

ATWATER KENT RADIO

SERVICE DATA

WITH

PARTS AND PRICE LIST FOR

MODELS 81, 81-B, 81-C, 82-D, 82-Q, 85-Q, 86, 87 AND 89 (Late Types)

AND

MODELS 90, 90-F, 92, 92-F, 93, 94, 94-F, 96, 96-F, 99, 99-F AND 99-P

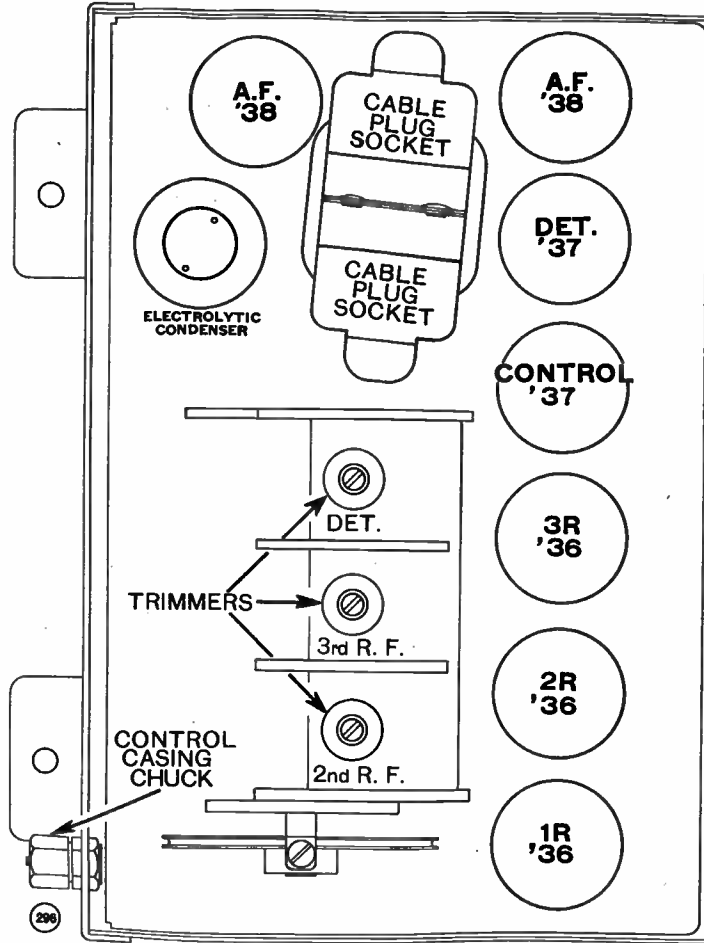
TABULATED DATA FOR MODELS DESCRIBED IN THIS SUPPLEMENT

All receivers described in this supplement, with the exception of Model 81, 81-B, and 81-C, employ the super-heterodyne circuit with an intermediate frequency of 130 kilocycles. The intermediate frequency of Model 93 short-wave converter is 1000 kilocycles.

