

Atwater Kent

	Model: 70	Chassis:	Year: Pre June 1933
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		

Resources

Riders Volume 1 - A.-K. 1-33

Riders Volume 1 - A.-K. 1-34

Riders Volume 1 - A.-K. 1-35

Riders Volume 1 - A.-K. 1-36

Riders Volume 1 - A.-K. 1-37

Riders Volume 1 - A.-K. 1-38

Riders Volume 1 - A.-K. 1-39

Riders Volume 1 - A.-K. 1-40

Riders Volume 1 - A.-K. 1-41

Riders Volume 1 - A.-K. 1-42

Riders Volume 1 - A.-K. 1-44

Riders Volume 1 - A.-K. 1-45

Riders Volume 1 - A.-K. 1-46

Riders Volume 3 - A-K 3-46

Riders Volume 3 - A-K 3-47

Riders Volume 3 - A-K 3-48

Riders Volume 3 - A-K 3-49

Riders Volume 3 - A-K 3-51

Riders Volume 3 - A-K 3-52

Riders Volume 3 - A-K 3-53

Riders Volume 3 - A-K 3-54

Riders Volume 3 - A-K 3-55

Riders Volume 3 - A-K 3-56

ATWATER KENT MFG. CO.

MODEL 70, 74, 76
Chassis D

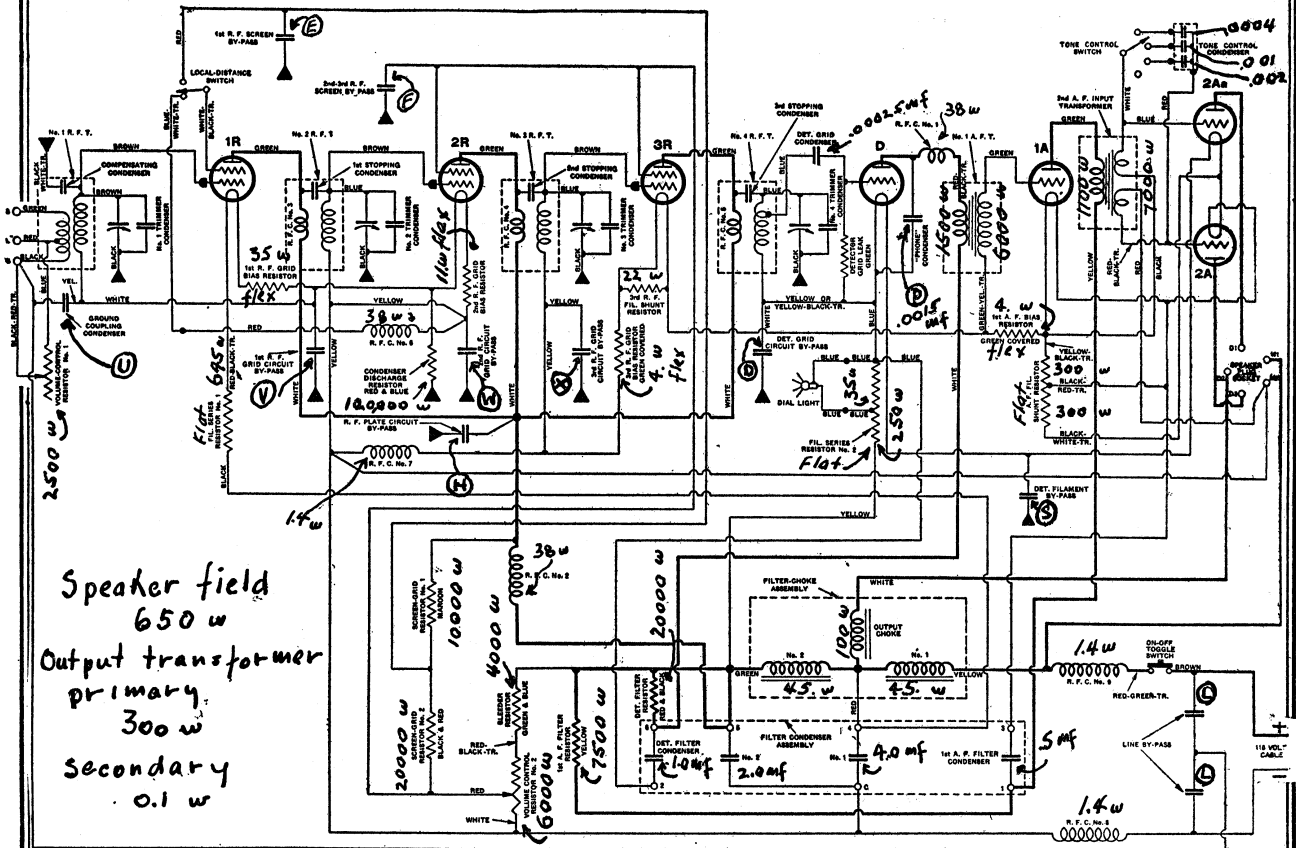


DIAGRAM OF D-1 CHASSIS.

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	# 16680
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

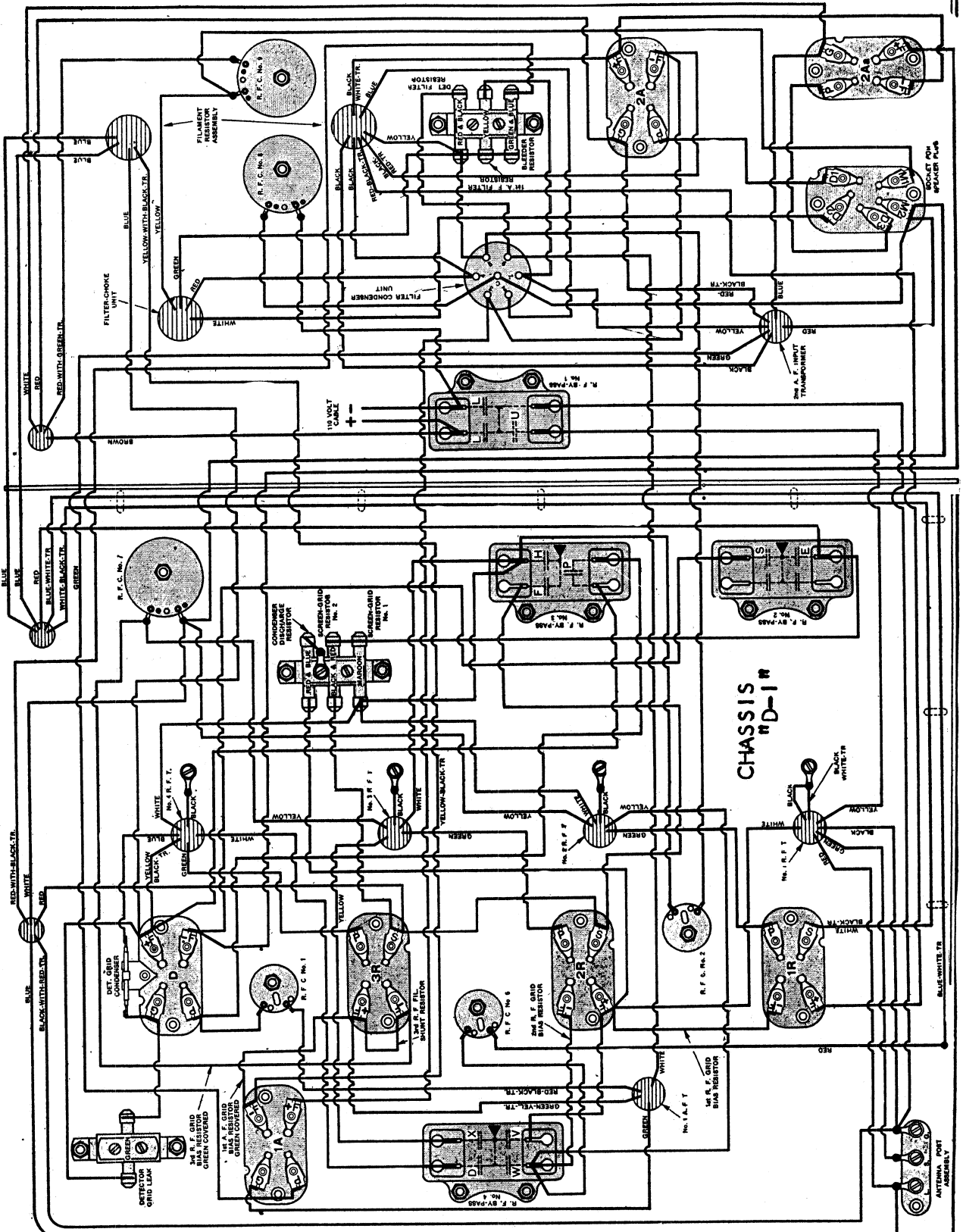
Tone control All condensers are rated at 100 volts

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

MODEL 70,74,76
Chassis "D-1"

ATWATER KENT MFG. CO.

