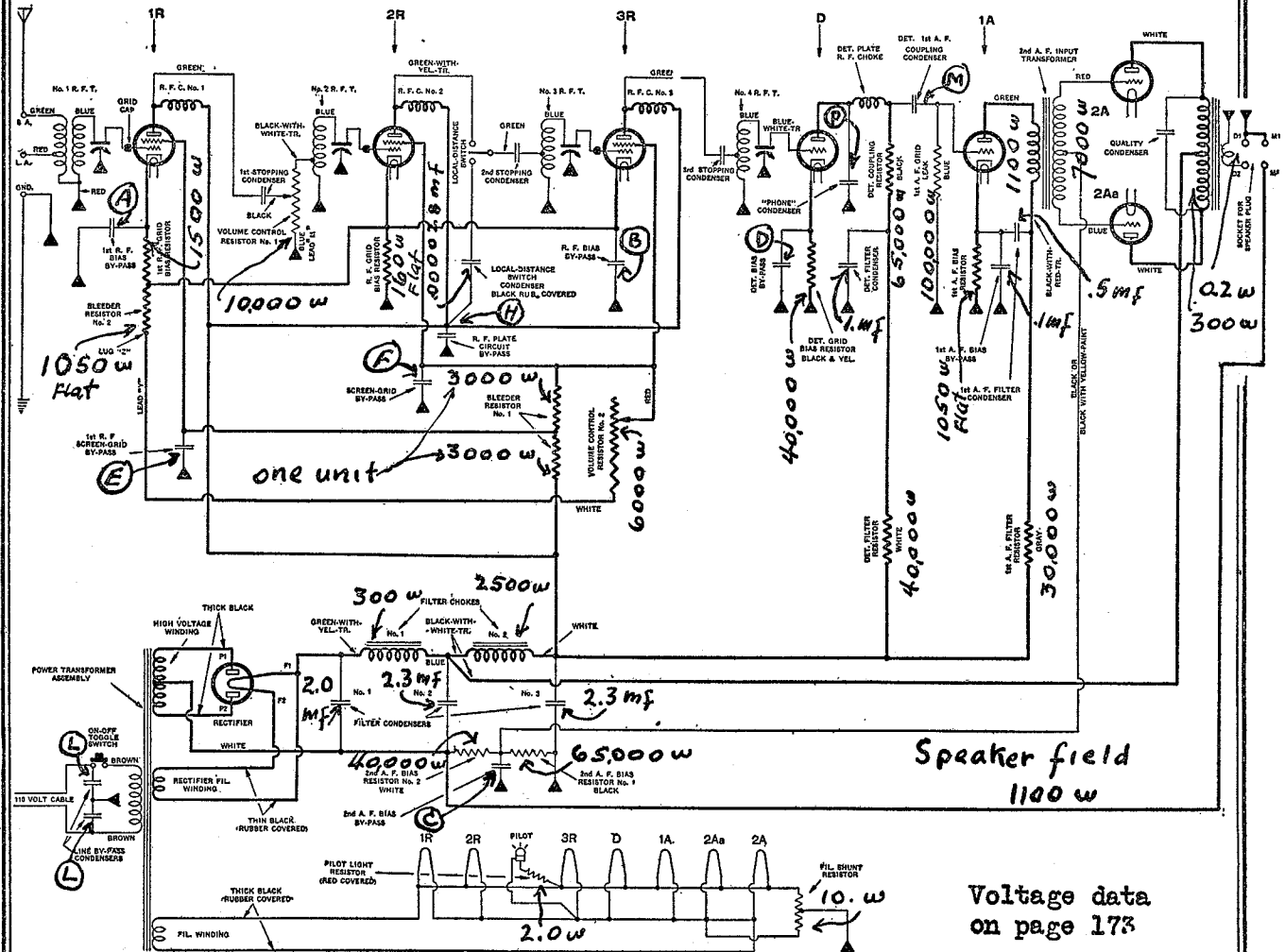
amount of pick-up from the 1st oscillator to secure a reading of about 20 on the output meter.

With a screw-driver, turn the pressure screw of the 4th trimmer condenser one way or the other, as necessary, to the point where the reading on the output meter is greatest. Repeat this process on the 3rd trimmer, then on the 2nd, and finally on the 1st. Reduce the pick-up from the 1st oscillator if necessary in order to keep the needle of the galvanometer near the centre of its scale.

This adjustment of the trimmer-condenser screws is termed the CORRECT POSITION.

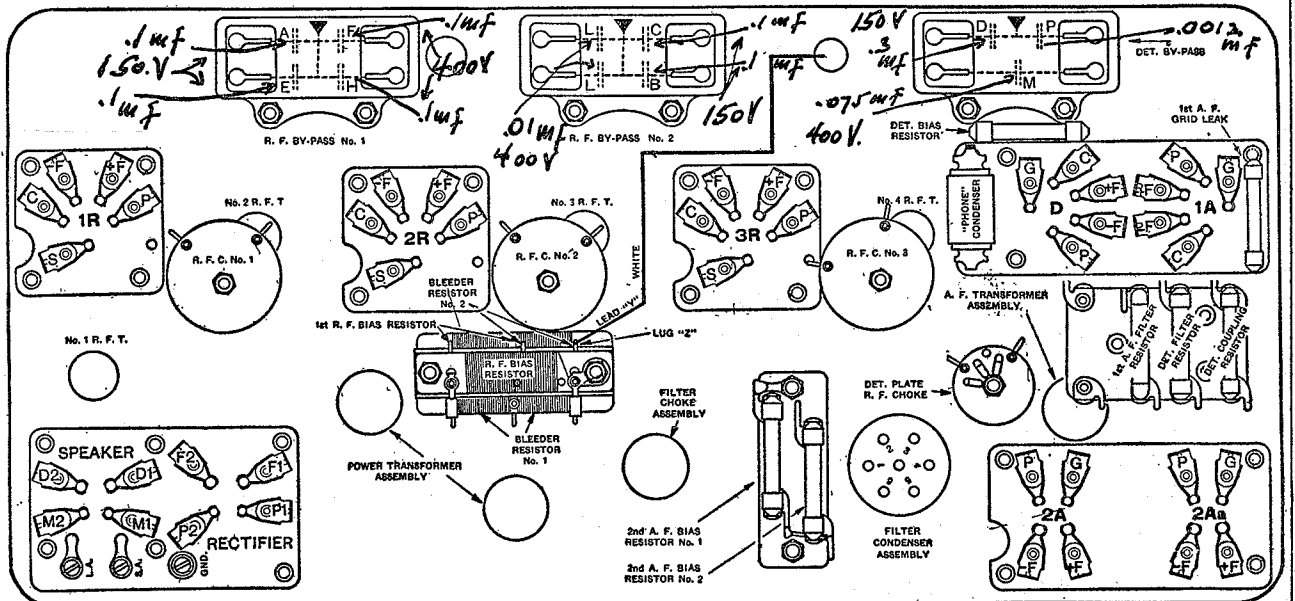
ATWATER KENT MFG. CO. MODEL 60 and 60-C

Late Schematic



CIRCUIT OF LATER MODEL 60 AND 60-C.

Voltage data on page 173

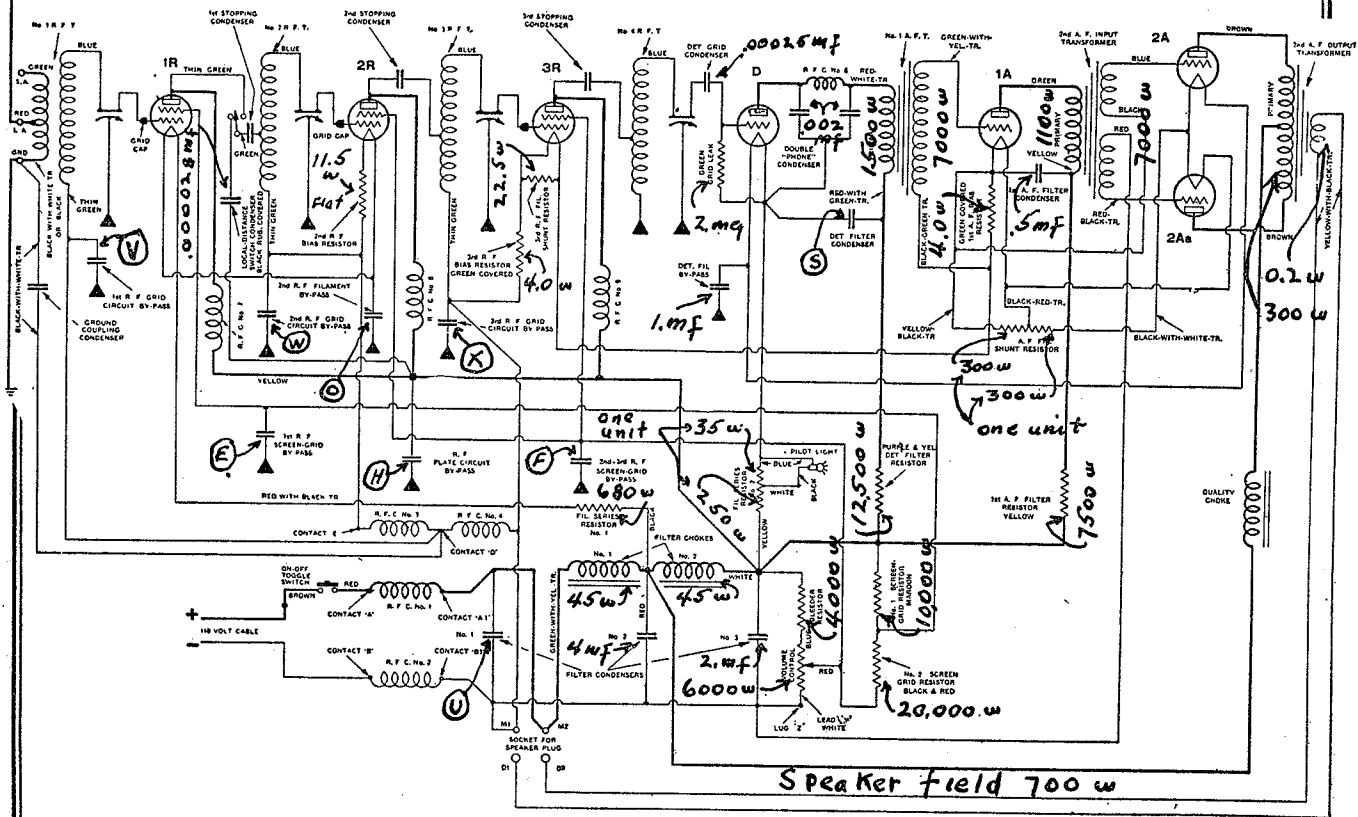


BOTTOM CHART OF LATER-TYPE MODEL 60 AND 60-C.

Voltage reference on page 1-24.

MODEL 61-61-C
Late Schematic

ATWATER KENT MFG. CO



SCHMATIC DIAGRAM OF LATER MODEL 61 AND 61-C (DIRECT CURRENT).

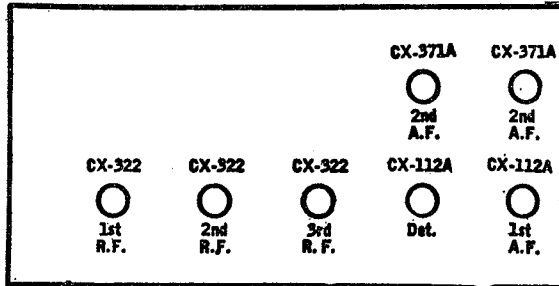
FILTER CONDENSER SPECIFICATIONS are shown on page 174.
BYPASS CONDENSER designations shown upon wiring diagram also appear upon chassis layout on page 177. For BYPASS CONDENSER data refer only to page 177 and not to page 174.

	R-F	Det.	1st A-F	2nd A-F
Fil.	2.9	4.6	4.6	4.6
Plate	78	32	50	80
Grid	4.6*		1.4	9
Screen	60**			

* This voltage applies only to the 1st R-F stage. The 2nd R-F bias voltage is 1.4 volts and the 3rd R-F bias voltage is 0.9 volts.

**The screen voltage quoted applies only to the third R-F tube. The other R-F tubes secure different values of screen voltage. R-F tube number 1 or rather the first R-F stage has 46 volts applied to its screen. Likewise the 2nd R-F stage has 46 volts applied to its screen.

The forementioned voltage measurements are made with the volume control adjusted to minimum.

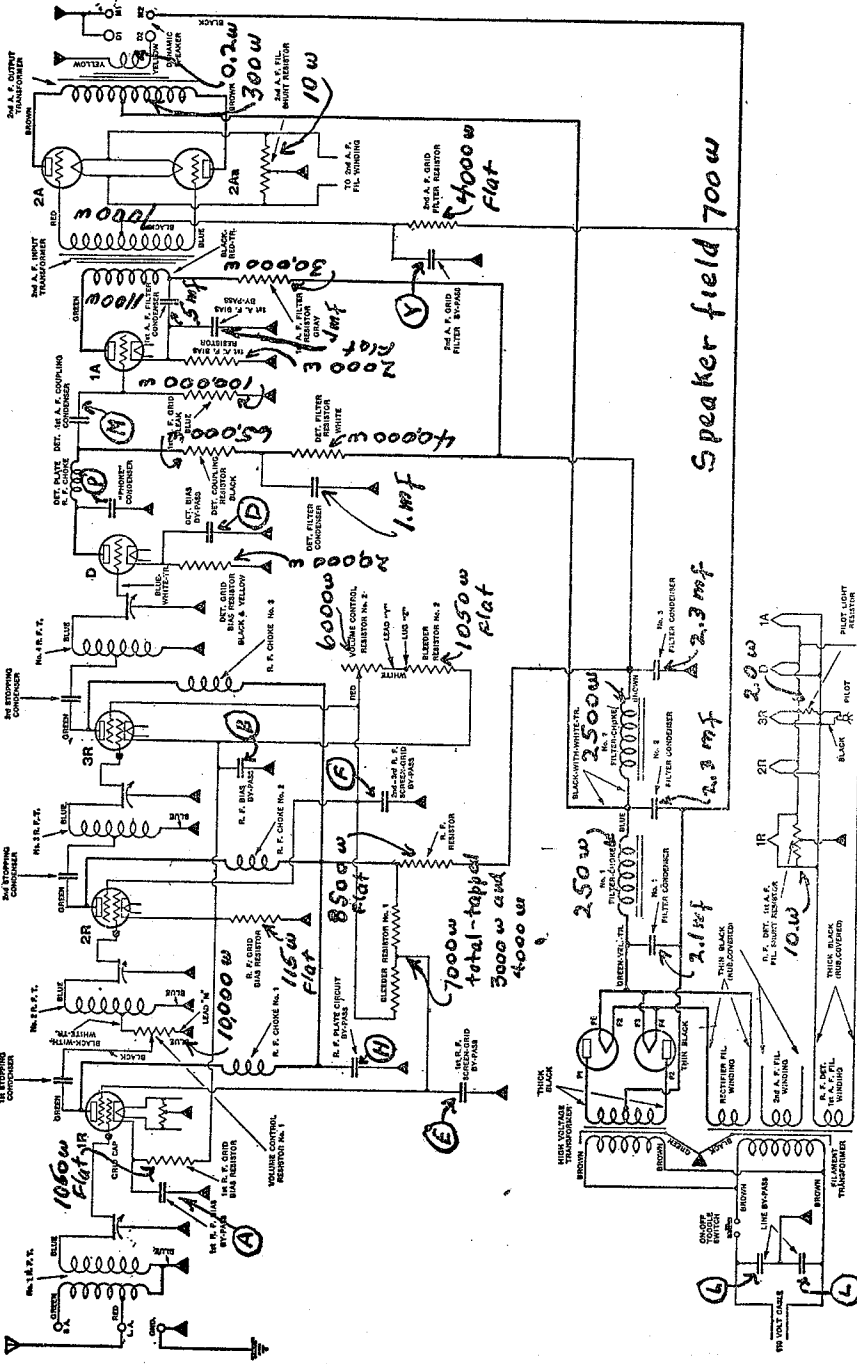


MODEL 66
Schematic
Data.