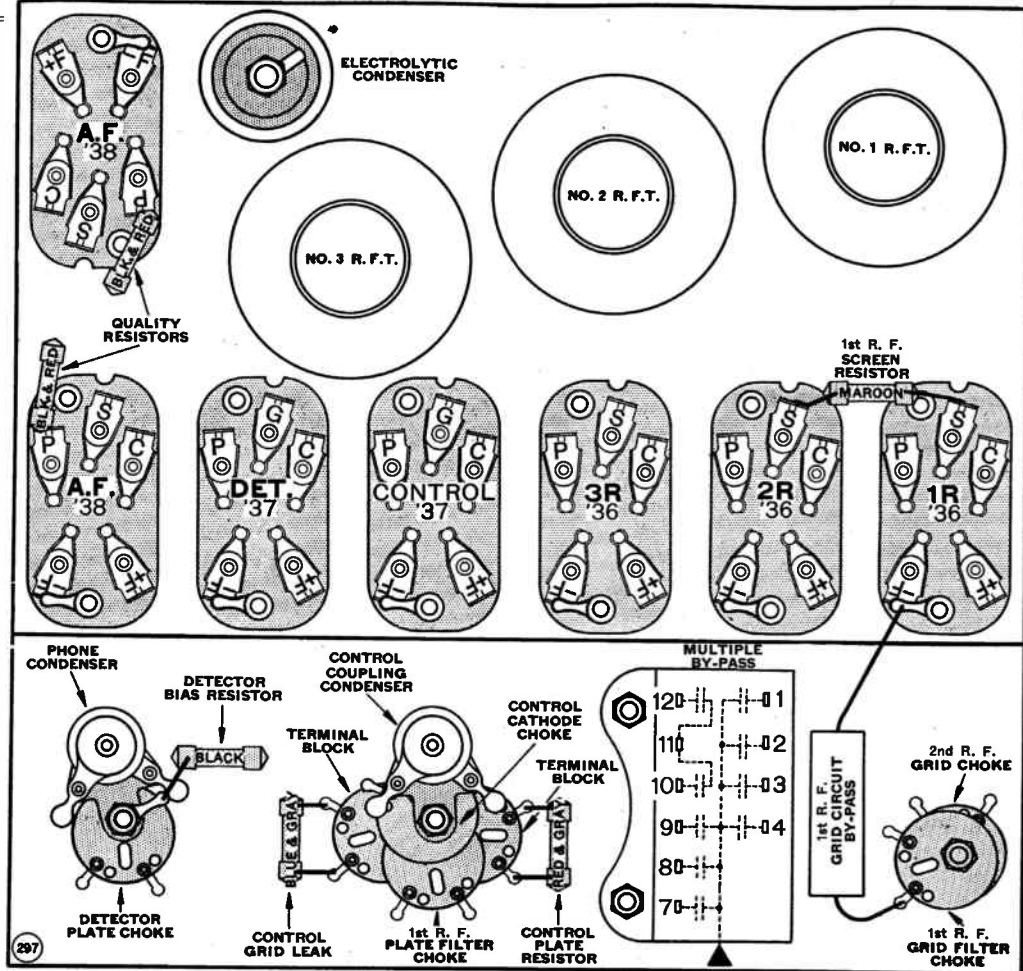
Model No.	Power Supply	Chassis Serial Nos.	Part No. Complete	Part No. Chassis	Part No. Speaker	Neon Tuning Light	Auto-matic Vol. Control	Tone Control	Local-Dis-tance Switch	TUBES								
										R.F.	1st I.F. Det.	2nd I.F. Det.	1st A.F.	2nd A.F.	Osc.	Control Rect. Tube		
81	Battery	All	20300	22750	22600	No	Yes	No	No	36(3)	37	—	—	38(2)	—	—	37	—
81-B	Battery	All	25600	24190	22600	No	Yes	No	No	36(3)	37	—	—	38(2)	—	—	37	—
81-C	Battery	All	25700	24190	22600	No	Yes	No	No	36(3)	37	—	—	38(2)	—	—	37	—
82-D 2nd Type	110-Volt D. C.	Above 5760301	21800	26170	18600	No	No	Yes	No	—	36	36	36	37	33	37	—	—
82-Q 2nd Type	Battery	Above 2550940	21900	25480	18400	No	Yes	Yes	Yes	32	32	32	32	30	33	30	—	—
85-Q 2nd Type	Battery	Above 163767	22200	22200C	19900	No	Yes	Yes	Yes	32	32	32	32	30	33	30	—	—
86 2nd Type	110-Volt 60-Cycle	Above 5876861	23000	23000C	24600	No	Yes	Yes	Yes	35	35	35	24	47	—	27	24	80
86-F 2nd Type	110-Volt 25-Cycle	Above 7168925	24700	24700C	24600	No	Yes	Yes	Yes	35	35	35	24	47	—	27	24	80
87 3rd Type	110-Volt 60-Cycle	Above 2525871	21200	21200C	19800	No	No	Yes	Yes	35	35	35	27	27	47(2)	27	—	80
89 3rd Type	110-Volt 60-Cycle	Above 6755181	21300	21300C	19800	No	Yes	Yes	Yes	35	35	35	27	27	47(2)	27	24	80
89-F 3rd Type	110-Volt 25-Cycle	Above 1585395	22400	22400C	19800	No	Yes	Yes	Yes	35	35	35	27	27	47(2)	27	24	80
89-P 3rd Type	110-Volt 60-Cycle	Above 1935904	20000	20000C	19800	No	Yes	Yes	Yes	35	35	35	27	27	47(2)	27	24	80