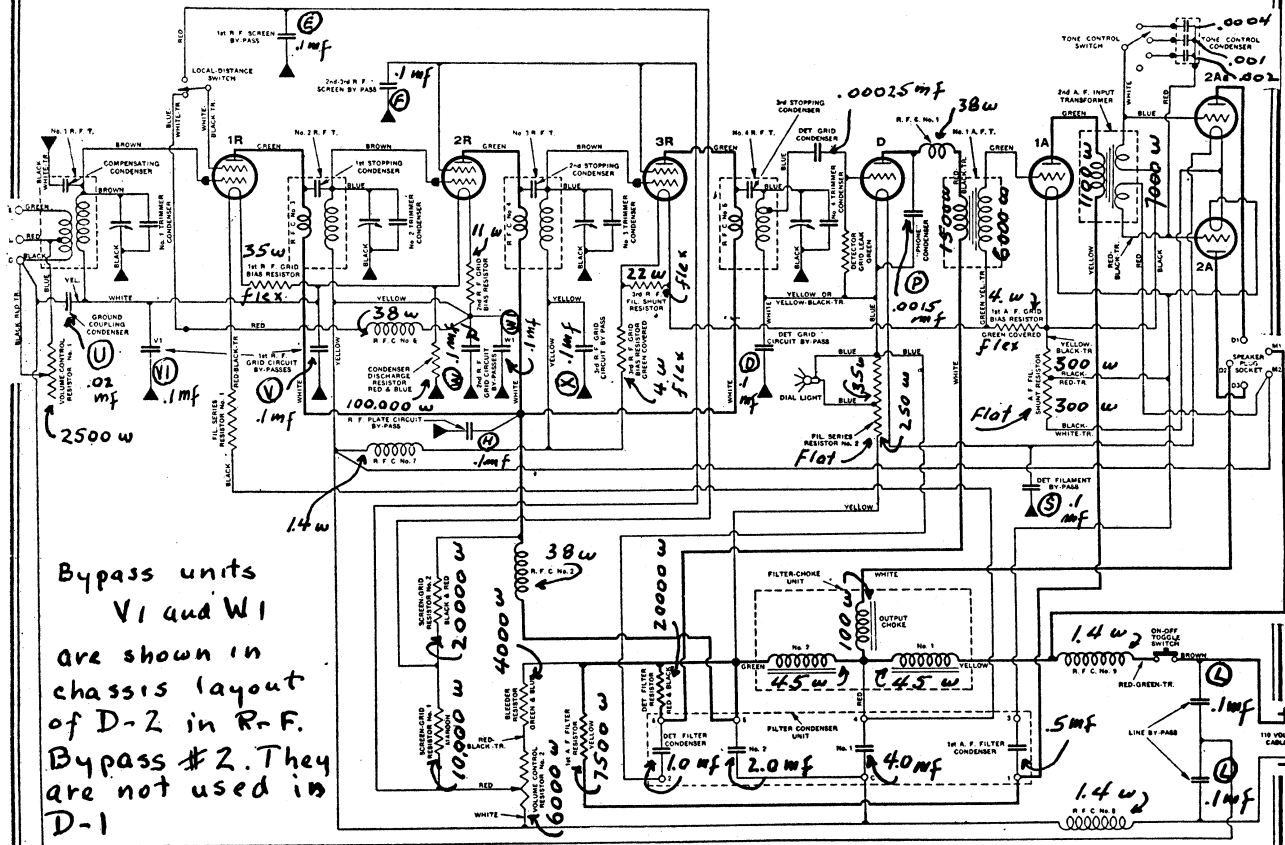


Voltage data on page 189

Voltage reference on page 1-35.

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

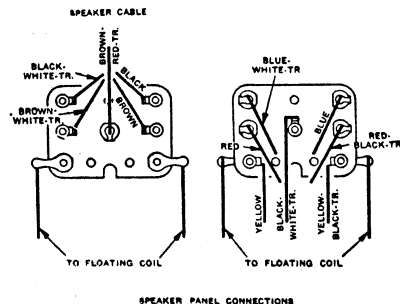
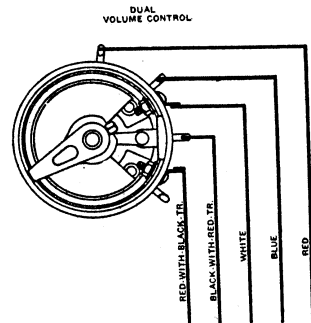
Set in operation. Volume control at maximum.
L-D switch at distance.

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	—

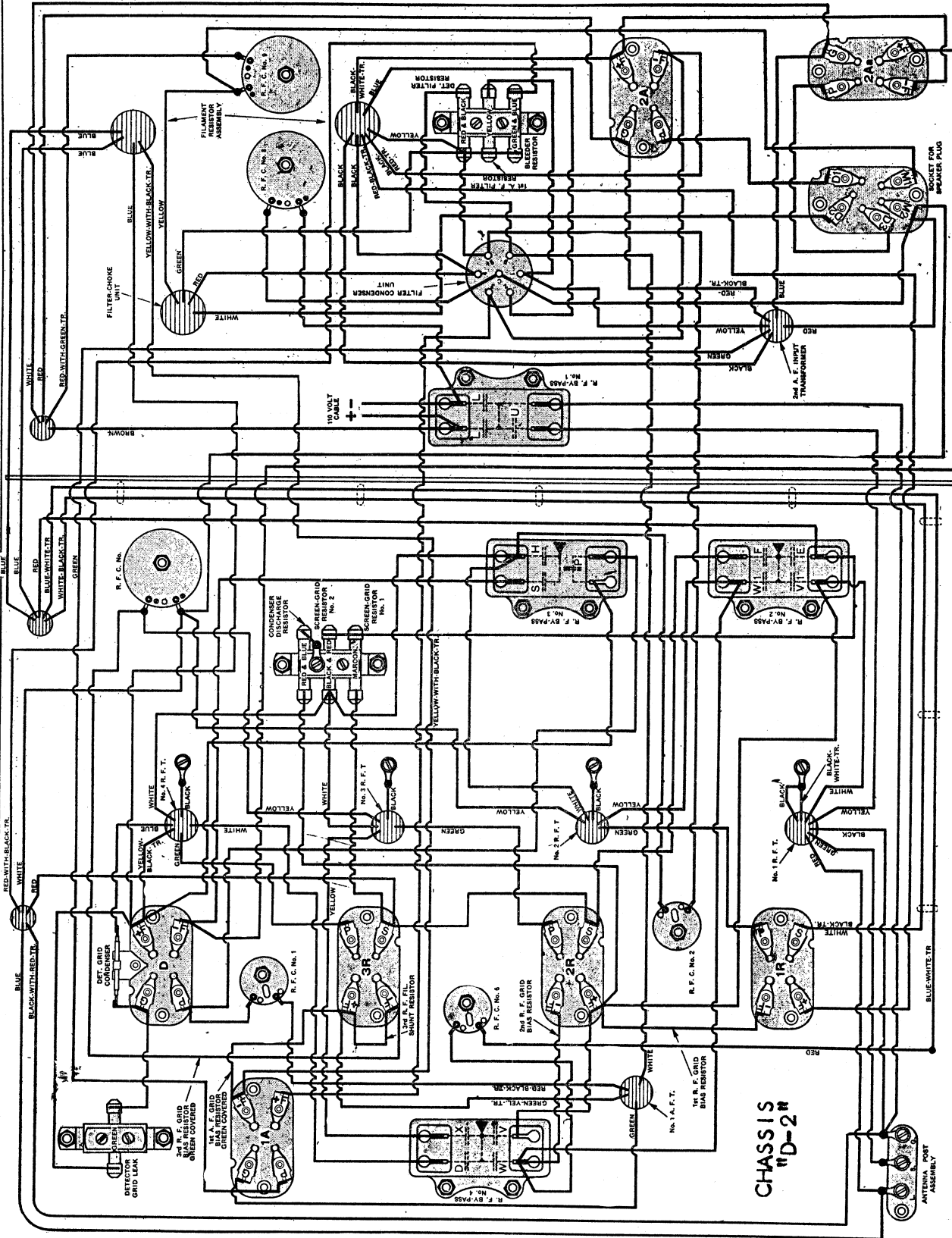
All readings made from cathode in heater-type tubes, and from -F in plain-filament-type tubes.
Use 250-volt scale to measure 2nd A. F. grid voltage.
*This is 50 volts in D-2 chassis.