ATWATER KENT MFG. CO

FILTER CONDENSER CONNECTIONS. The following specifications should be used in conjunction with the schematic shown below and the chassis layout shown on the condenser can

- Filter #1 2.1 mfd connected between terminals (1) and (4)
- Filter #2 2.3 mfd connected between terminals (2) and (4)
- Filter #3 2.3 mfd connected between terminal (6) and can
- Detector filter 1.0 mfd connected between terminal (5) and can
- 1st a-f filter 0.5 mfd connected between center stud and can
- 1st a-f bias 0.1 mfd connected between center stud and (3)



In some early Model 66, volume control resistor No. 1 is connected across the R.F. choke coil in the plate circuit of the 1st-R.F. tube. The slider of this resistor is connected to a tap on No. 2 R.F.T. through a coupling condenser.

BYPASS CONDENSER VALUES. The letter designations given should be used in conjunction with the schematic wiring diagram above and the chassis layout

RF Bypass #1	A	.1 mfd	150 volts	F	.1 mfd	400 volts
RF Bypass #2	E	.1 mfd	150 volts	H	.1 mfd	400 volts
Detector Bypass	B	.1 mfd	150 volts	L	.01 mfd	400 volts
	Y	.1 mfd	150 volts	L	.01 mfd	400 volts
Detector Bypass	D	.3 mfd	150 volts	M	.075 mfd	400 volts
				P	.0012 mfd	400 volts

ATWATER KENT MFG. CO.

MODEL 67,67-C Early and Late Schematic

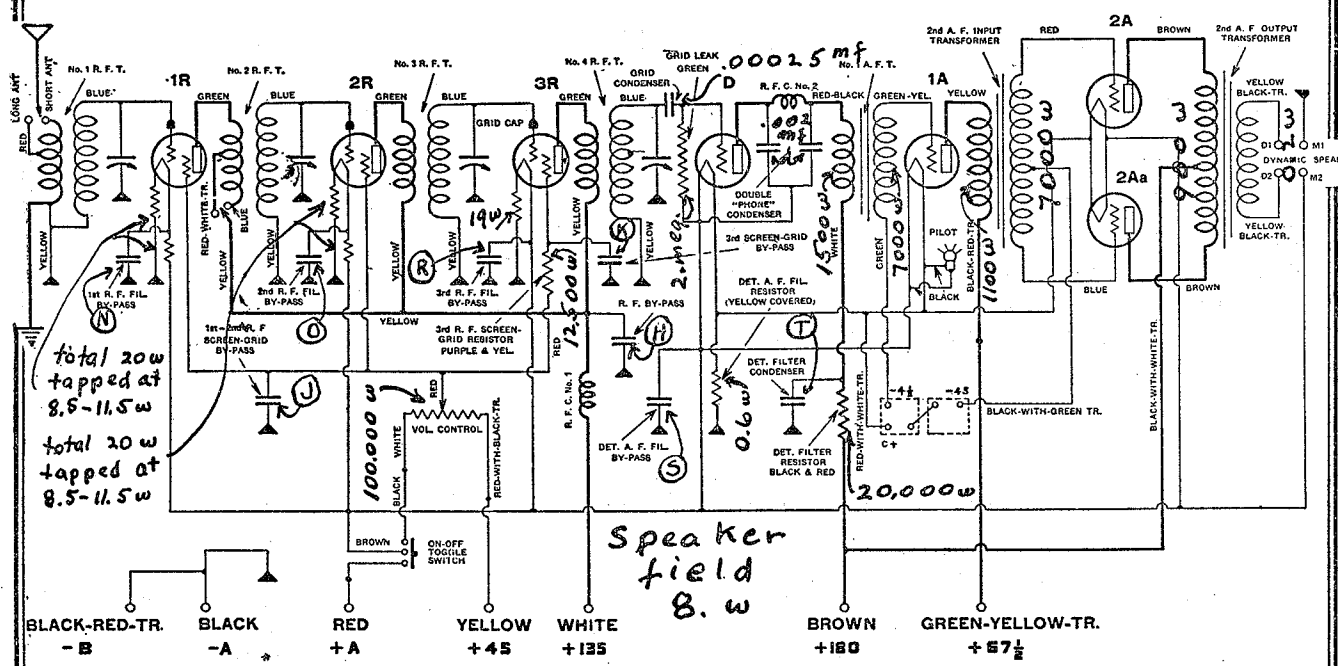


DIAGRAM OF EARLY MODEL 67 AND 67-C (BATTERY OPERATED).

Voltage data on page 180

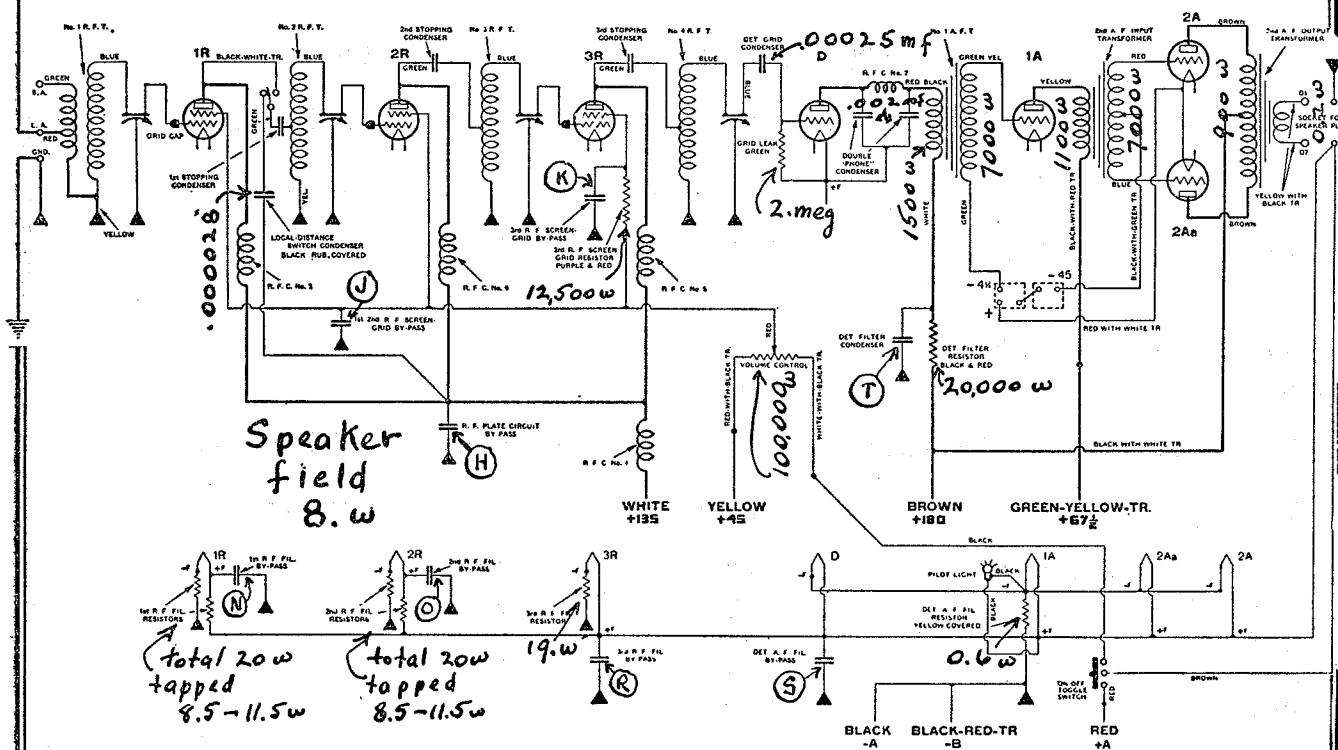


DIAGRAM OF LATER MODEL 67 AND 67-C (BATTERY OPERATED).

MODEL 66 Voltage
MODEL 67 and 67-C
Voltage

ATWATER KENT MFG. CO.

VOLTAGE DATA FOR MODEL 66

Line voltage 110. Line voltage of 120 volts increases voltage 10%.

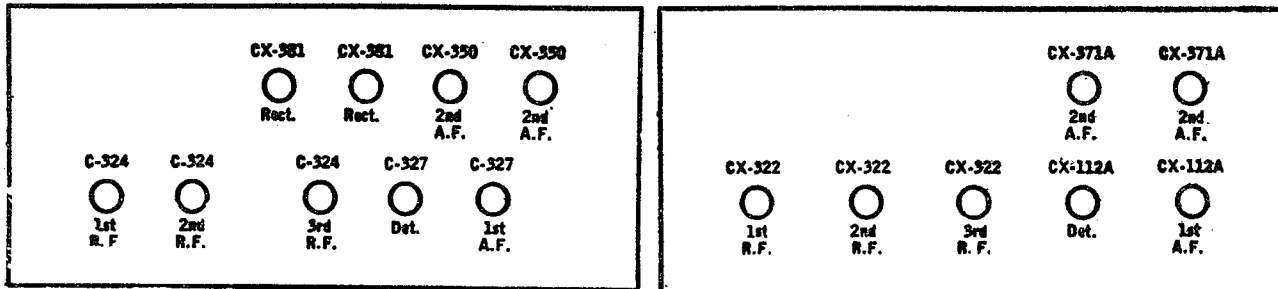
Tube	Filament	Plate	Grid	Screen
R-F (1st)	2.2	158	5.5	110
R-F (2nd-3rd)	2.2	160	2.8	78
Detector	2.2	206	23.	
A-F (1st)	2.2	137	2.8*	
A-F (2nd)	6.9	412	78.	

* This is the measured voltage, not the actual operating voltage.

66

(A.C.) 67

(Batt.)



VOLTAGE DATA FOR MODELS 67 and 67-C

These values apply when the total "B" voltage is 150 volts.

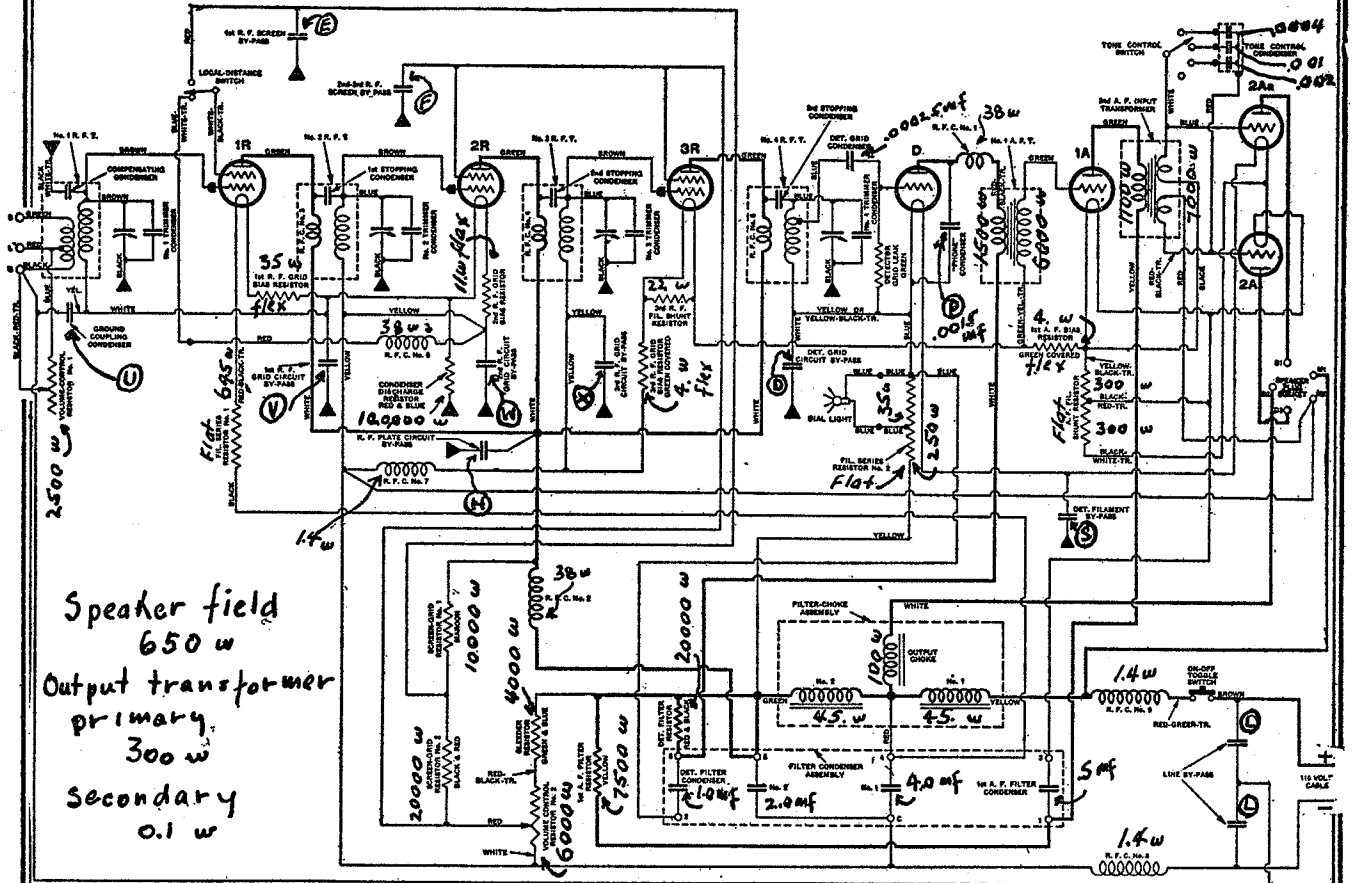
Tube	Filament	Plate	Grid	Screen
RF (1st-2nd)	3.3	110	1.5	30
R-F (3rd)	3.3	110	2.5	25
Det.	5.0	50	--	
A-F (1st)	5.0	55	4.5	
A-F (2nd)	5.0	150	45.	

These values apply when the total "B" voltage is 180 volts.

Tube	Filament	Plate	Grid	Screen
R-F (1st-2nd)	3.3	135	1.5	45
R-F (3rd)	3.3	135	2.5	40
Det.	5.0	60	--	
A-F (1st)	5.0	65	4.5	
A-F (2nd)	5.0	180	45.	

ATWATER KENT MFG. CO.

MODEL 70, 74, 76
Chassis D



Speaker field
650 w
Output transformer
primary
300 w
Secondary
0.1 w

DIAGRAM OF D-1 CHASSIS.