90	110V., 60C.	All	25800	24320	17300	No	No	Yes	No	35	35	35	24	47	—	27	—	80
90-F	110V., 25C.	All	26500	25110	17300	No	No	Yes	No	35	35	35	24	47	—	27	—	80
92	110V., 60C.	All	25900	24330	17300	No	Yes	Yes	Yes	35	35	35	24	47	—	27	27	80
92-F	110V., 25C.	All	26600	25120	17300	No	Yes	Yes	Yes	35	35	35	24	47	—	27	27	80
93	110-Volt 25 to 60-C.	All	27200	25430	—	No	No	No	No	—	24	27	—	—	—	27	—	80
94	110V., 60C.	All	26000	26000C	26300	No	No	Yes	No	35	35	35	24	47	—	27	—	80
94-F	110V., 25C.	All	26700	26700C	26300	No	No	Yes	No	35	35	35	24	47	—	27	—	80
96 1st Type	110-Volt 60-Cycle	Below 7289385	26100	26100C	26300	Yes	Yes	Yes	Yes	35	35	35	24	47	—	27	27	80
96 2nd Type	110-Volt 60-Cycle	7289385 to 7291674	26100	26100C	26300	Yes	Yes	Yes	Yes	35	35	35	24	47	—	27	27	80
96 3rd Type	110-Volt 60-Cycle	Above 7291674	26100	26100C	26300	Yes	Yes	Yes	Yes	35	35	35	24	47	—	27	27	80
96-F	110V., 25C.	All	26800	26800C	26300	Yes	Yes	Yes	Yes	35	35	35	24	47	—	27	27	80
99 1st Type	110-Volt 60-Cycle	Below 4882380	26200	26200C	26400	Yes	Yes	Yes	Yes	35	35	35	27	27	47(2)	27	24	80
99 2nd Type	110-Volt 60-Cycle	4882380 to 4884901	26200	26200C	26400	Yes	Yes	Yes	Yes	35	35	35	27	27	47(2)	27	24	80
99 3rd Type	110-Volt 60-Cycle	Above 4884901	26200	26200C	26400*	Yes	Yes	Yes	Yes	35	35	35	27	27	47(2)	27	24	80
99-F	110V., 25C.	All	26900	26900C	26400	Yes	Yes	Yes	Yes	35	35	35	27	27	47(2)	27	24	80
99-P	110V., 60C.	All	27400	27400C	26400*	Yes	Yes	Yes	No	35	35	35	27	27	47(2)	27	24	80