SPEAKER PANEL CONNECTIONS

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

ATWATER KENT MFG. CO.

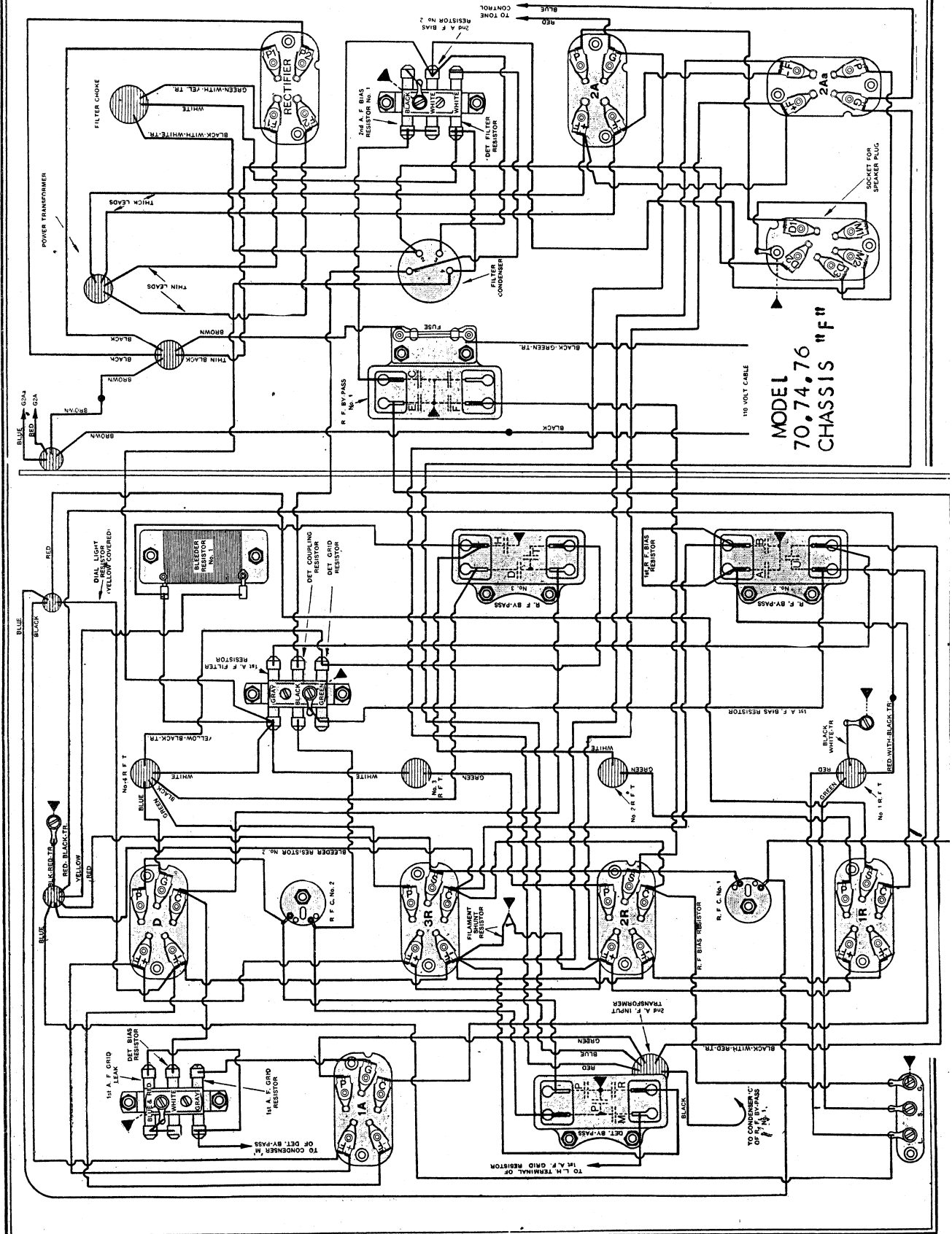


Voltage data on page 189

ATWATER KENT MFG. CO.

MODEL 70, 74 and 76 Chassis "F"

In some early Type F Chassis, a line by-pass condenser is used, and the 1st-A. F. grid resistor (gray) is omitted.

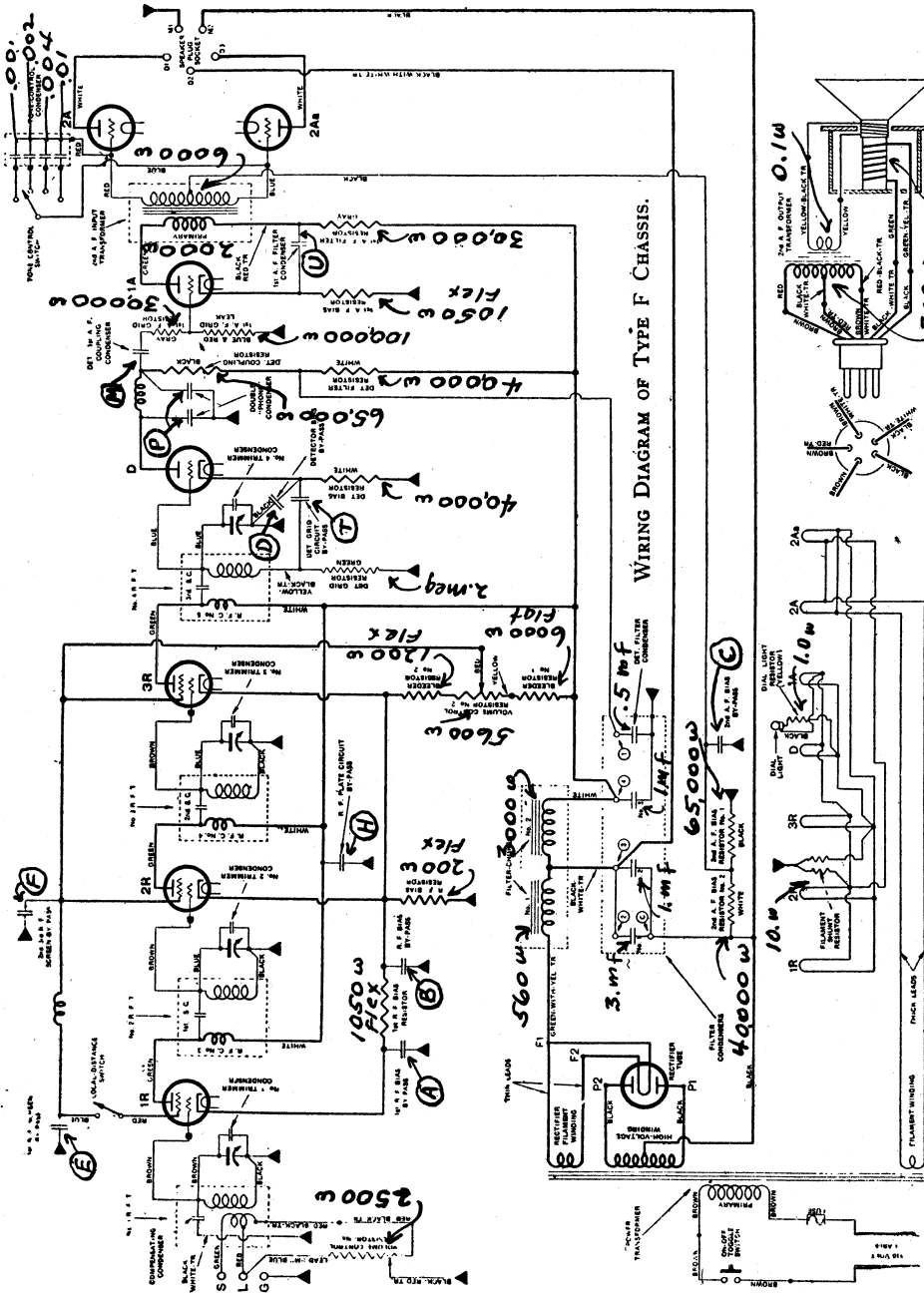


MODEL
70, 74, 76
CHASSIS "F"

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.P. grid lead 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