BYPASS CONDENSERS. The letters within the circles adjacent to the various bypass condensers correspond with the letters shown within the respective bypass units on chassis layout

Note exception stated beneath the following tabulation.

RF Bypass #1	L	.1 mfd	400 volts	L	.1 mfd	400 volts	# 14710
	U	.02 mfd	400 volts				
RF Bypass #2	E	.1 mfd	400 volts	F	.1 mfd	400 volts	# 15262
	V1*	.1 mfd	400 volts	W1*	.1 mfd	400 volts	
RF Bypass #3	H	.1 mfd	400 volts	S	.1 mfd	400 volts	# 16680
	P	.0015mfd	400 volts				
RF Bypass #4	D	.1 mfd	400 volts	V	.1 mfd	400 volts	# 15262
	X	.1 mfd	400 volts	W	.1 mfd	400 volts	

* Used only in D-2 chassis as shown in wiring diagram of D-2 receiver
These two condensers are not used in D-1 chassis, but are shown in their proper position in the chassis layout

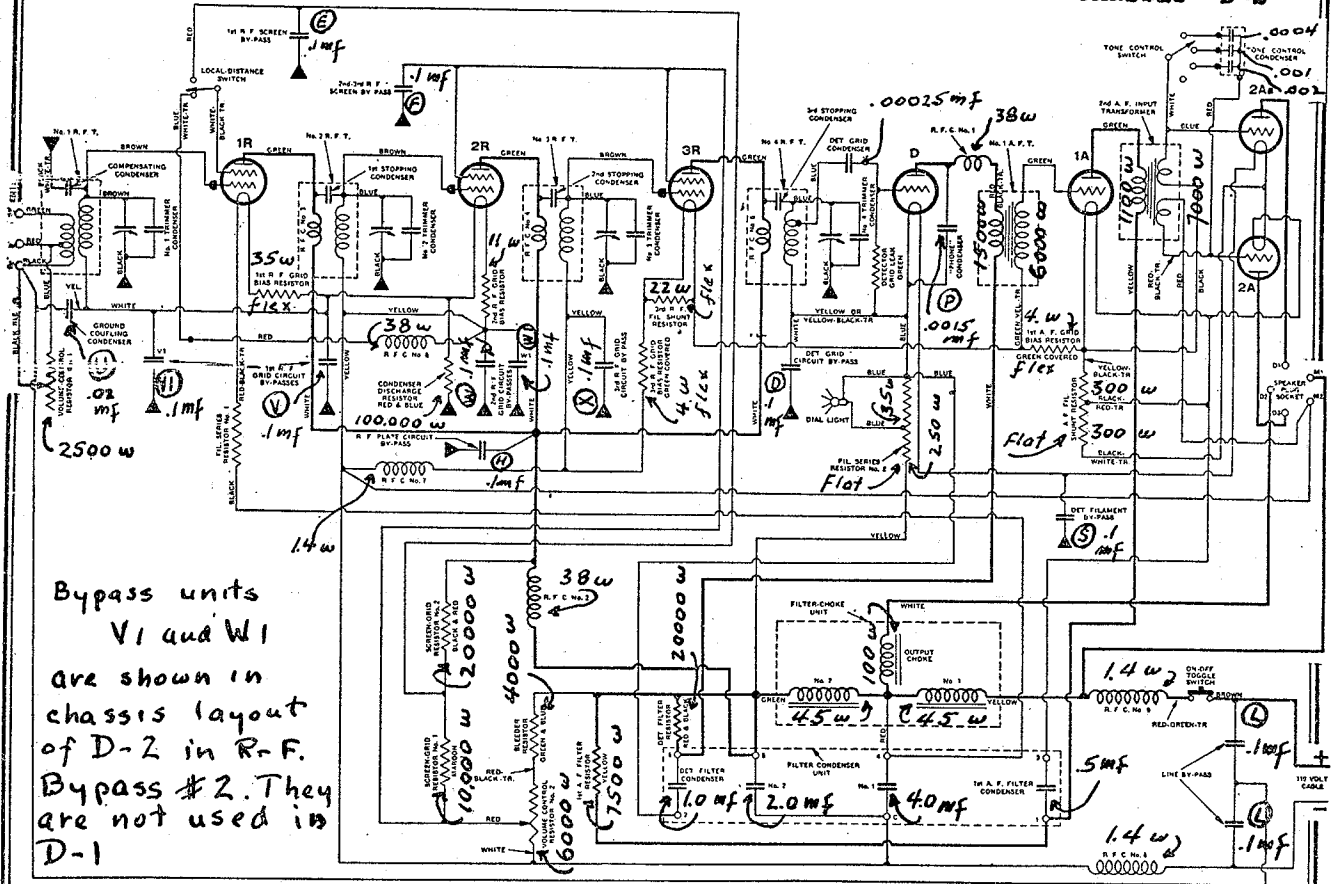
Tone control All condensers are rated at 100 volts

SPECIAL NOTE.

Chassis D-1 and D-2 are identical except for the minor changes noted above in connection with bypass condensers W1 and V1 and also as noted on the D-2 schematic

ATWATER KENT MFG. CO.

MODEL 70, 74, 76
Chassis "D-2"



SCHEMATIC DIAGRAM OF TYPE D-2 CHASSIS.

Note the addition of by-pass condensers V-1 and W-1 and the reversal of screen-grid resistors No. 1 and No. 2.

VOLTAGE TABLE FOR TYPE D CHASSIS

Set in operation. Volume control at maximum.
L-D switch at distance.

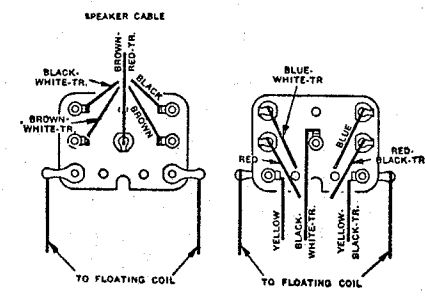
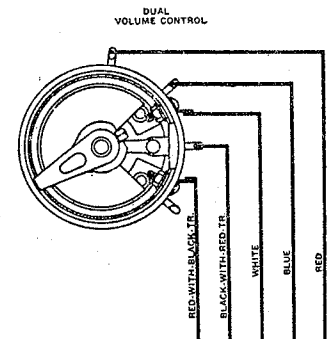
Use High Resistance D. C. Voltmeter (about 0-50-250) to Measure Plate and Grid Voltages.
Use A. C. Voltmeter to Measure Filament Voltages.

APPROX. VOLTAGES, USING 120 V. LINE

TUBE	FILAMENT VOLTAGE	PLATE VOLTAGE	CONTROL-GRID VOLTAGE	SCREEN VOLTAGE
1st-R.F.	3.3	75	4.2	60*
2nd-R.F.	3.3	75	1.3	50
3rd-R.F.	3.3	75	1	50
Detector	5	20	—	—
1st-A.F.	5	45	6	—
2A	5	75	10	—
2Aa	5	80	10	—

All readings made from cathode in heater-type tubes, and from —F in plain-filament-type tubes.
Use 250-volt scale to measure 2nd A. F. grid voltage.

*This is 50 volts in D-2 chassis.

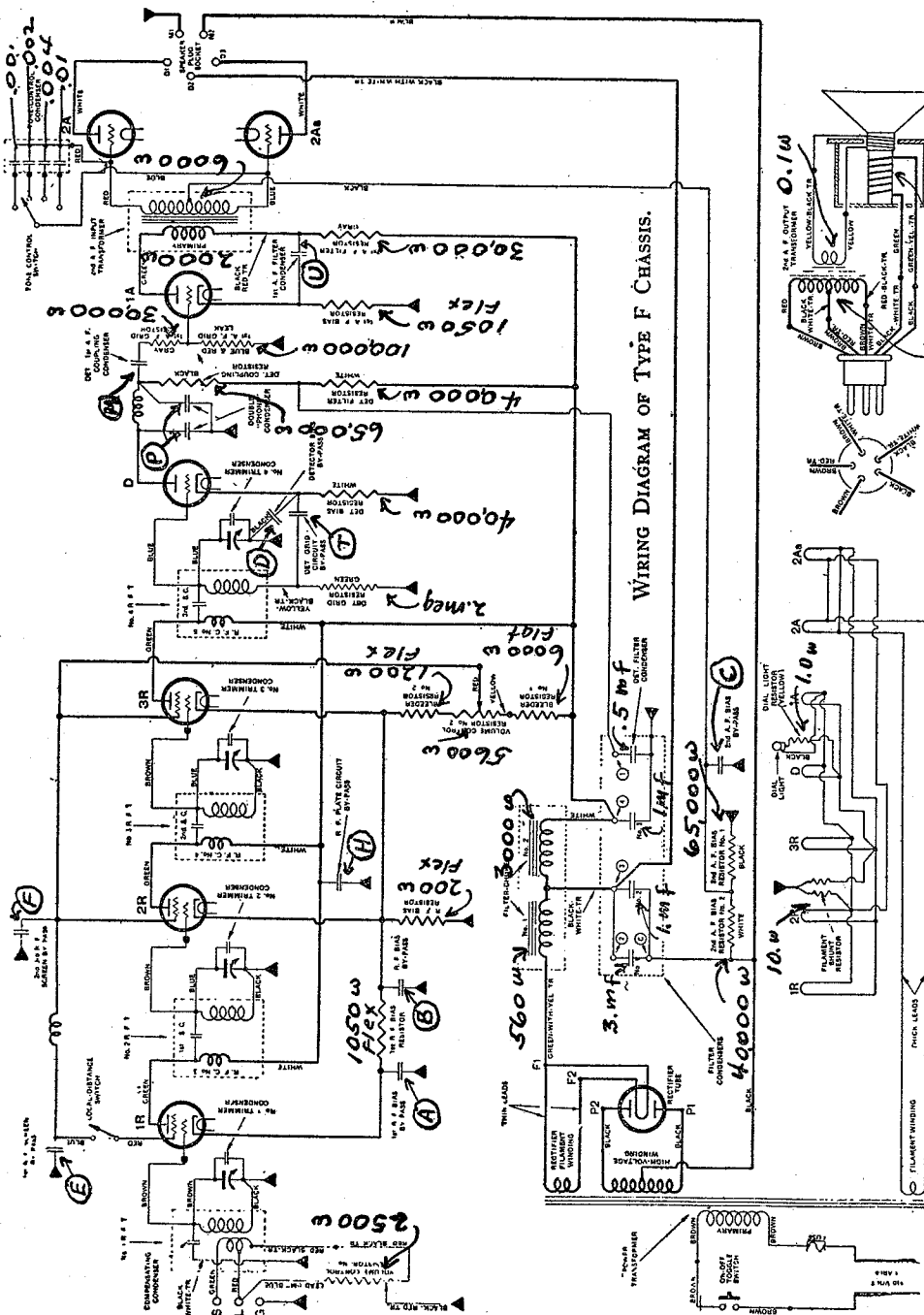


SPEAKER PANEL CONNECTIONS

MODEL 70,74,76
Chassis F

ATWATER KENT MFG. CO.

Voltage data on
page 186



In some early-type F chassis, a line by-pass condenser is used and the 1st-A. F. grid resistor (gray) is omitted. In later-type F chassis, the filter condenser has only four contacts, A.F. grid leak is connected to the opposite end of the 1st-A. F. grid resistor.

FILTER CONDENSER. In early models, the filter condenser has five contacts as indicated by the numbers within circles in the diagram. For those shown there

Detector filter .5 mfd connected between terminal (1) and can
 Filter #1 3.0 mfd connected between terminal (2) and center stud
 Filter #2 1.0 mfd connected between terminal (3) and center stud
 Filter #3 1.0 mfd connected between terminal (4) and can

BYPASS CONDENSERS. The letters within the circles correspond with the designations within the bypass units shown in the chassis layout

RF Bypass #1	C	.01 mfd	400 volts	E	.01 mfd	400 volts	# 15790
	F	.01 mfd	400 volts	(In very early F "F" is .01 mfd.)			
RF Bypass #2	A	.01 mfd	150 volts	U	.12 mfd	400 volts	# 15770
	B	.01 mfd	150 volts				
RF Bypass #3	D	.01 mfd	400 volts	H	.02 mfd	400 volts	# 15780
	T	.04 mfd	400 volts				
Detector Bypass	R	.01 mfd	400 volts	M	.075 mfd	400 volts	# 15640
	P	.0012 mfd	400 volts	P	.00025 mfd	400 volts	

Tone Control All condensers are rated at 100 volts

MODEL 70,74,76
Chassis L-1

ATWATER KENT MFG. CO.

BYPASS CONDENSERS. The letters within the circles designate the condensers within the multiple units shown on the chassis layout

RF Bypass #1	L	.01 mfd	400 volts	L	.01 mfd	400 volts	# 15790
	C	.1 mfd	400 volts	E	.1 mfd	400 volts	
RF Bypass #2	A	.1 mfd	150 volts	U	.12 mfd	400 volts	#15770
	B	.1 mfd	150 volts				
RF Bypass #3	D	.1 mfd	400 volts	H	.2 mfd	400 volts	# 15780
	T	.04 mfd	400 volts				
Detector Bypass	F	.1 mfd	400 volts	M	.075 mfd	400 volts	# 15640
	P	.0012 mfd	400 volts	P	.00025 mfd	400 volts	
Tone Control	All condensers rated at 100 volts						

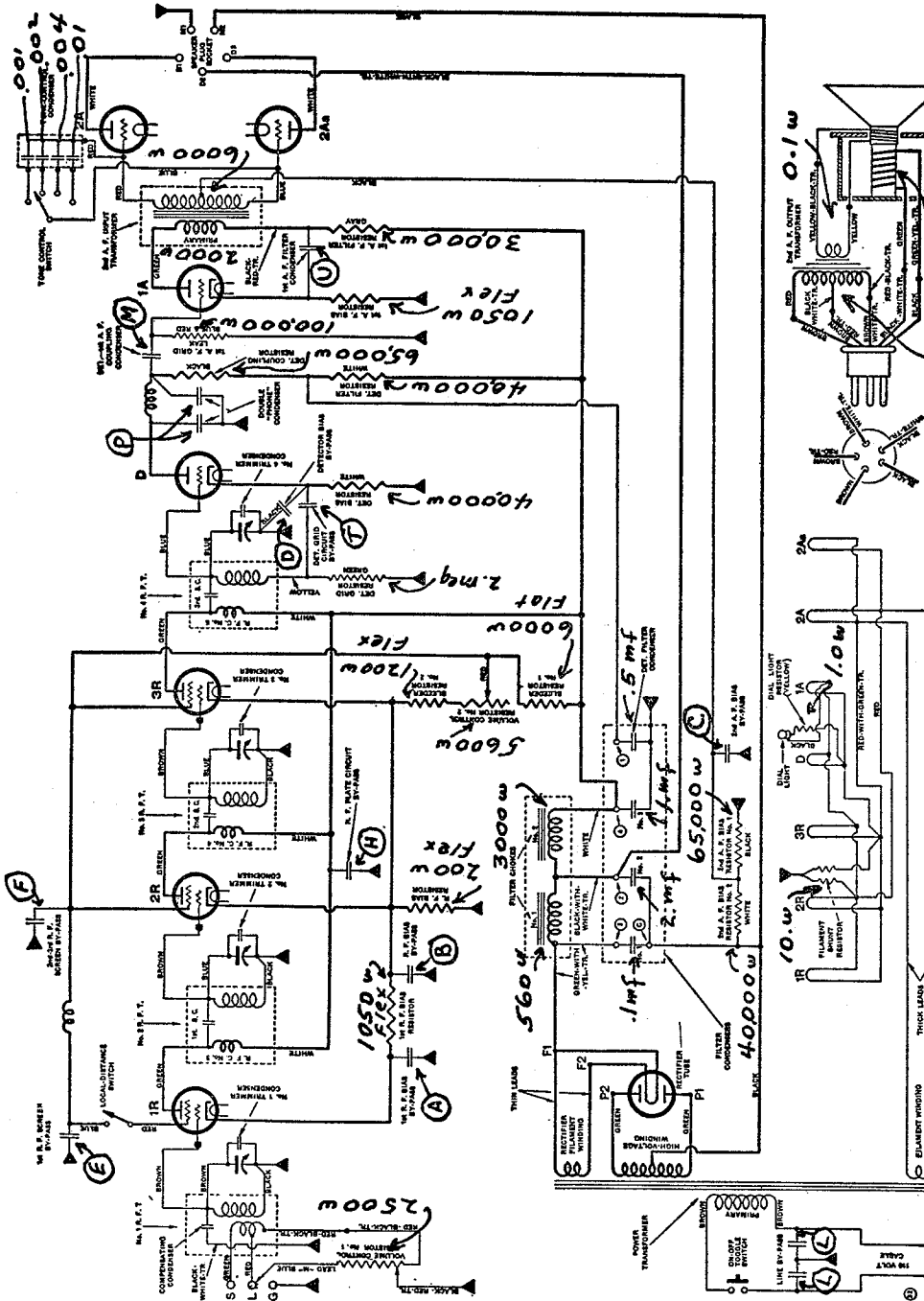


DIAGRAM OF L-1 CHASSIS.