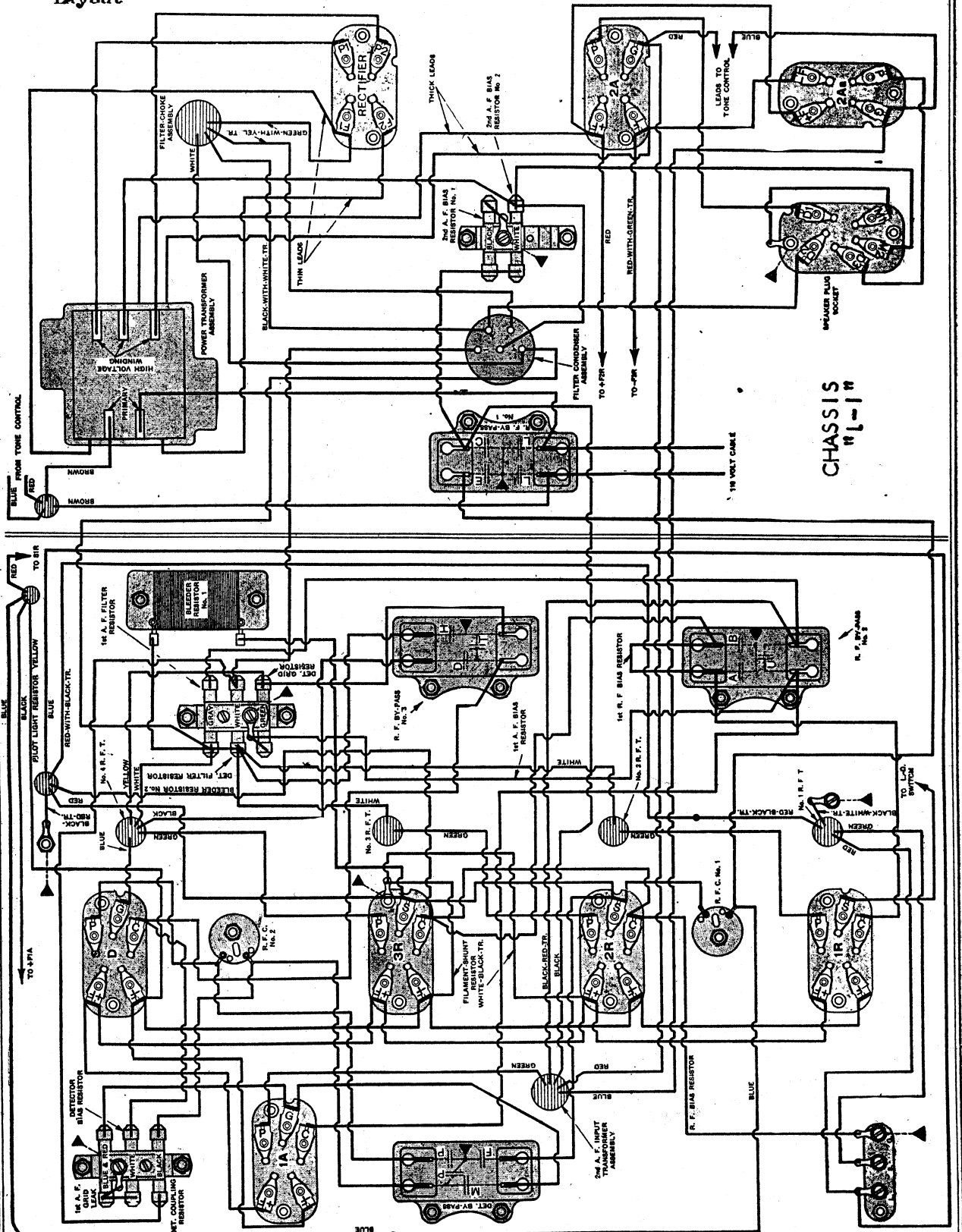
BYPASS CONDENSERS. The letters within the circles correspond with the designations within the bypass units shown in the chassis layout

RF Bypass #1	C	.1 mfd	400 volts	E	.1 mfd	400 volts	# 15790
	F	.01mfd	400 volts	(In very early F "F" is .1 mfd.)			
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	R	.1 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"
Layout

ATWATER KENT MFG. CO.



CHASSIS "L-1"

ATWATER KENT MFG. CO.

MODEL 70, 74, 76
Chassis L-2

BYPASS CONDENSERS. The letters within 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	# 15770
RF Bypass #2	A	.1 mfd	150 volts	U	.12 mfd	400 volts	# 15780
	B	.1 mfd	150 volts	H	.2 mfd	400 volts	# 15640
RF Bypass #3	D	.1 mfd	400 volts	M	.075 mfd	400 volts	# 15640
	T	.04 mfd	400 volts	P	.00025 mfd	400 volts	
Detector Bypass	F	.1 mfd	400 volts				
Tone Control		All condensers are rated at 100 volts					

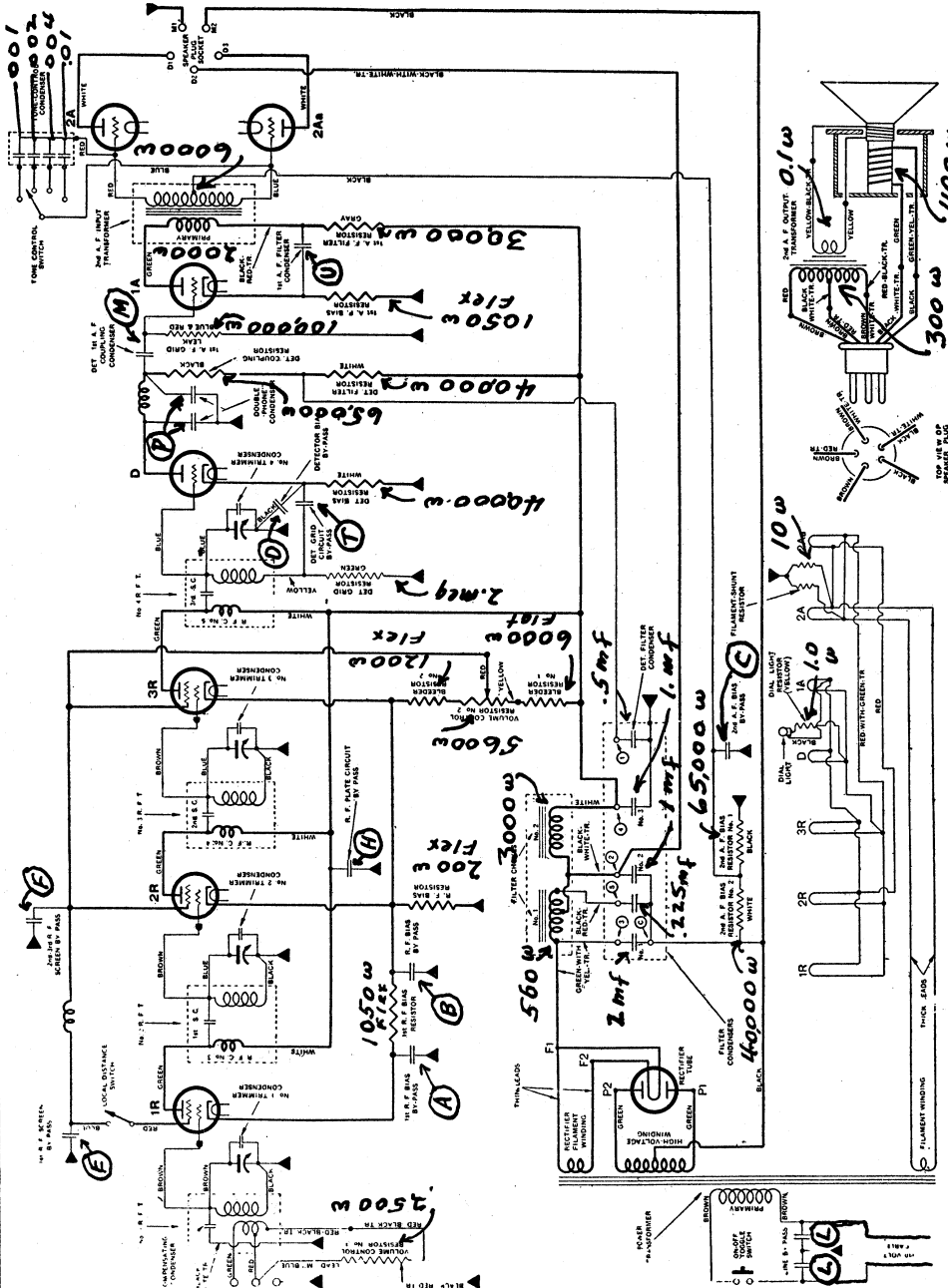


DIAGRAM OF L-2 CHASSIS.