FILTER CONDENSERS

Numerals within circles adjacent to filter condensers designate connections upon condenser can terminal block. These numbers are also shown upon the chassis layout

- Detector filter .5 mfd connected between terminal (1) and can
- Filter #1 .1 mfd connected between terminal (5) and center stud
- Filter #2 2.0 mfd connected between terminal (2) and center stud
- Filter #3 1.0 mfd connected between terminal (4) and can

MODEL 70, 74, 76
 Chassis "L-2"- "P"
 Voltage Data

ATWATER KENT MFG. CO.

Notes
VOLTAGE TABLE FOR TYPE L-2 AND P CHASSIS

Set in operation. Volume control at maximum.
 L-D (or 'phono) switch up.

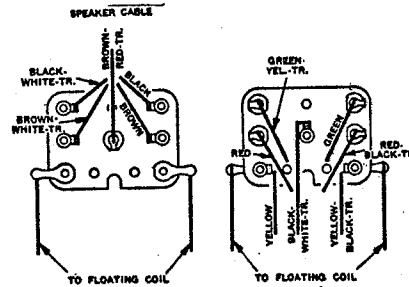
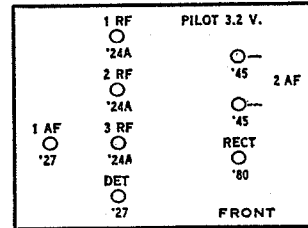
Use Hi_on Resistance D. C. Voltmeter (about 0-50-250) to Measure Plate and Grid Voltages.
 Use A. C. Voltmeter to Measure Filament Voltages.

APPROX. VOLTAGES, USING 120 V. LINE

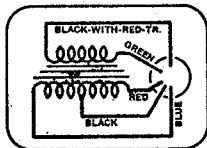
TUBE	FILAMENT VOLTAGE	PLATE VOLTAGE	CONTROL-GRID VOLTAGE	SCREEN VOLTAGE
1st-R.F.	2.4	180	5	85
2nd-R.F.	2.35	180	4.5	86
3rd-R.F.	2.35	180	4.5	86
Detector	2.35	110	14**	—
1st-A.F.	2.35	70	2	—
2A	2.45	250	55*	—
2Aa	2.45	250	55*	—
Rectifier	5.	—	—	—

* Use 250-volt scale.
 ** This is the voltage across the detector bias resistor; when measuring from grid to cathode, the voltage reading is only 2.
 All readings made from cathode in heater-type tubes, and from —F in plain-filament-type tubes.

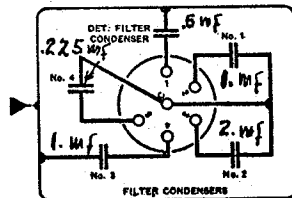
Models 75P, 70, 74, 76, 60 (3rd type) (1930)



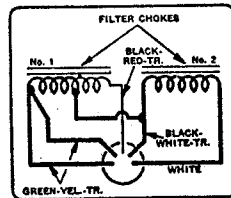
SPEAKER PANEL CONNECTIONS



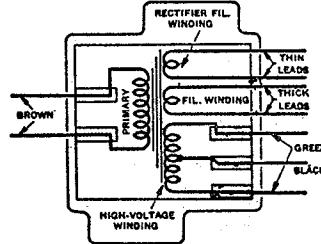
INPUT A. F. TRANSFORMER ASSEMBLY



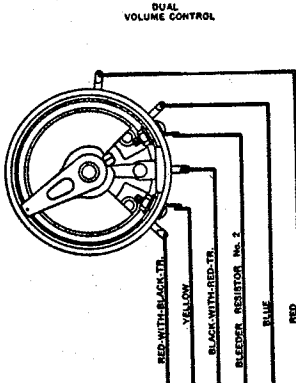
FILTER CONDENSER ASSEMBLY



FILTER-CHOKES ASSEMBLY



POWER TRANSFORMER ASSEMBLY



DUAL VOLUME CONTROL

LOCAL-DISTANCE SWITCH

ON-OFF SWITCH

DIAL LIGHT

PHONE CONTROL CONDENSER

PHONE CONTROL SWITCH

Condensers in R.F. By-Pass No. 1

- L—Line by-pass.
- L—Line by-pass.
- C—2nd-A.F. bias by-pass.
- E—1st-R.F. screen by-pass.

Condensers in Detector By-Pass

- F—2nd-3rd R.F. screen by-pass.
- M—Detector-1st A.F. coupling condenser.
- P—Phone condenser.
- P—Phone condenser.

Condensers in R.F. By-Pass No. 2

- A—1st-R.F. bias by-pass.
- B—R.F. bias by-pass.
- U—1st-A.F. filter condenser.

Condensers in R.F. By-Pass No. 3

- D—Detector bias by-pass.
- H—R.F. plate-circuit by-pass.
- T—Detector grid-circuit by-pass.

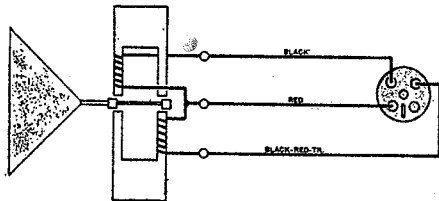
CONNECTION OF UNITS IN TYPE L-2 CHASSIS, AND, AT RIGHT, CONNECTIONS TO TERMINAL PANEL OF TYPE N SPEAKER.

ATWATER KENT MFG. CO.

MODEL 70,76
Chassis "Q"
Voltage

Type Q Chassis (battery operated) has three stages of screen-grid R. F. amplification, grid detection, one stage of transformer-coupled audio, and a double-audio.output stage.

An output filter choke and condenser are used in the Q-2 (above Serial No. 5704025), as shown in the diagram below. The Q-1 Chassis does not have these two parts.



CONNECTIONS OF INDUCTOR
TYPE J SPEAKER.

VOLTAGE TABLE FOR TYPE Q CHASSIS

Set in operation. Volume control at maximum.
L-D switch at distance.

Use High Resistance D. C. Voltmeter (about 0-50-250) to Measure Plate and Grid Voltages.
Use A. C. Voltmeter to Measure Filament Voltages.

180 VOLTS "B" BATTERY

TUBE	FILAMENT VOLTAGE	PLATE VOLTAGE	CONTROL-GRID VOLTAGE	SCREEN VOLTAGE
1st-R.F.	3.3	135	1.5	45
2nd-R.F.	3.3	135	1.5	45
3rd-R.F.	3.3	135	2.5	45
Detector	5.0	70	—	—
1st-A.F.	5.0	67	45	—
2A	5.0	180	45	—
2Aa	5.0	180	45	—

R.F. By-Pass No. 1

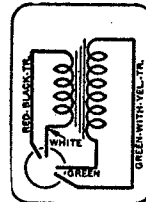
- G—R.F. screen by-pass.
- V—1st-R.F. grid-circuit by-pass.
- Y—Output filter condenser.
- N—1st-R.F. filament by-pass.

R.F. By-Pass No. 2*

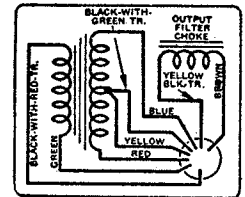
- H—R.F. plate-circuit by-pass.
- T—Detector filter condenser.
- P—"Phone" condenser.
- P—"Phone" condenser.

R.F. By-Pass No. 3

- S—Detector filament by-pass.
- R—3rd-R.F. filament by-pass.
- R—3rd-R.F. filament by-pass.
- O—2nd-R.F. filament by-pass.

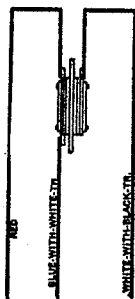


No. 1 A.F.T.

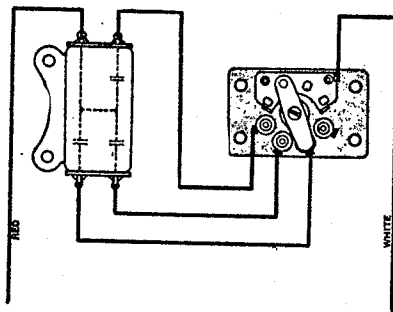


No. 2 A.F. INPUT TRANSFORMER

LOCAL-DISTANCE SWITCH

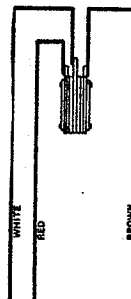


TOPE CONTROL CONDENSER

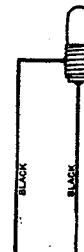


TOPE CONTROL SWITCH

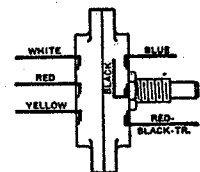
ON-OFF TOGGLE SWITCH



DIAL LIGHT



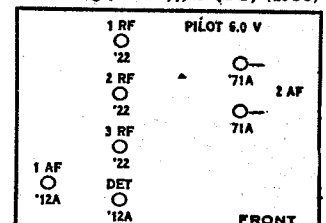
DUAL VOLUME CONTROL



The output filter choke is not used in the Q-1 chassis.

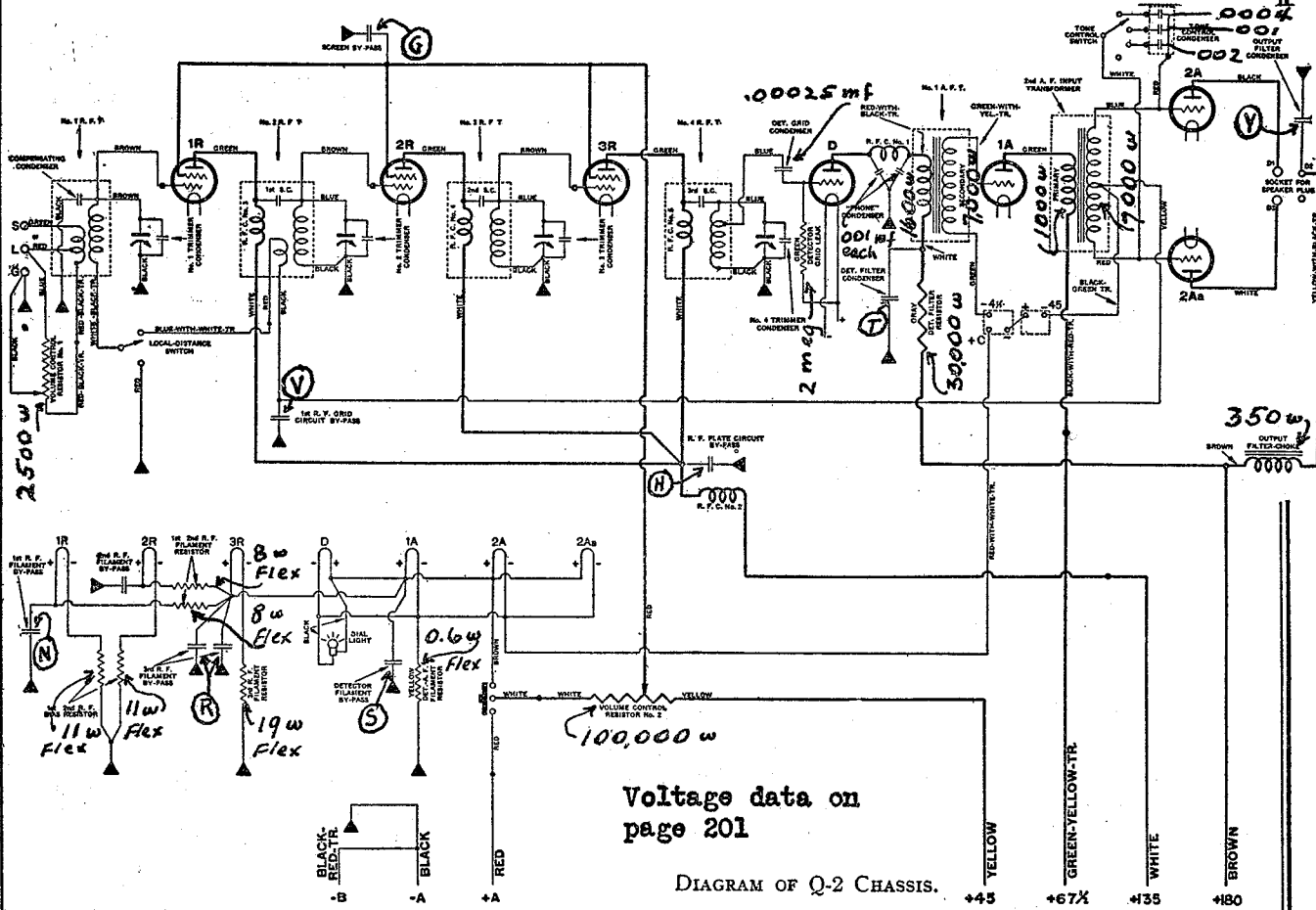
*The connections shown for R. F. by-pass No. 2 are correct when this part is No. 16060. However, if a No. 18350 (H-28) is used. 'P' and 'P' are at top and "H" and "T" are at bottom; therefore, the connections to this condenser are correspondingly changed

Models Q (Battery), D (DC) (1930)

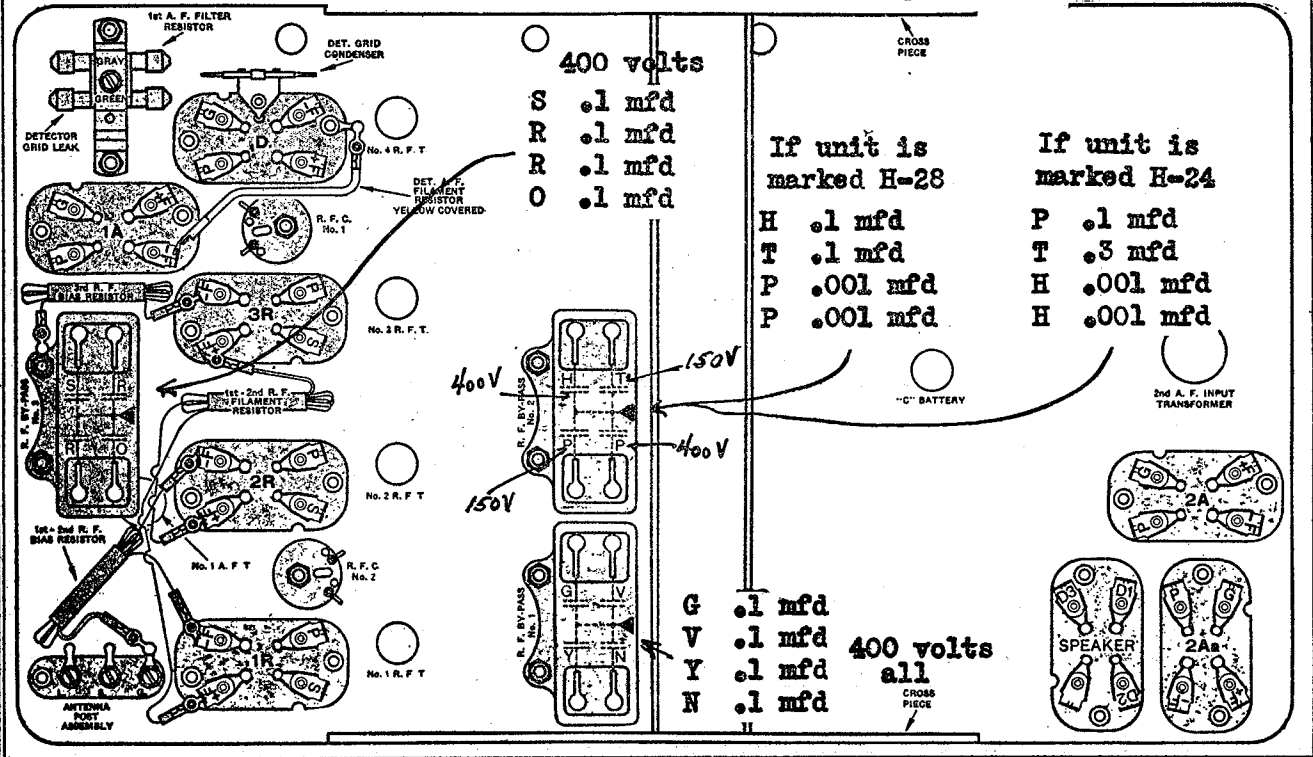


MODEL 70,76
Chassis Q

ATWATER KENT MFG. CO.



The output filter choke and filter condenser are used only in Type Q-2 Chassis. The choke is mounted in the 2nd-A. F. input transformer container. Type Q-1 Chassis may be converted to Q-2 by installing this unit (No. 18020) and connecting it as shown above



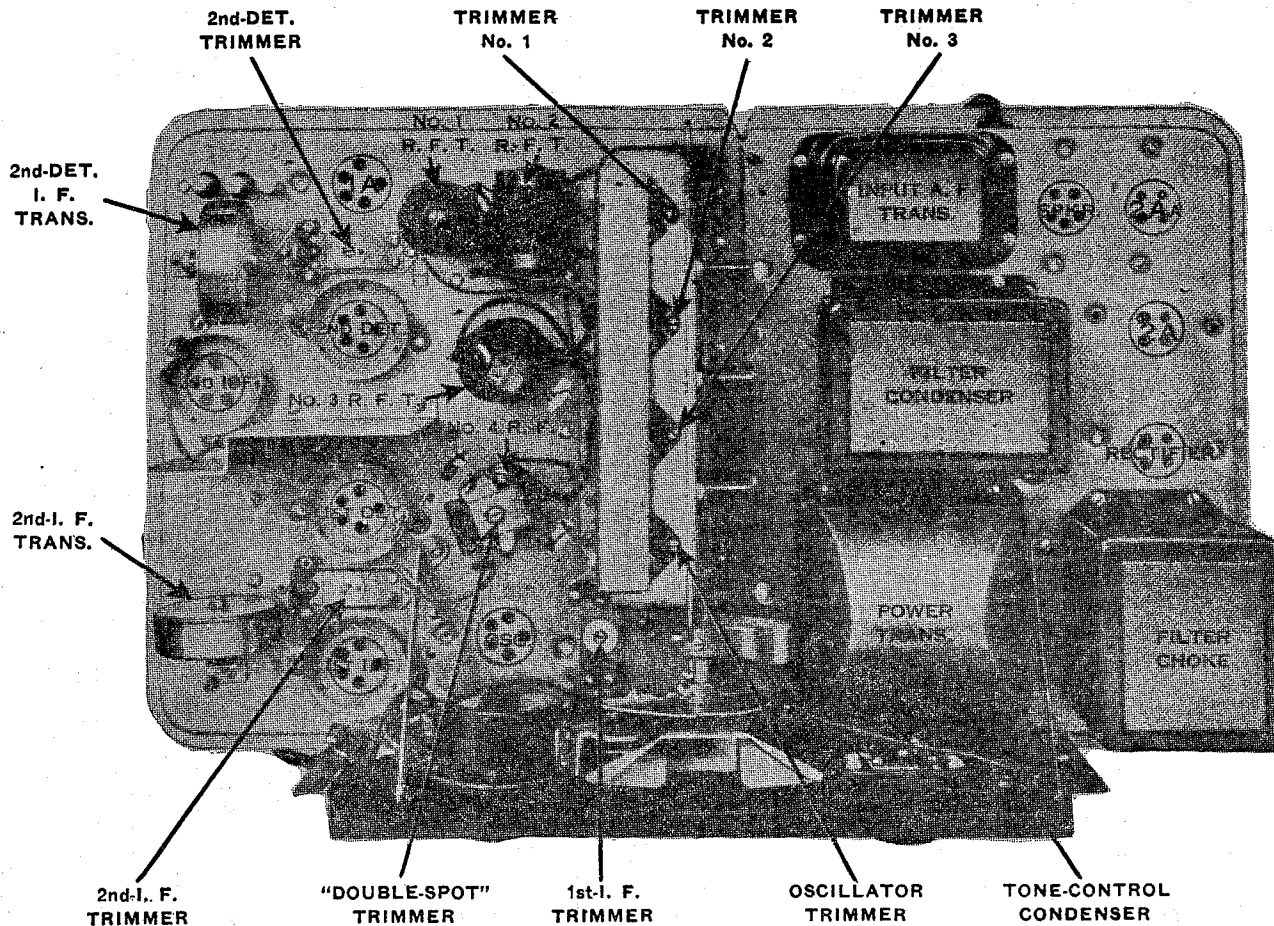
MODEL 72

Chassis "H-1"
Voltage

ATWATER KENT MFG. CO.

TYPE H-1, No. 16500, SUPER-HETERODYNE CHASSIS

(Below Serial No. 5,855,201)



TOP VIEW OF ATWATER KENT TYPE H-1 SUPER-HETERODYNE CHASSIS

Tube	"A" Volts	"B" Volts	Control Grid	Screen
1st Det	2.4	150	3.	12.
Osc.	2.3	100	10.*	
1st IF	2.3	150	3.	75.
2nd IF	2.3	145	3.	85.
2nd Det	2.3	100	13.**	
1st AF	2.3	65	2.	
2nd AF PP	2.5	250	55.*	
2nd AF PP	2.5	250	55.*	
Rect.	4.7			

With volume control at minimum, the IF plate voltage is reduced to about 150 volts and screen voltage is reduced to about 10 volts. * Use 250 volts scale of high resistance voltmeter. ** This is the voltage across the detector bias resistor.

ATWATER KENT MFG. CO.

MODEL 72

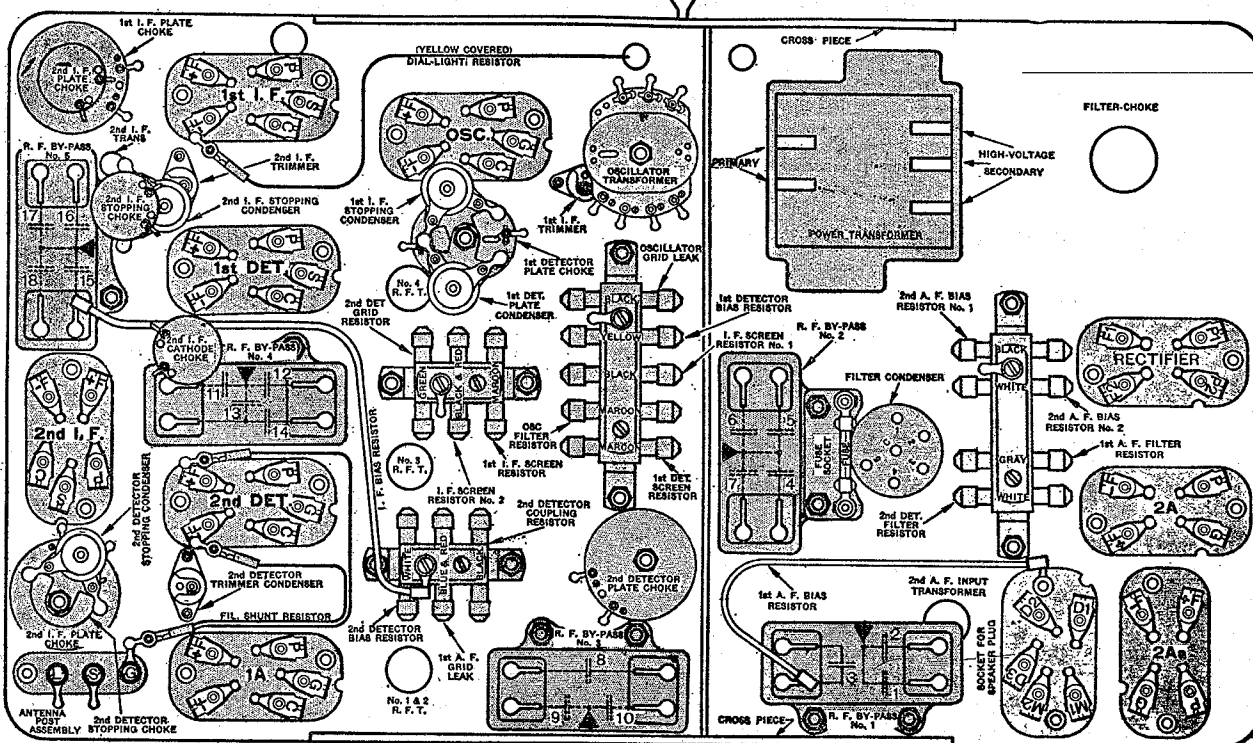
Chassis H-1
Below serial
5,855,201

FILTER CONDENSERS. Numerals in circles indicate connections upon filter condenser terminal block. These numbers are shown upon the parts layout below and also upon the chassis layout

Detector filter	.1 mfd	connected between terminal (1) and can
Filter #1	2.0 mfd	connected between terminal (2) and center stud
Filter #2	1.0 mfd	connected between terminal (3) and center stud
Filter #3	1.0 mfd	connected between terminal (4) and can
Resonant condenser	.225 mfd	connected between terminal (5) and center stud

BYPASS CONDENSERS. The small numerals adjacent to the bypass condensers corresponds with the designating numerals upon the chassis layout

RF Bypass #1	1	.01 mfd	400 volts	2	.01 mfd	400 volts	# 17360
	3	.3 mfd	400 volts				
RF Bypass #2	4	.1 mfd	400 volts	5	.1 mfd	400 volts	# 15262
	6	.1 mfd	400 volts	7	.1 mfd	400 volts	
RF Bypass #3	8	.075 mfd	400 volts	9	.0012 mfd	400 volts	# 16745
	10	.3 mfd	150 volts				
RF Bypass #4	11	.1 mfd	400 volts	12	.00123mfd	400 volts	# 17379
	13	.1 mfd	400 volts	14	.04 mfd	400 volts	
RF Bypass #5	15	.1 mfd	400 volts	16	.1 mfd	400 volts	# 15262
	17	.1 mfd	400 volts	18	.1 mfd	400 volts	

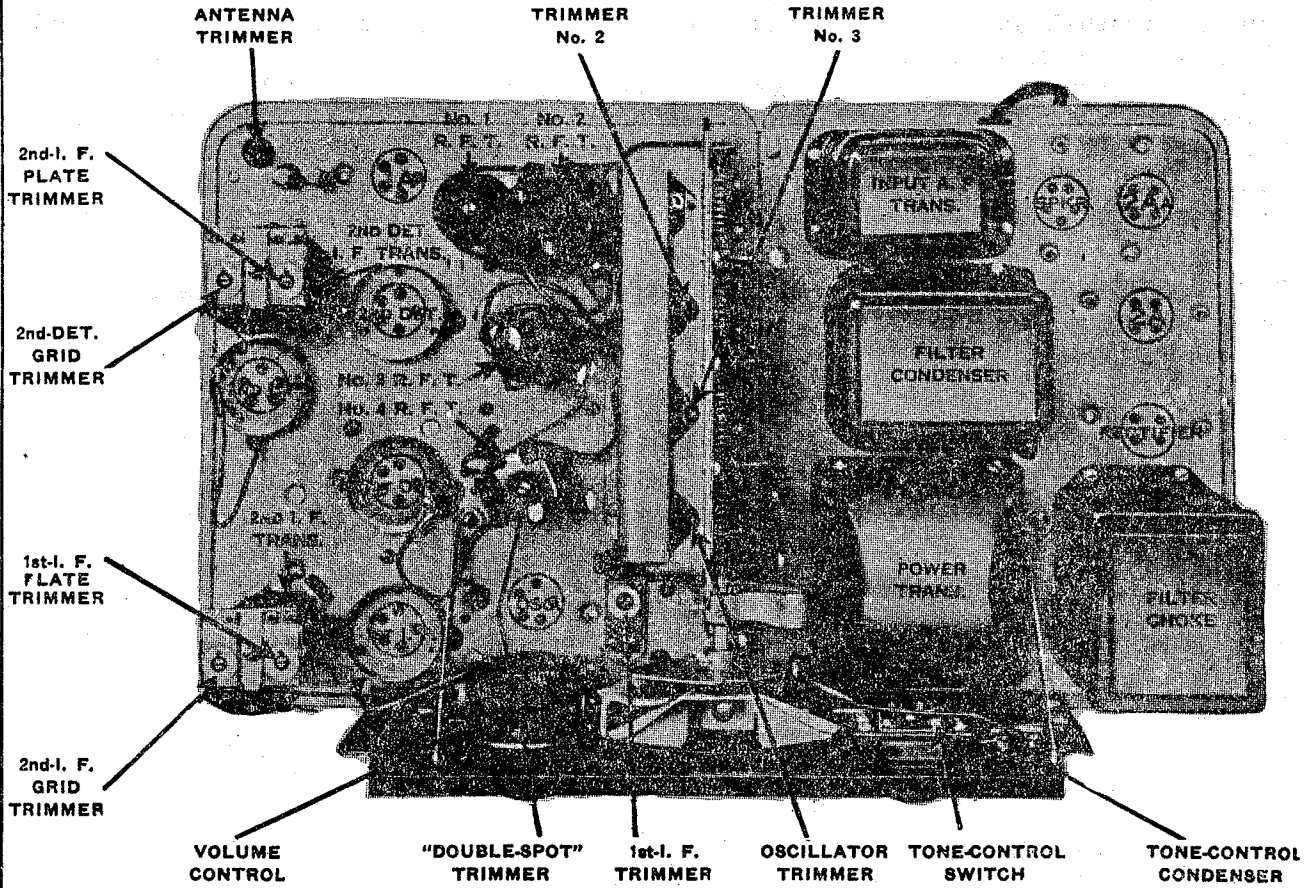


BOTTOM CHART OF TYPE H-1 CHASSIS

MODEL 72
 Chassis "H-2"
 Voltage

ATWATER KENT MFG. CO.