In the majority of L-2 sets, the filament shunt resistor is connected across the R.F. filaments. Also, a 2-ampere fuse is connected in one side of the 110-volt line.

FILTER CONDENSERS. Numerals in circles designate connections upon filter condenser terminal block.

- 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

MODEL 70, 74, 76

ATWATER KENT MFG. CO.

Chassis "L-2"- "P"

Voltage Data

Notes

VOLTAGE TABLE FOR TYPE L-2 AND P CHASSIS

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

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

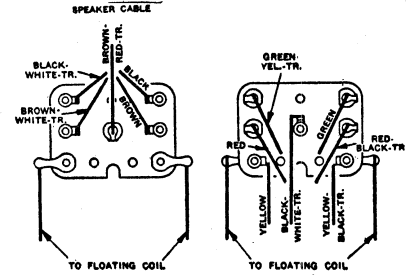
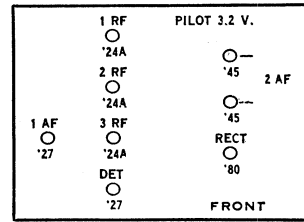
TUBE	FILAMENT VOLTAGE	PLATE VOLTAGE	CONTROL-GRID VOLTAGE	SCREEN VOLTAGE
1st-R.F.	2.4	180	5	85
2nd-R.F.	2.35	180	4.5	86
3rd-R.F.	2.35	180	4.5	86
Detector	2.35	110	14**	—
1st-A.F.	2.35	70	2	—
2A	2.45	250	55*	—
2Aa	2.45	250	55*	—
Rectifier	5.	—	—	—

* Use 250-volt scale.

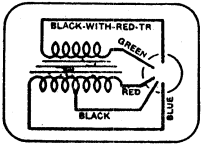
** This is the voltage across the detector bias resistor; when measuring from grid to cathode, the voltage reading is only 2.

All readings made from cathode in heater-type tubes, and from -F in plain-filament-type tubes.

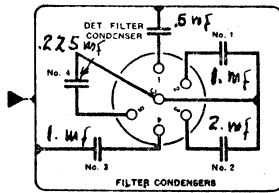
Models 75P, 70, 74, 76, 60 (3rd type) (1930)



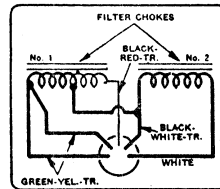
SPEAKER PANEL CONNECTIONS



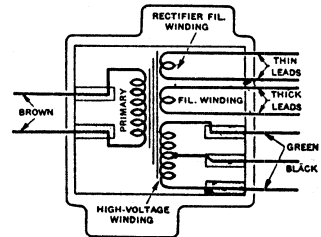
INPUT A. F. TRANSFORMER ASSEMBLY



FILTER CONDENSER ASSEMBLY



FILTER-CHOKES ASSEMBLY



POWER TRANSFORMER ASSEMBLY

DUAL VOLUME CONTROL

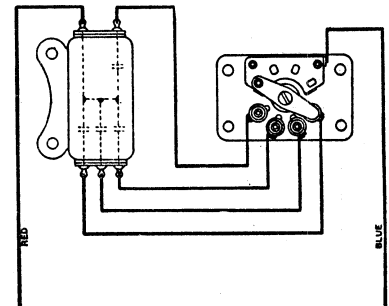
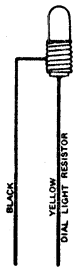
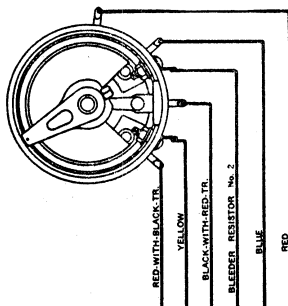
LOCAL-DISTANCE SWITCH

ON-OFF SWITCH

DIAL LIGHT

TO NE CONTROL CONDENSER

TO NE 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.

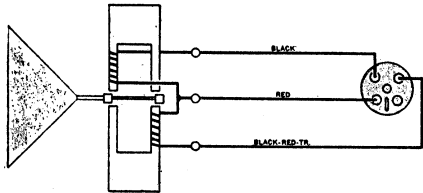
CONNECTION OF UNITS IN TYPE L-2 CHASSIS, AND, AT RIGHT, CONNECTIONS TO TERMINAL PANEL OF TYPE N SPEAKER.

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

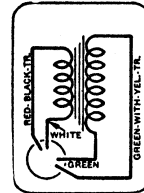
- G—R.F. screen by-pass.
- V—1st-R.F. grid-circuit by-pass.
- Y—Output filter condenser.
- N—1st-R.F. filament by-pass.

R.F. By-Pass No. 2*

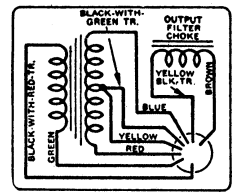
- H—R.F. plate-circuit by-pass.
- T—Detector filter condenser.
- P—"Phone" condenser.
- P—"Phone" condenser.

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.

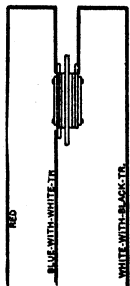


No. 1 A. F. T.

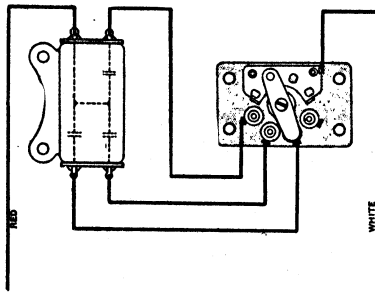


2nd A. F. INPUT TRANSFORMER

LOCAL-DISTANCE SWITCH

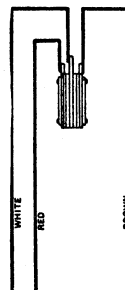


PHONE CONTROL CONDENSER



PHONE CONTROL SWITCH

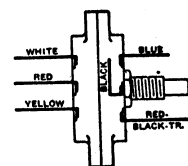
UP-DOWN TOGGLE SWITCH



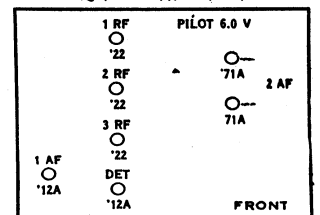
DIAL LIGHT



DUAL VOLUME CONTROL



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



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

ATWATER KENT MFG. CO.