TYPE H-2, No. 16500, SUPER-HETERODYNE CHASSIS
 (Above Serial No. 5,855,201)



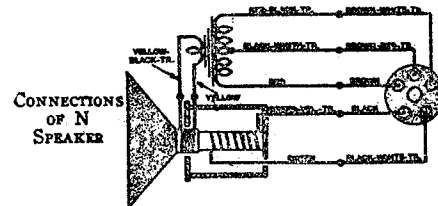
TOP VIEW OF ATWATER KENT TYPE H-2 SUPER-HETERODYNE CHASSIS
 Note that trimmer No. 1 is omitted. The antenna trimmer serves the same purpose

VOLTAGE TABLE FOR TYPE H-2 CHASSIS

Set in operation. Volume control at maximum

Tube	"A" Volts	"B" Volts	Control Grid	Screen
1st Det	2.3	150	4.	15.
Ose	2.5	130	10.*	
1st IF	2.3	150	3.5	100.
2nd IF	2.3	150	3.5	85.
2nd Det	2.3	100	14.**	
1st AF	2.3	70	2.	
2nd AF PP	2.5	250	55.*	
2nd AF PP	2.5	250	55.*	
Rect.	4.7			

With the volume control at minimum, the IF voltage is reduced to 15 volts. * Use 250 volt scale of high resistance voltmeter. ** This is the voltage across the detector bias resistor; when measuring from grid to cathode, the voltage reading is only 2. All readings made from cathode in heater type tubes and -F in filament type tubes.



THE DOUBLE SPOT CIRCUIT

The double spot circuit is simultaneously tuned to two different frequencies. The complete circuit consists of #3 and #4 RF transformers and #3 variable condenser. A part of this circuit, #4 RFT, the double spot trimmer and #3 variable condenser is automatically tuned to 260 KC more than the desired frequency.

MODEL 72
 Chassis H-2
 Above serial
 5,855,201

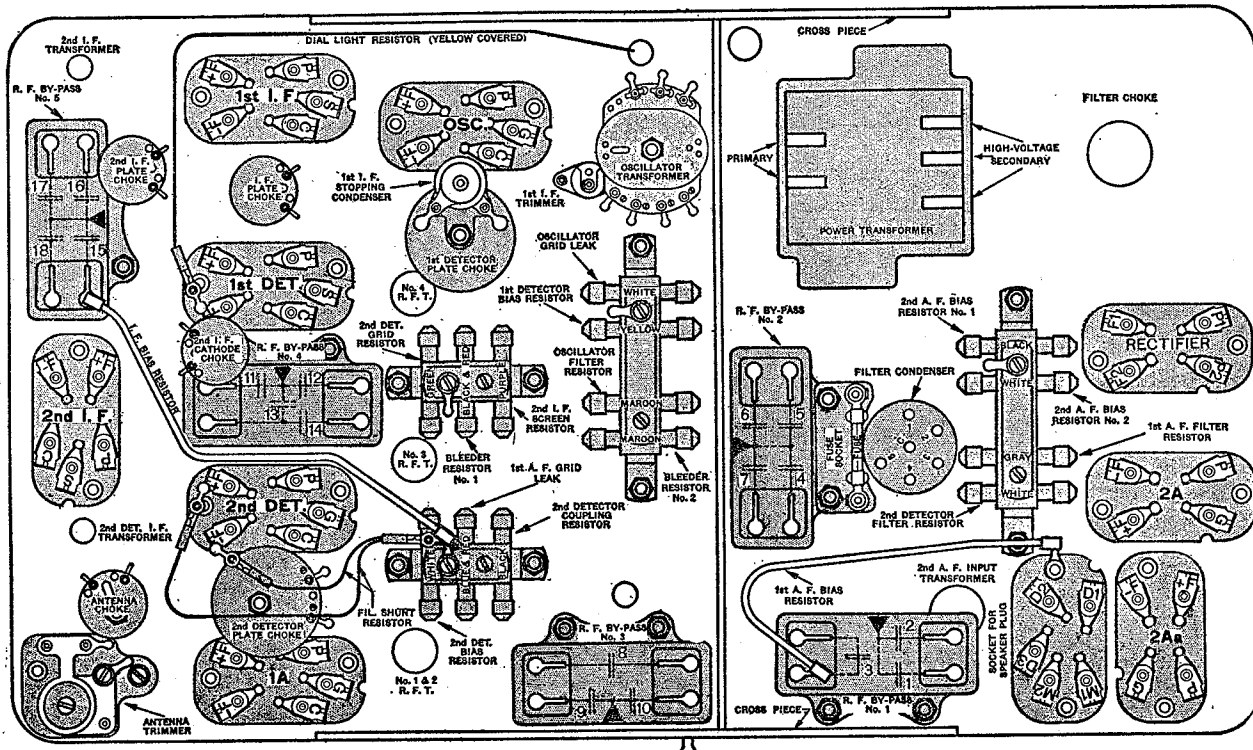
ATWATER KENT MFG. CO.

FILTER CONDENSERS. Numerals in circles shown on wiring diagram indicate connections upon filter condenser terminal block. These numbers are also shown upon the parts layout below. Also upon the chassis wiring diagram

Detector filter	.1 mfd	connected between terminal (1) and can
Filter #1	2.0 mfd	connected between terminal (2) and center stud
Filter #2	1.0 mfd	connected between terminal (3) and center stud
Filter #3	1.0 mfd	connected between terminal (4) and can
Resonant condenser	.225 mfd	connected between terminal (5) and center stud

BYPASS CONDENSERS. The small numerals adjacent to the various bypass condensers shown on the wiring diagram correspond with the designating numerals upon the parts layout below and the chassis

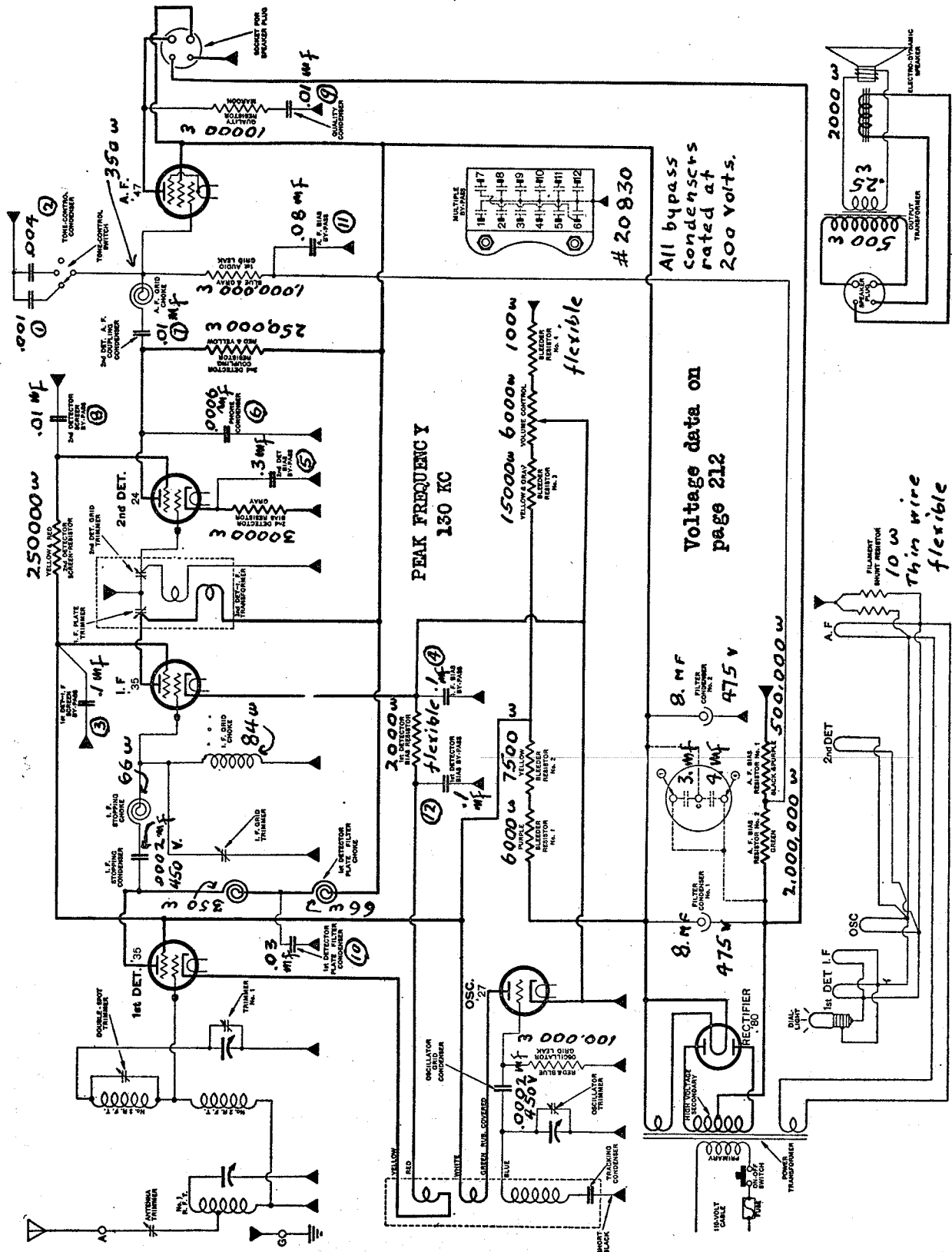
RF Bypass #1	1	.01 mfd	400 volts	2	.01 mfd	400 volts	# 17360
	3	.3 mfd	400 volts				
RF Bypass #2	4	.1 mfd	400 volts	5	.1 mfd	400 volts	# 15262
	6	.1 mfd	400 volts	7	.1 mfd	400 volts	
RF Bypass #3	8	.075 mfd	400 volts	9	.0012 mfd	400 volts	# 16745
	10	.3 mfd	150 volts				
RF Bypass #4	11	.1 mfd	400 volts	12	.00123 mfd	400 volts	# 17370
	13	.1 mfd	400 volts	14	.04 mfd	400 volts	
RF Bypass #5	15	.1 mfd	400 volts	16	.1 mfd	400 volts	# 15262
	17	.1 mfd	400 volts	18	.1 mfd	400 volts	



BOTTOM VIEW OF TYPE H-2 CHASSIS
 In this chart, the 2nd-I. F. screen resistor should be maroon instead of purple.

ATWATER KENT MFG. CO.

MODEL 80, 80-F
83, 83-F

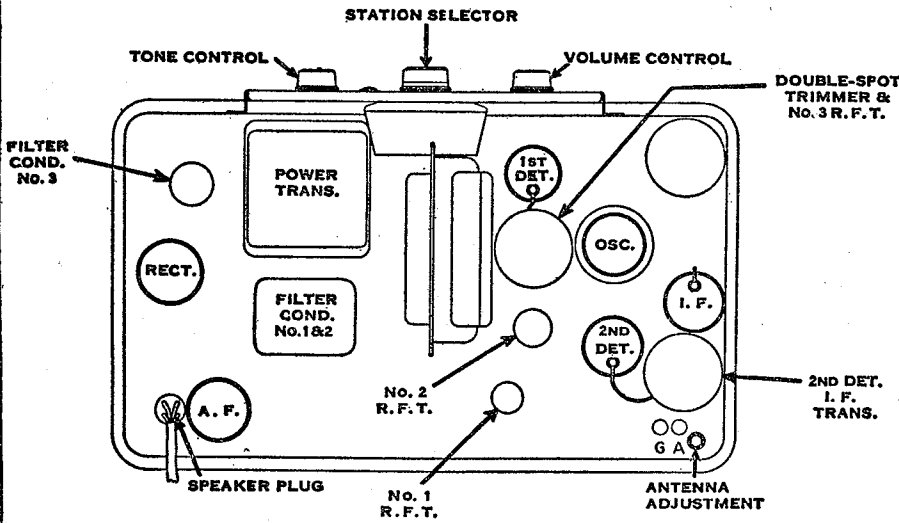


In Model 83 and 83-F, a filter-condenser unit is used and it is connected as shown in dotted lines. This unit is NOT used in Model 80 and 80-F. In Model 83, 83-F, the electrolytic filter condenser No. 1 is not used, and the filament circuit is slightly different.

Voltage reference on page 1-50.

MODEL 80, 80-F
83, 83-F

ATWATER KENT MFG. CO.



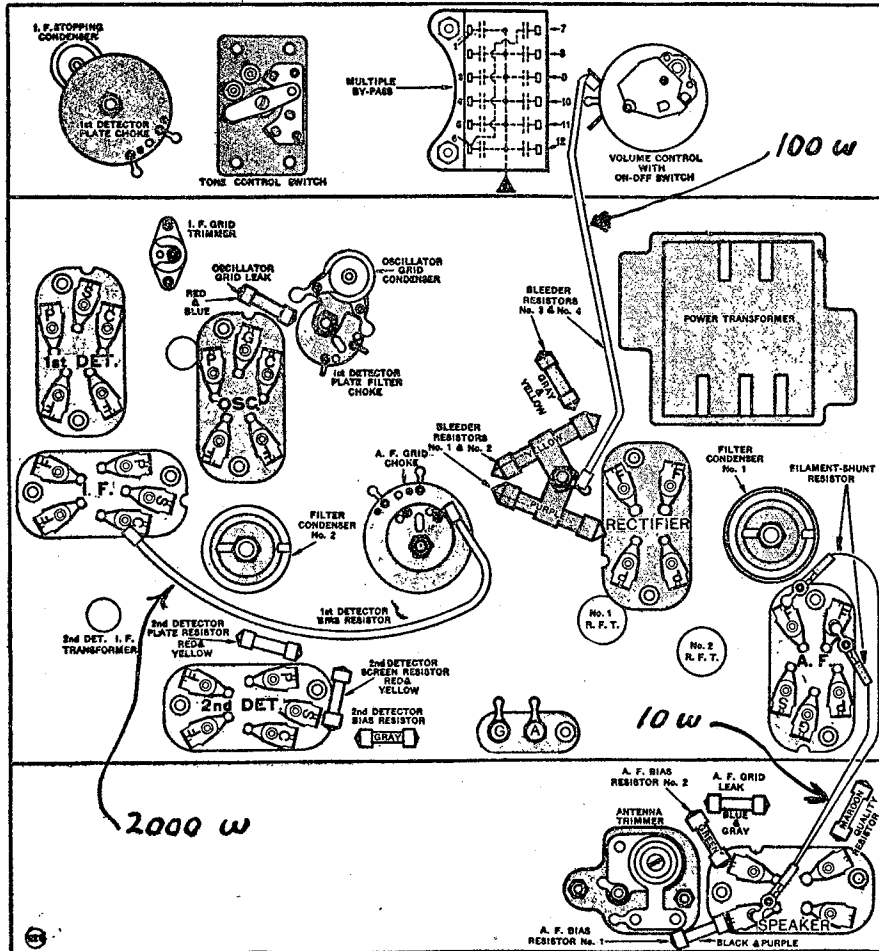
Condensers in Multiple By-pass Model 80, 80-F, 83, 83-F

- 1—Tone-control condenser.
- 2—Tone-control condenser.
- 3—1st-detector—I. F. screen by-pass.
- 4—I. F. bias by-pass.
- 5—2nd-detector bias by-pass.
- 6—Phone condenser.
- 7—2nd-detector—A. F. coupling condenser.
- 8—2nd-detector screen by-pass.
- 9—Quality condenser.
- 10—1st-detector plate filter condenser.
- 11—A. F. bias by-pass.
- 12—1st-detector bias by-pass.