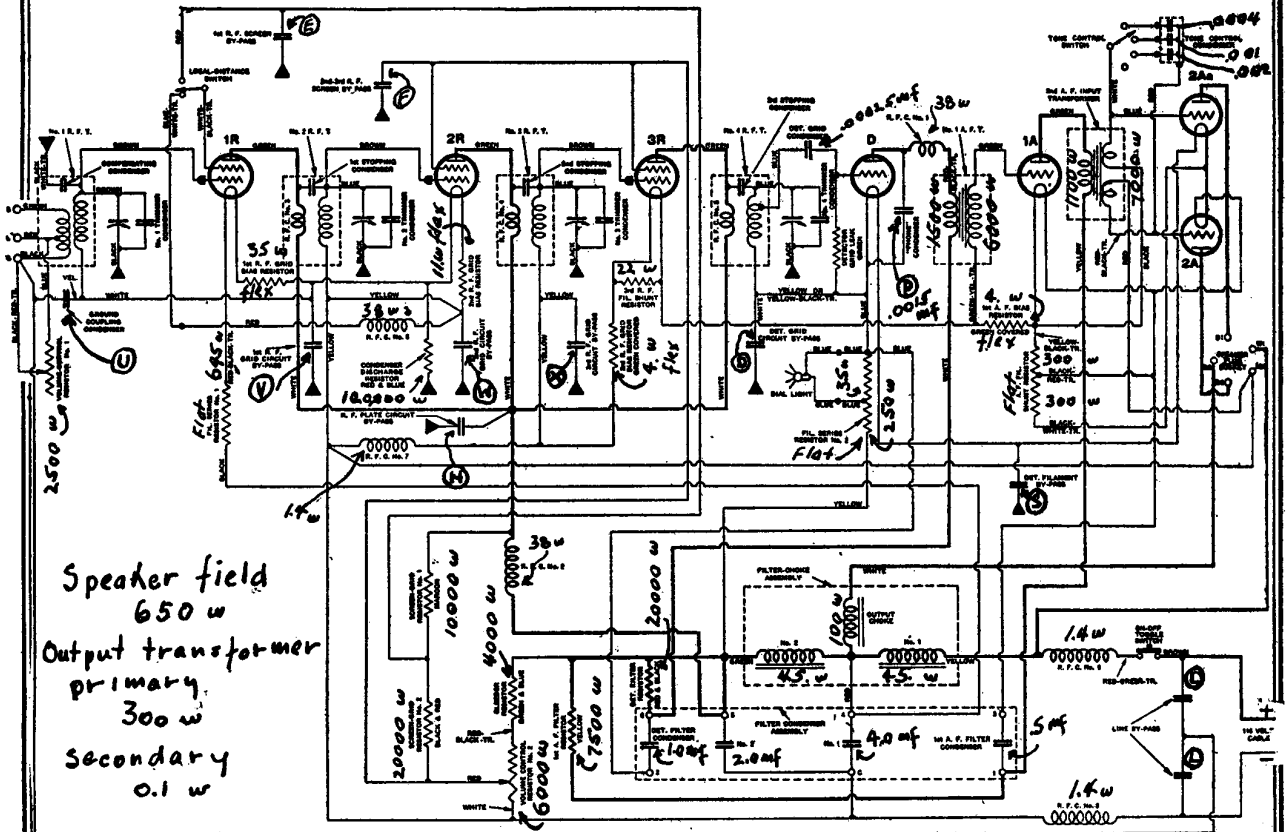
MODEL 70, 74, 76
Chassis D

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	# 16880
	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

MODEL 70,74,76

ATWATER KENT MFG. CO.

Voltage and Data

VOLTAGE TABLE FOR TYPE F CHASSIS

Set in operation. Volume control at maximum
LD 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

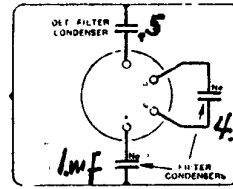
TUBE	FILAMENT VOLTAGE	PLATE VOLTAGE	CONTROL-GRID VOLTAGE	SCREEN VOLTAGE
1st-R.F.	2.5	180	6	92
2nd-R.F.	2.5	180	4	93
3rd-R.F.	2.5	180	4	93
Detector	2.5	117	30**	—
1st-A.F.	2.4	70	2	—
2A	2.7	250	55*	—
2Aa	2.7	250	55*	—

All readings made from cathode in heater-type tubes, and from -F in plain-filament-type tubes.

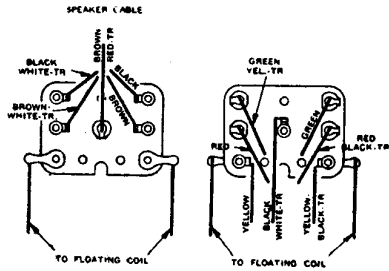
* Use 250-volt scale.

** This is the voltage across the detector bias resistor; when measuring from grid to cathode, the voltage reading is only 2.

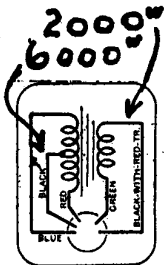
This condenser is used in late production.



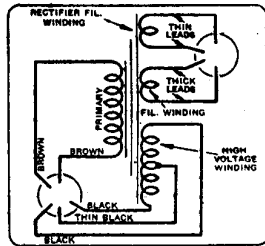
FILTER CONDENSER UNIT



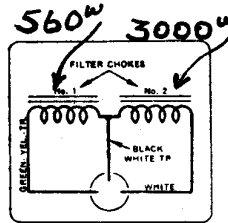
SPEAKER PANEL CONNECTIONS



2nd A. F. INPUT TRANSFORMER



POWER TRANSFORMER



FILTER CHOKES UNIT

DUAL VOLUME CONTROL

LOCAL-DISTANCE SWITCH



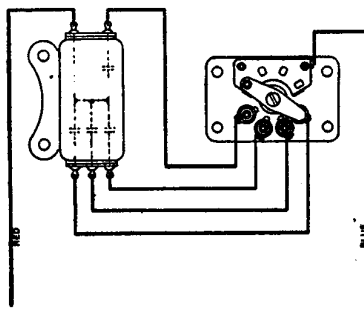
ON-OFF SWITCH



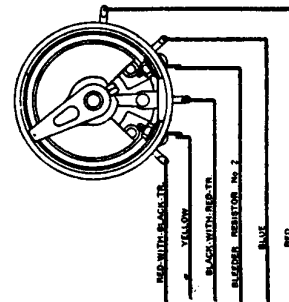
DIAL LIGHT



TONE CONTROL CONDENSER



TONE CONTROL SWITCH



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

- C—2nd-A.F. bias by-pass.
- E—1st-R.F. screen by-pass.
- F—2nd-3rd-R.F. screen by-pass.

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 Detector By-Pass

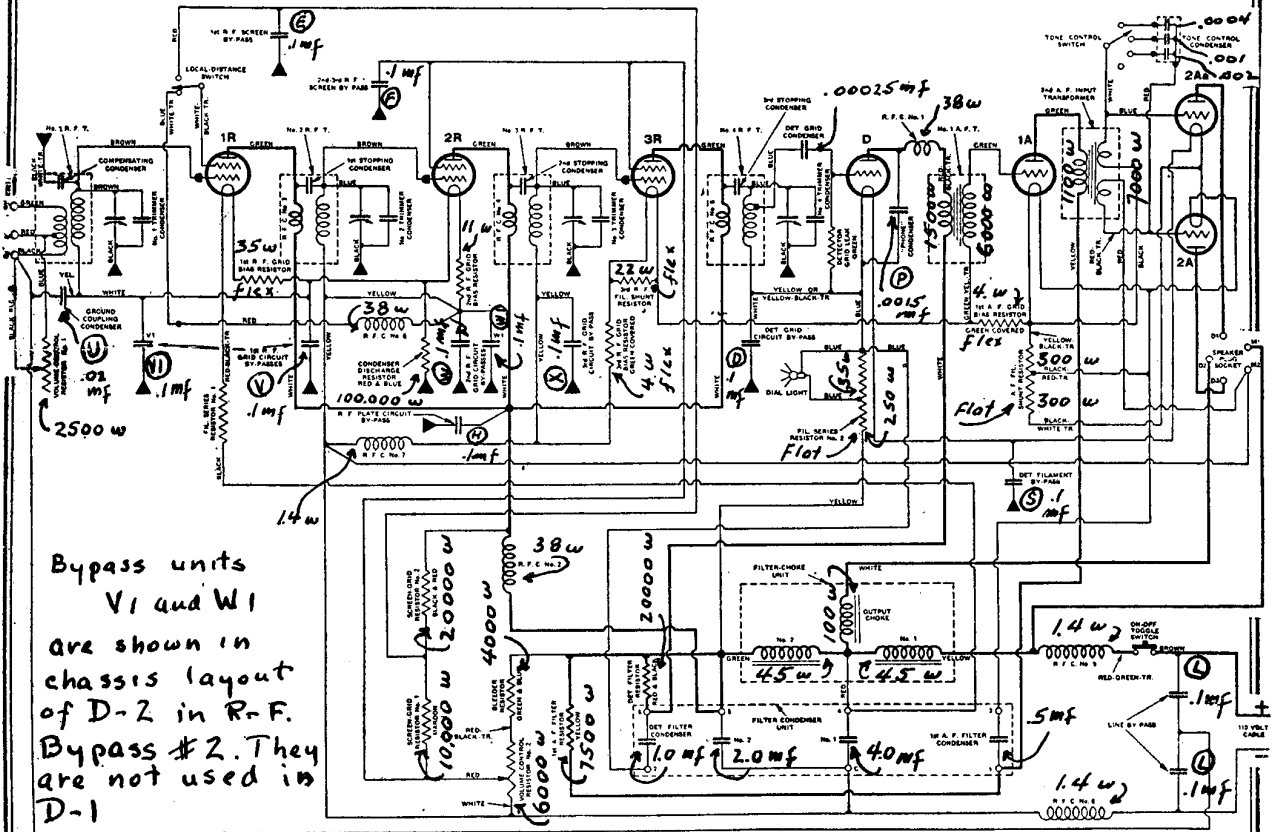
- M—Detector-1st A.F coupling condenser
- P—"Phone" condenser.
- P—"Phone" condenser.
- R—Filament by-pass.

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

ATWATER KENT MFG. CO.

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



Bypass units
V1 and W1
are shown in
chassis layout
of D-2 in R-F.
Bypass #2. They
are not used in
D-1

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

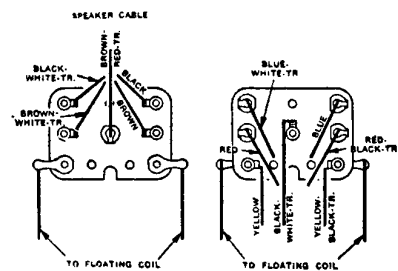
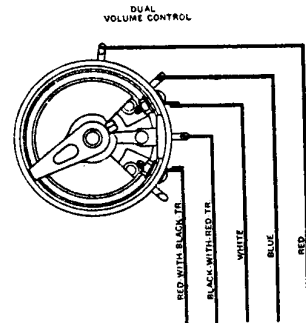
Set in operation. Volume control at maximum.
L-D switch at distance.

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	0	—
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

ATWATER KENT MFG. CO.

MODEL 70 Series
Service Notes
"L-1"
Voltage

ADJUSTING TRIMMER CONDENSERS

When adjusting the trimmer condensers, it is necessary to have a four-wave oscillator, providing modulated signals at 1500, 1000, 800 and 600 kilocycles. The oscillator signals should come in at exactly these settings on two or more Type L sets **THAT HAVE THE ORIGINAL FACTORY SYNCHRONISM.**

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 post.
2. Connect the output measuring circuit shown in Figure 259 to the speaker-plug socket on the set. Close S₂ and S₃. Throw S₁ to the left.
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. Turn pointer exactly to the 1500 K. C. mark. Reduce or increase the amount of pick-up from the 1500 K. C. oscillator to secure a reading of about 20 on the output meter.
5. With a screw-driver, turn the pressure screw of the 4th trimmer condenser (on front variable 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.

IMPORTANT SERVICE NOTES

1. In the Types L, F, P, D and Q chassis receivers, it is very important to arrange the three control-grid leads to the screen-grid tubes exactly parallel to each other. If these leads are not parallel, and two of them come close together, the dial readings will not be accurate, especially at the high-frequency end of the scale.
2. When replacing a flexible resistor, care must be taken to use a resistor having the same value. In the event of any uncertainty, make a continuity meter reading of a good resistor of the same type in a stock set, and then use a replacement resistor that gives the same reading on the continuity meter
3. A number of different code markings may be used to identify by-pass condensers that have the same part number. If the part number is the same, the condensers are interchangeable, even though the code markings are different.

VOLTAGE TABLE FOR TYPE L-1 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.	2.4	185	6	85
2nd-R.F.	2.35	185	4.5	86
3rd-R.F.	2.35	185	4.5	86
Detector	2.35	120	12**	—
1st-A.F.	2.35	75	3.5	—
2A	2.45	265	55*	—
2Aa	2.45	265	55*	—
Rectifier	5.			

In order to identify modifications of each chassis, where such modifications require new part numbers, a numeral is used after the type letter. Thus the 1st style of Type L chassis (below No. 6,234,881) is termed Type L-1, and the 2nd style (above No. 6,234,881) is termed Type L-2. This marking is for use only in Service literature and will not appear on the serial-number plates

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						

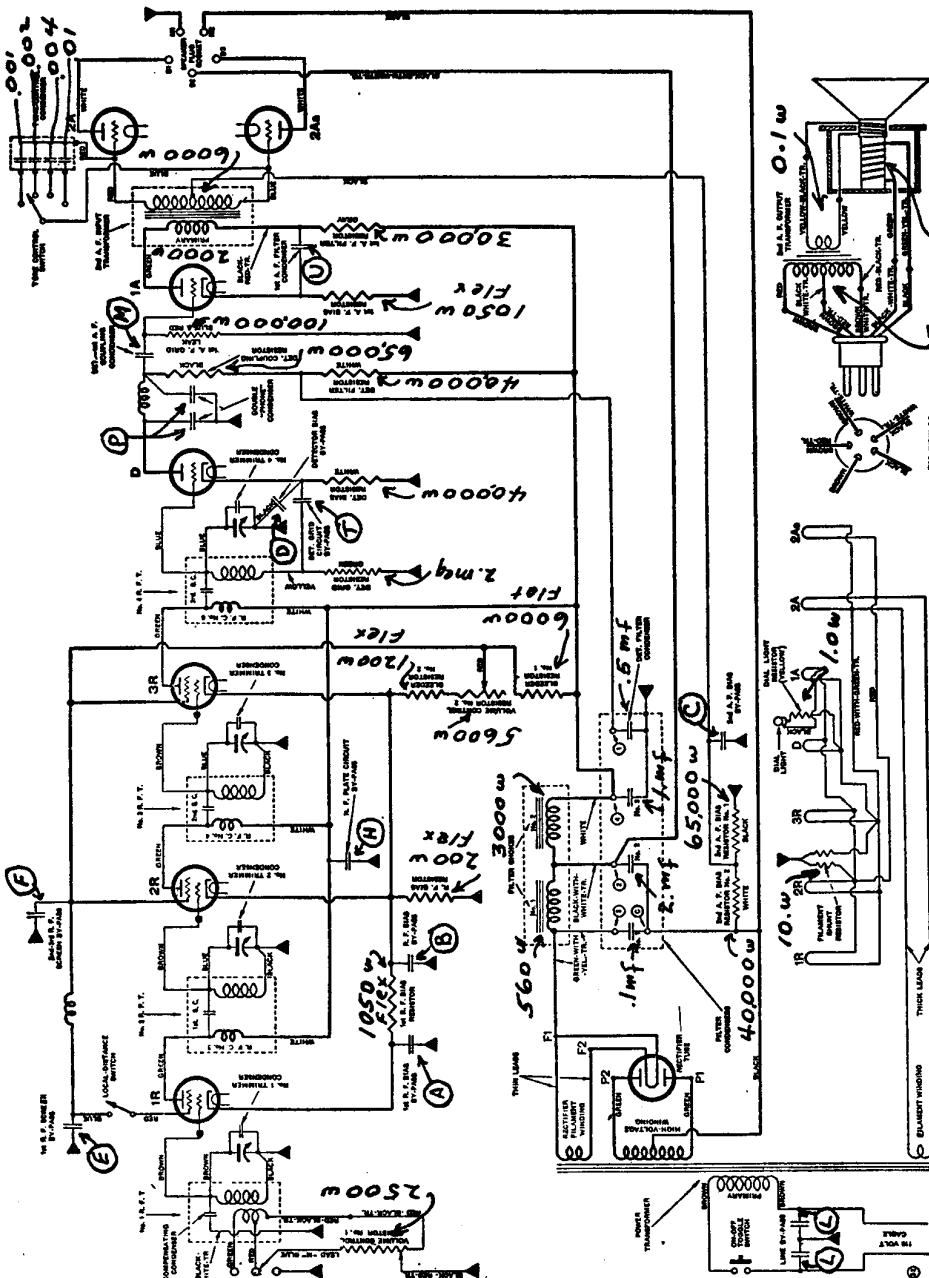


DIAGRAM OF L-1 CHASSIS.

FILTER CONDENSERS

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

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

ATWATER KENT MFG. CO. MODEL 70, 74, 76
Chassis L-2

BYPASS CONDENSERS. The letters within 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 are rated at 100 volts						