TOP VIEW OF MODEL 83, 83-F.

The circle in the upper right-hand corner is the shield that covers the coupling unit between the 1st-detector and the I. F. tubes.

The numbers given above correspond with the numbers marked upon the multiple condenser unit.



	VOLTAGE TABLE			
	Plate	Screen	Control	Fill.
1st Det.	225	90	5	2.4
I-F	230	95	2	2.4
2nd Det	110	45	5	2.4
1st A-F	230	240	4	2.4
2nd A-F	100	*	*	2.4
Osc				

* A variable depending upon several factors. Capacity of voltmeter leads may cause oscillator tube to cease functioning.

CHART OF MODEL 80, 80-F.

The parts on Model 83, 83-F are similar except that Model 83, 83-F has a filter condenser unit and only one electrolytic condenser.

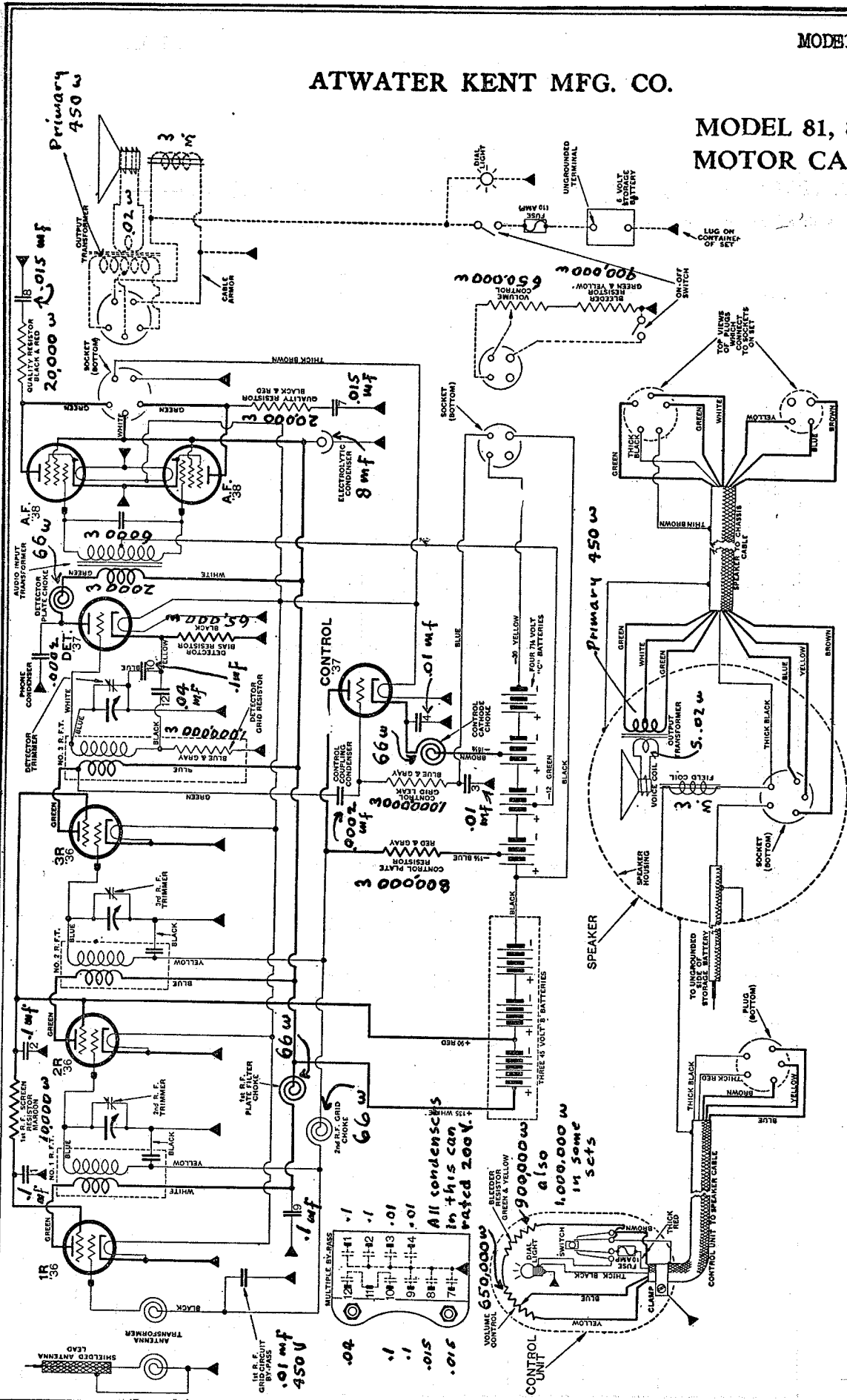
ATWATER KENT MFG. CO.

MODEL 81

81-B

81-C

MODEL 81, 81-B, 81-C MOTOR CAR RADIO



Voltage data on page 212

The small numerals adjacent to the bypass condensers correspond with the numerals marked upon the multiple bypass condenser unit.

Voltage reference on page 1-56.

ATWATER KENT MFG. CO.

VOLTAGE TABLE

FOR MODEL 80, 81, 82, 82-D, 82-Q, 83, 84, 84-D, 84-Q, 85, 85-Q, 86, 87 and 89

The voltages listed in this table are only approximate, and are measured values, not actual operating values. Turn volume control to maximum.

Use 250-volt scale of a 1000-ohm-per-volt D. C. voltmeter.

All plate, screen and grid measurements are made from cathode in heater-type tube, and from —F in plain-filament-type tube.

When replacing a tubular resistor, use a resistor of the same color as the defective unit. However, if a resistor has been removed, or its identification destroyed, replace it with a resistor having the color that is specified in the diagram for that set.

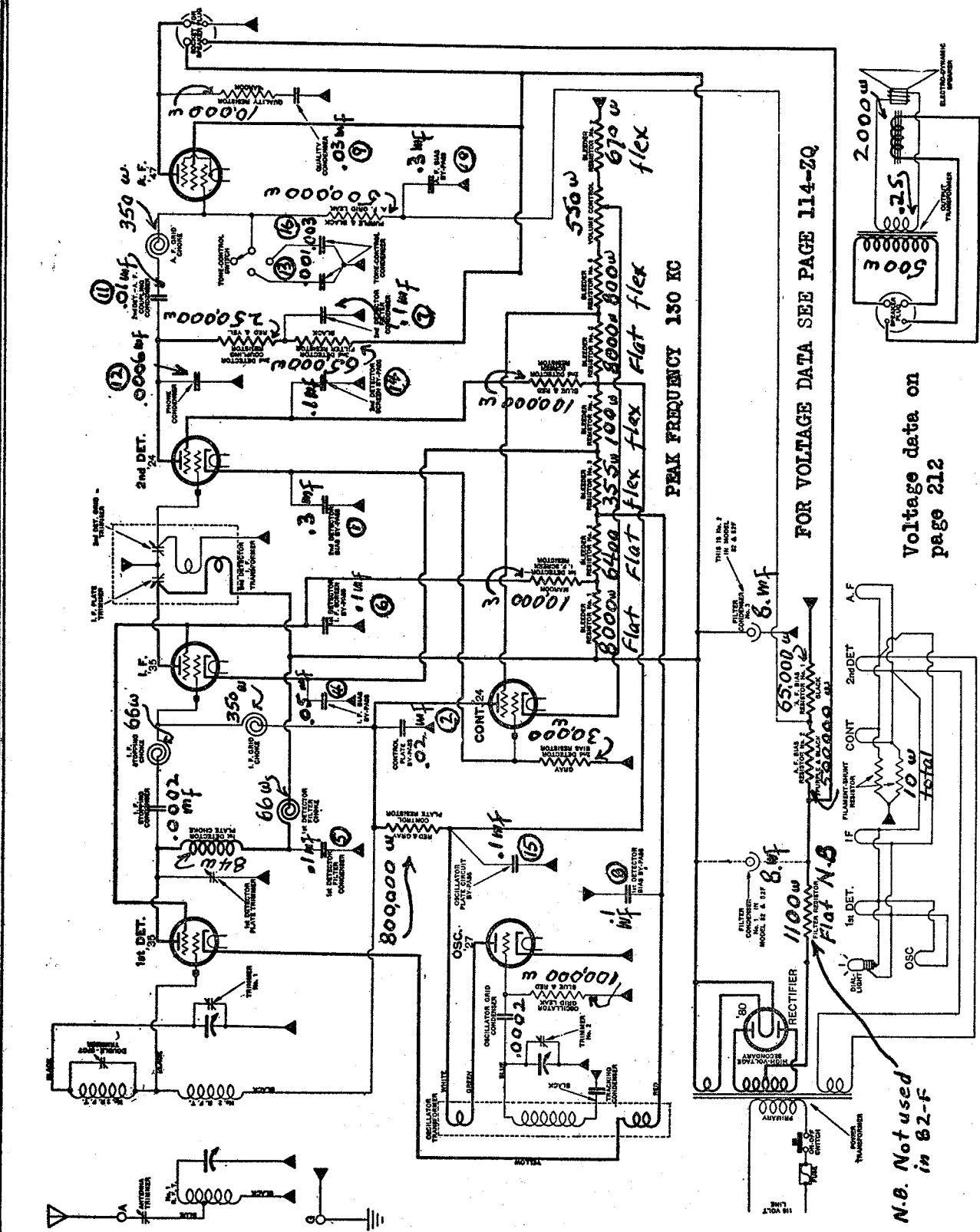
the same color as the defective unit. However, if a resistor has been removed, or its identification destroyed, replace it with a resistor having the color that is specified in the diagram for that set.

	MODEL 80	MODEL 81	MODEL 82	MODEL 82-D	MODEL 82-Q	MODEL 83	MODEL 84	MODEL 84-D	MODEL 84-Q	MODEL 85	MODEL 85-Q	MODEL 86	MODEL 87	MODEL 89
LINE VOLTAGE	110	110	112	110	110	110	110	120	125	110	115	110	110	110
TOTAL "B" VOLTAGE	125	125	125	125	125	125	125	125	125	125	125	125	125	125
FILAMENT	5.5	5.5	5.5	2	2	2	2	2	2	2	2	2	2	2
PLATE	125	125	125	125	125	125	125	125	125	125	125	125	125	125
SCREEN	75	75	75	60	65	65	65	65	65	65	65	65	65	65
GRID	SMALL	SMALL	SMALL	3	3	3	3	3	3	3	3	3	3	3
1ST DEF. TUBE†	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	225	95	135	70	125	225	205	80	125	135	125	125	100	120
	90	50	50	40	90	90	65	50	25	50	40	35	70	45
	5	7	4	5	3	5	6	5	3	3	3	4	11	4
I. F. TUBE	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	230	140	95	125	230	215	105	125	125	125	125	125	170	135
	95	50	50	60	60	65	55	65	65	65	65	65	80	50
	2	SMALL	SMALL	3	3	3	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL
2ND DEF. TUBE	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	110	105	55	45	110	90	55	60	100	40	95	90	120	120
	45	65	10	25	45	45	10	25	65	25	60	60	SMALL	15
	5	8	2	3	5	6	1	3	7	3	8	SMALL	SMALL	15
1ST A. F. TUBE	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	230	230	75	55	230	205	80	55	55	55	210	90	120	120
	240	123	240	—	240	215	—	—	225	—	220	—	—	—
	4	11	5	3	4	5	2.5	3	5	3	5	3	4	4
2ND A. F. TUBE	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	95	85	120	120	120	120	120	120	120	120	120	120	200	225
	—	—	90	125	125	125	125	125	125	125	125	125	210	235
	—	—	7	15	15	15	7	5	15	15	15	15	14	14
OSC. TUBE	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	95	95	100	60	100	100	70	60	100	40	95	85	100	100
	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CONTROL TUBE	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	5.5	3	15	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* The measured oscillator grid voltages will vary dependent on the capacity of the voltmeter leads. In some cases, the presence of the leads will stop oscillation and no reading will be secured for grid bias. In other cases, the reading will be only slight, or it may be as high as 10 volts.
 **This includes the 1st, 2nd and 3rd R. F. tubes in Model 81. †This is the detector tube in Model 81.

ATWATER KENT MFG. CO.

MODEL 82, 82-F

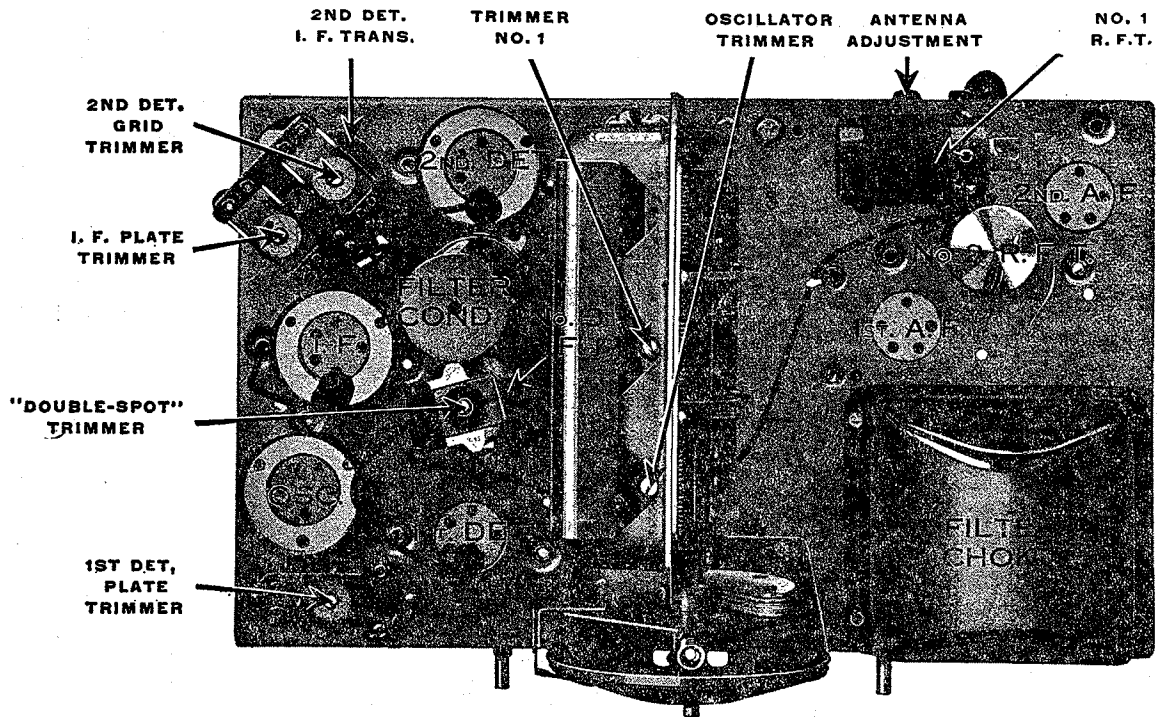


Numerals adjacent to bypass condensers designate units shown upon parts layout on next page within multiple condensers. Condenser voltage ratings are shown upon next page.