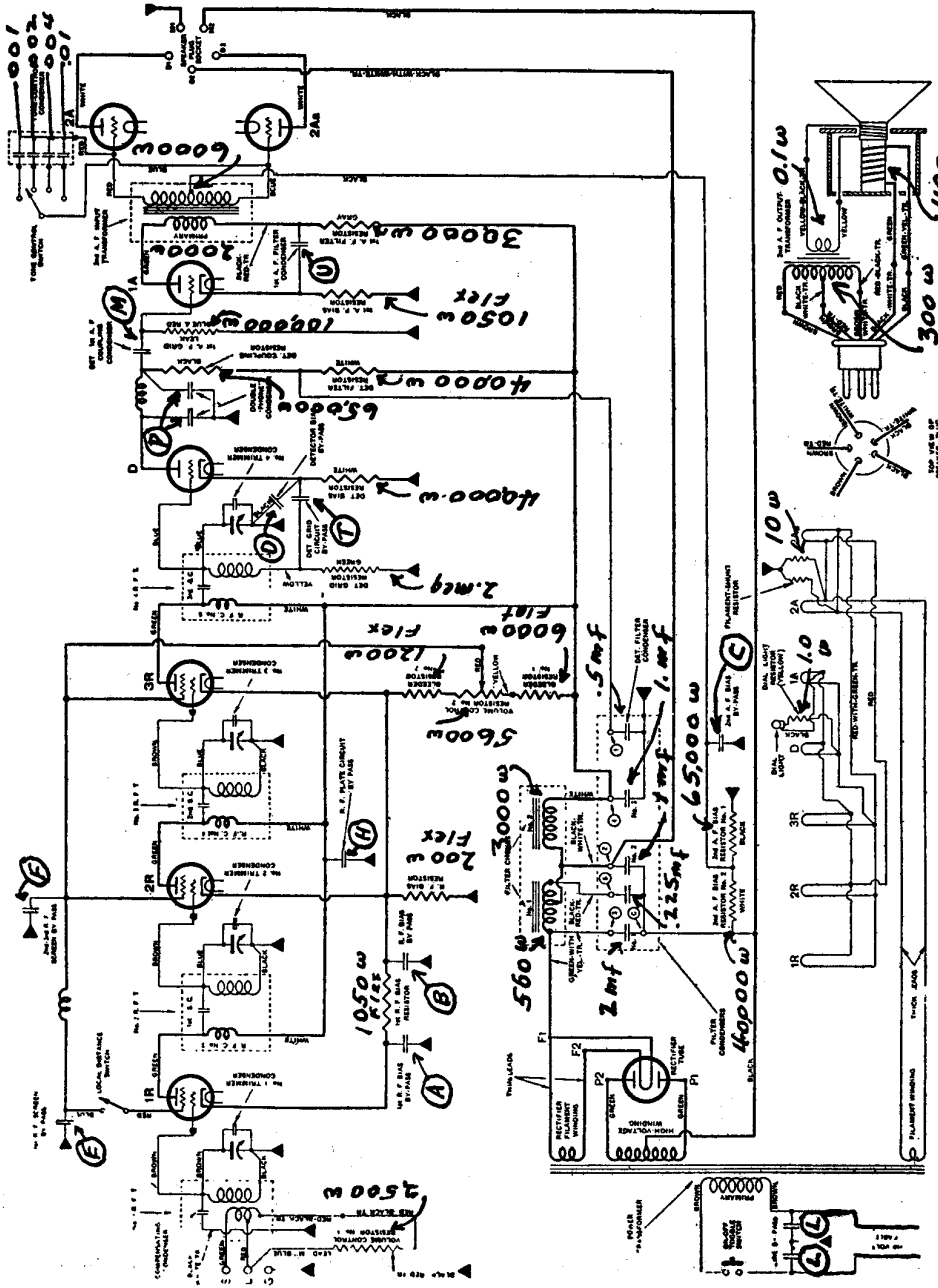


DIAGRAM OF L-2 CHASSIS.

In the majority of L-2 sets, the filament shunt resistor is connected across the R.F. filaments. Also, a 2-ampere fuse is connected in one side of the 110-volt line.

FILTER CONDENSERS. Numerals in circles designate connections upon filter condenser terminal block.

- 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

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.
 LD (or 'phono) switch up.

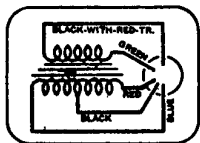
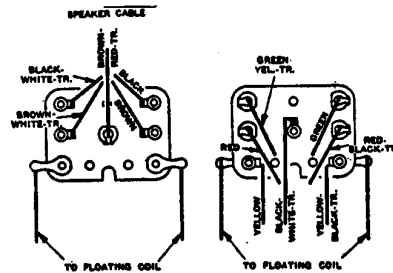
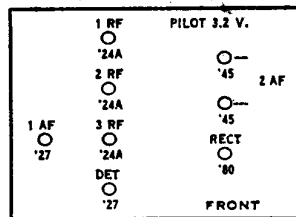
Use Hi_hn Resistance D. C. Voltmeter (about 0-50-250) to Measure Plate and Grid Voltages.
 Use A. C. Voltmeter to Measure Filament Voltages.

APPROX. VOLTAGES, USING 120 V. LINE

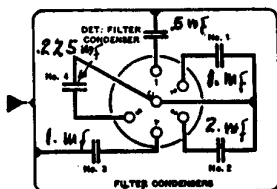
TUBE	FILAMENT VOLTAGE	PLATE VOLTAGE	CONTROL-GRID VOLTAGE	SCREEN VOLTAGE
1st-R.F.	2.4	180	5	85
2nd-R.F.	2.35	180	4.5	86
3rd-R.F.	2.35	180 </td <td>4.5</td> <td>86</td>	4.5	86
Detector	2.35	110	14**	—
1st-A.F.	2.35	70	2	—
2A	2.45	250	55*	—
2Aa	2.45	250	55*	—
Rectifier	5.	—	—	—

* 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.

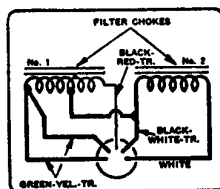
Models 75P, 76, 74, 76, 60 (3rd type) (1930)



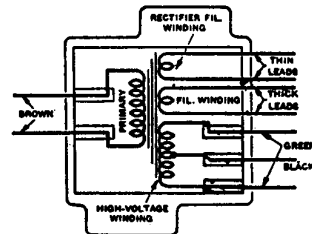
INPUT A. F. TRANSFORMER ASSEMBLY



FILTER CONDENSER ASSEMBLY



FILTER-CHOKES ASSEMBLY



POWER TRANSFORMER ASSEMBLY

DUAL VOLUME CONTROL

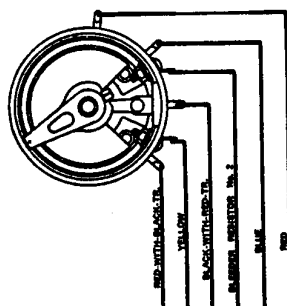
LOCAL-DISTANCE SWITCH

ON-OFF SWITCH

DIAL LIGHT

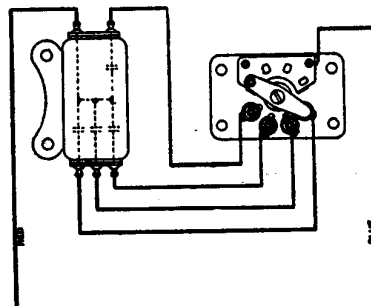
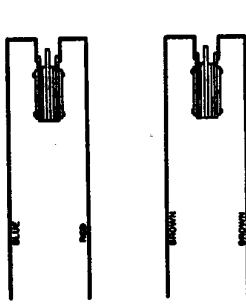
TO NE CONTROL CONDENSER

TO NE 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.

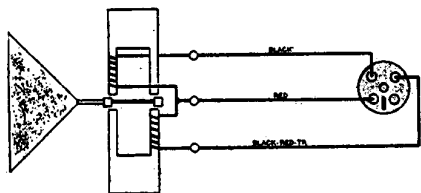
CONNECTION OF UNITS IN TYPE L-2 CHASSIS, AND, AT RIGHT, CONNECTIONS TO TERMINAL PANEL OF TYPE N SPEAKER.

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

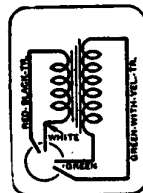
- G—R.F. screen by-pass.
- V—1st-R.F. grid-circuit by-pass.
- Y—Output filter condenser.
- N—1st-R.F. filament by-pass.

R.F. By-Pass No. 2*

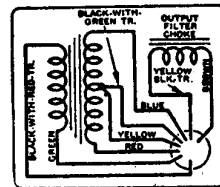
- H—R.F. plate-circuit by-pass.
- T—Detector filter condenser.
- P—"Phone" condenser.
- P—"Phone" condenser.

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.

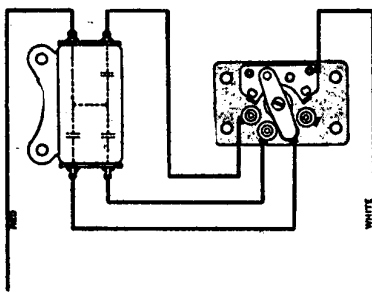


2nd A.F. INPUT TRANSFORMER

LOCAL-DISTANCE SWITCH



TO NE CONTROL CONDENSER



TO NE CONTROL SWITCH

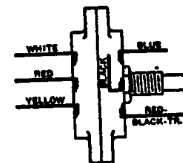


UP-DOWN TOGGLE SWITCH



DIAL LIGHT

DIAL 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)