Voltage reference on page 1-56.

MODEL 84-D

ATWATER KENT MFG. CO.



TOP VIEW OF MODEL 84-D.

OUTPUT TRANSFORMER

Primary 500 ohms
 Secondary 0.25 ohm
 Field coil 1200 ohms

By-pass Condensers in Model 84-D

Condensers in R. F. By-pass No. 1

- 1—Ground coupling condenser.
- 2—1st-detector screen by-pass.
- 3—110-volt line condenser.
- 4—1st-detector grid by-pass.

R. F. By-pass No. 2

- 5—2nd-detector—1st-A. F. coupling condenser.
- 6—Filter condenser-No. 2.
- 7—Tracking condenser.

R. F. By-pass No. 3

- 8—Quality condenser.
- 9—2nd-detector filter condenser.
- 10—2nd-A. F. grid condenser in early-type sets, 2nd-detector phone condenser in later-type sets.

Tone-control Condenser (Late-type sets only)

- 11—Not used.
- 12—Tone condenser.
- 13—Tone condenser.
- 14—Tone condenser.

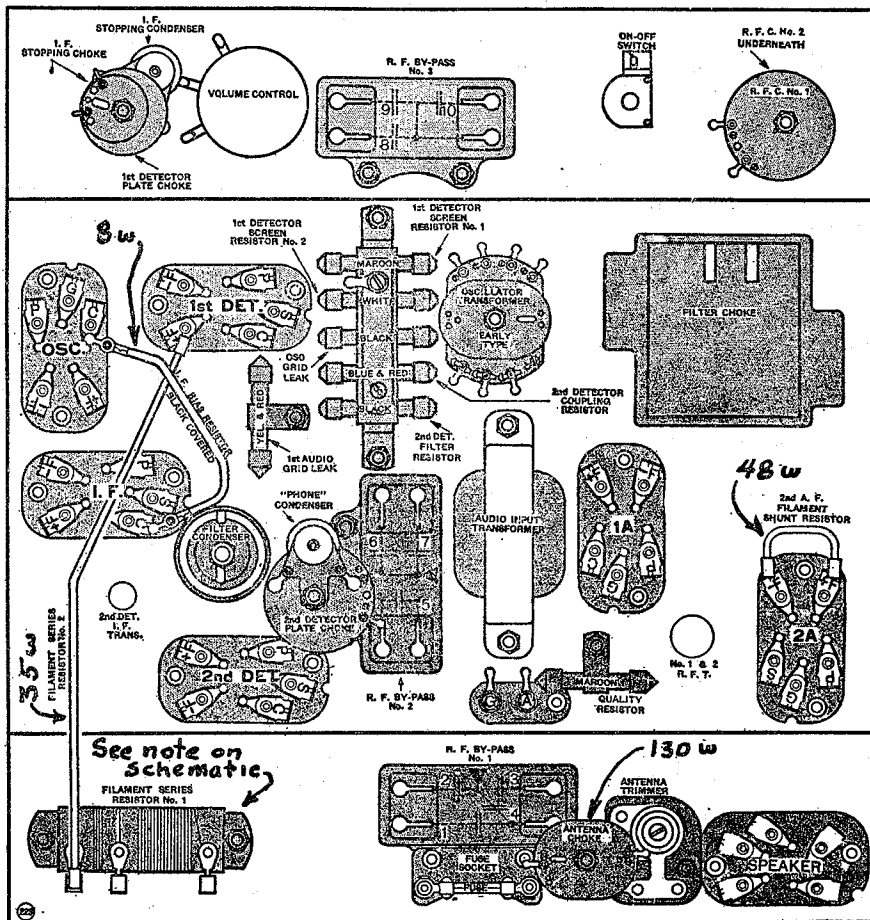
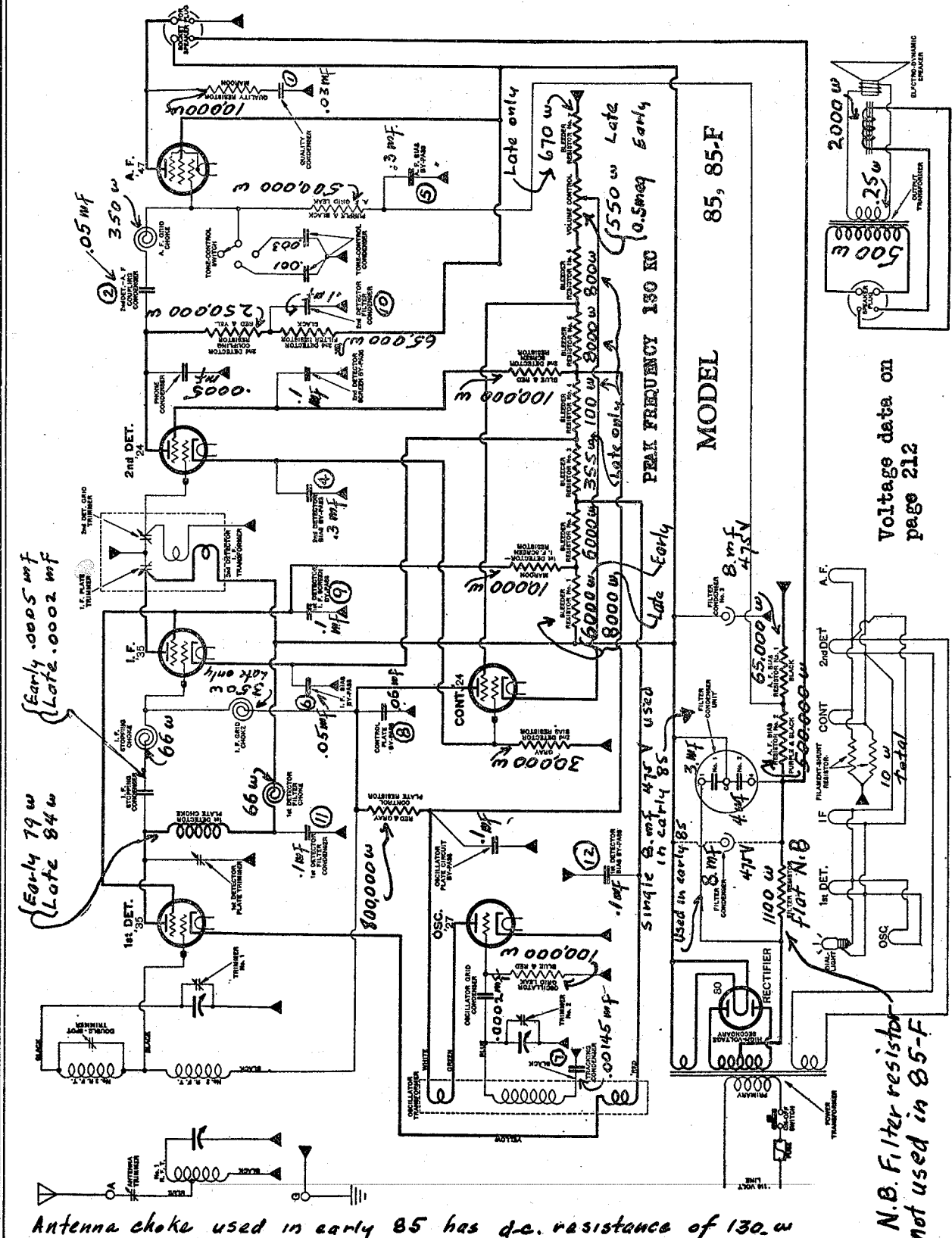


CHART OF MODEL 84-D. (EARLY TYPE WITHOUT TONE CONTROL.)

MODEL 85, 85-F

ATWATER KENT MFG. CO.



MODEL 85, 85-F

PEAK FREQUENCY 130 KC

Voltage data on page 212

Antenna choke used in early 85 has d.c. resistance of 130w

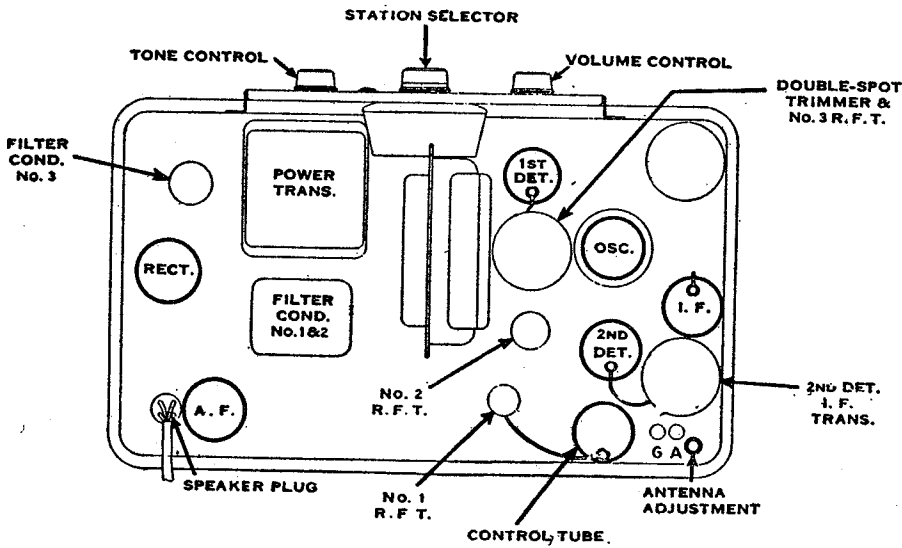
N.B. Filter resistor not used in 85-F

A few early-type Model 85 do not have automatic volume control; they have three electrolytic filter condensers; the circuit of these early Model 85 sets is similar to Model 80. The tracking condenser is mounted on the oscillator transformer in Model 82 and some 85 sets. The filament circuit of Model 82 is somewhat different from that shown above.

MODEL 85, 85-F

ATWATER KENT MFG. CO.

CONDENSERS



RF Bypass # 1
19160 Early
19980 Late
All 400 volts

RF Bypass # 2
19150 Early
19990 Late
All 400 volts

RF Bypass # 3
15262
All 400 volts

Tone Control
16490 Early
20010 Late
All 100 volts

TOP VIEW OF MODEL 85, 85-F.

The circle in the top right corner represents the shield for the coupling unit between the 1st-detector and I. F. tubes.

See schematic

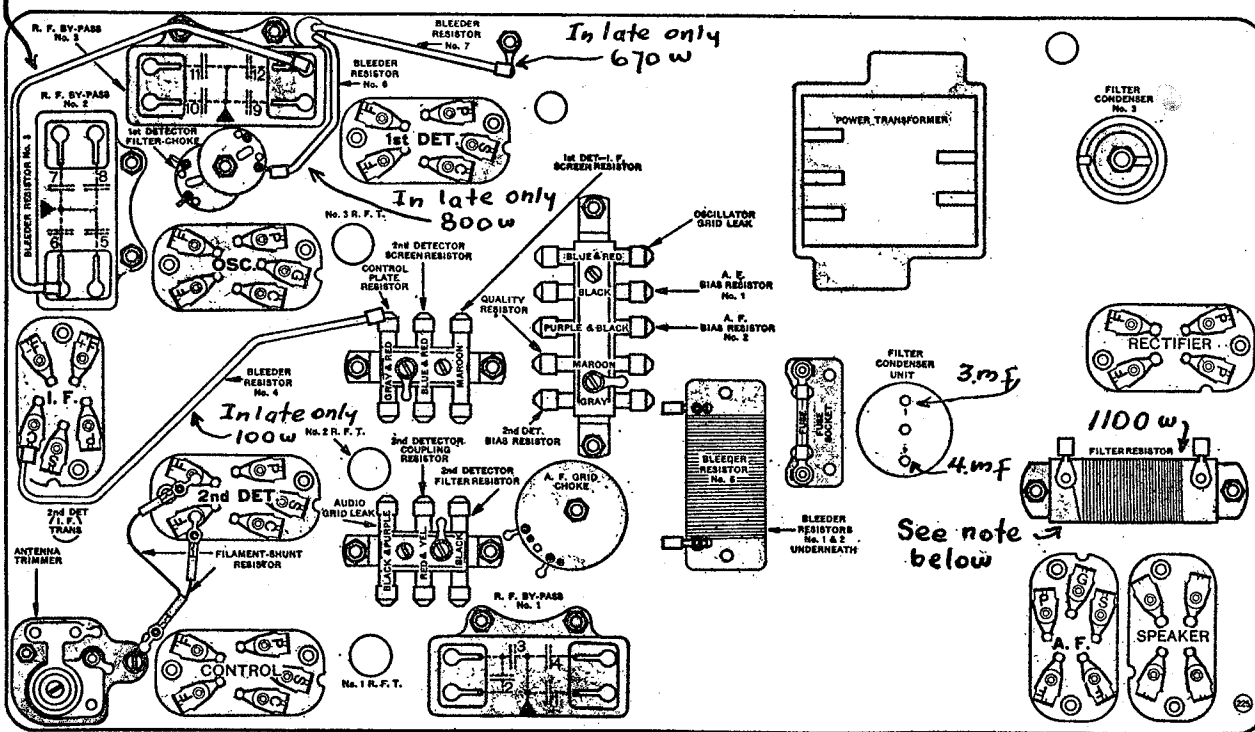


CHART OF MODEL 85, 85-F.

The filter resistor is not used in Model 85-F.

By-pass Condensers in Model 85, 85-F

R. F. By-pass No. 1

- 1—Quality condenser.
- 2—2nd-detector—A. F. coupling condenser.
- 3—Phone condenser.
- 4—2nd-detector bias by-pass.

R. F. By-pass No. 2

- 5—A. F. bias by-pass.
- 6—I. F. bias by-pass.
- 7—Tracking condenser.
- 8—Control-plate by-pass.

R. F. By-pass No. 3

- 9—1st-detector—I. F. screen by-pass.
- 10—2nd-detector filter condenser.
- 11—1st-detector filter condenser
- 12—1st-detector bias by-pass.

Tone-control Condenser (on front panel)

- Two top contacts—2nd-detector screen by-pass and oscillator plate-circuit by-pass.
- Two bottom contacts—tone-control condensers.