*In Model 99-P and the 3rd type of Model 99, the field coil resistance is higher than in the early types of Model 99. The speaker plug and socket are colored green for identification.

TOP VIEW.



BOTTOM CHART.



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

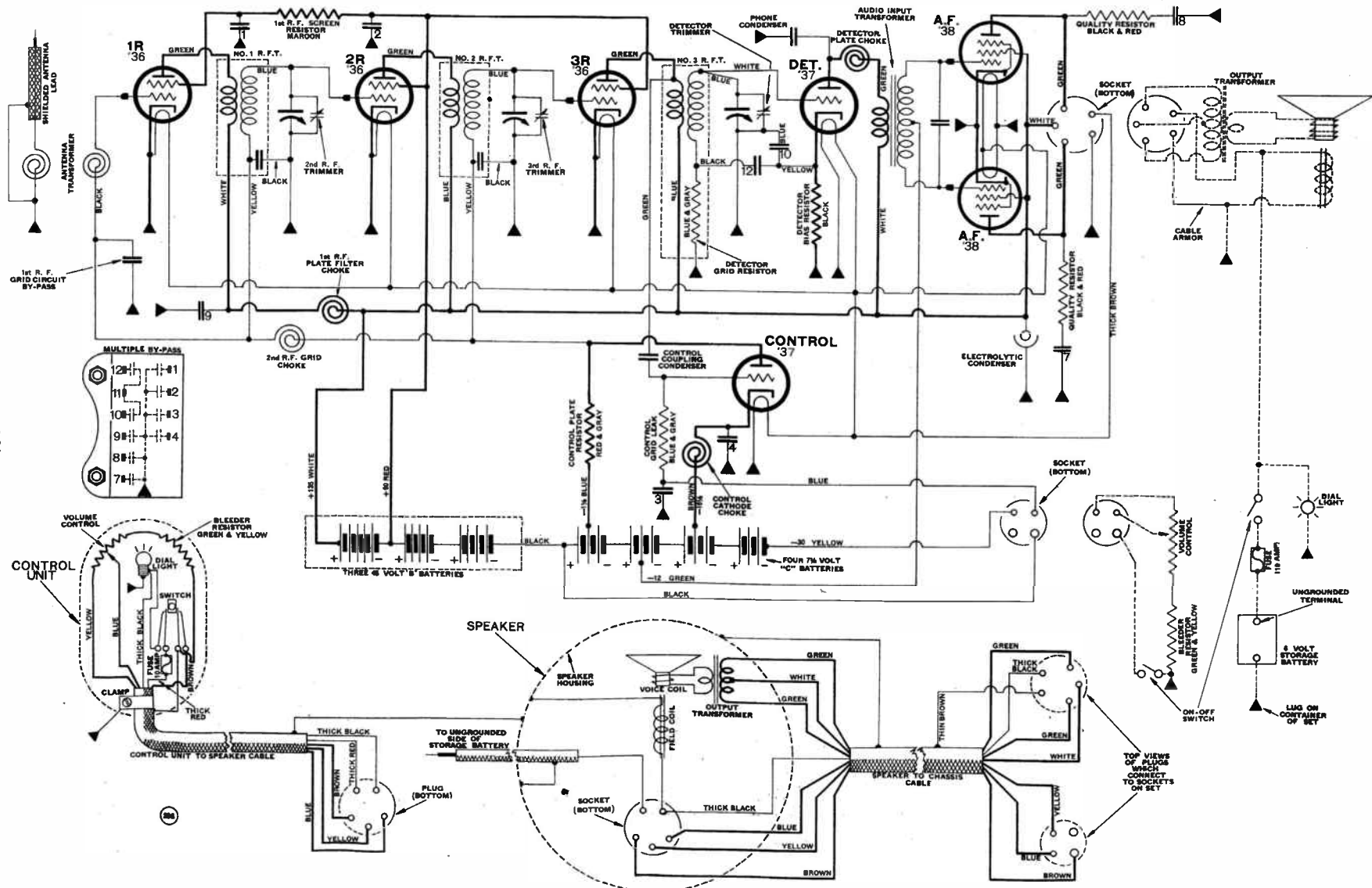
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Complete installation instructions are furnished with each Atwater Kent Motor Car receiver. The instructions also contain complete information regarding the suppression of ignition interference.

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

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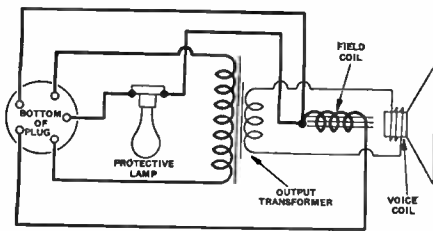
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Model 81 receiver consists of three units; (1st) the chassis and battery container, (2nd) the electro-dynamic speaker, (3rd) the remote-control unit. Model 81-B and 81-C have separate containers for the chassis and "B" batteries. The "C" batteries are mounted in the chassis container in Model 81-B and 81-C. The dimensions of the chassis and battery containers are shown on page 864.

ATWATER KENT RADIO

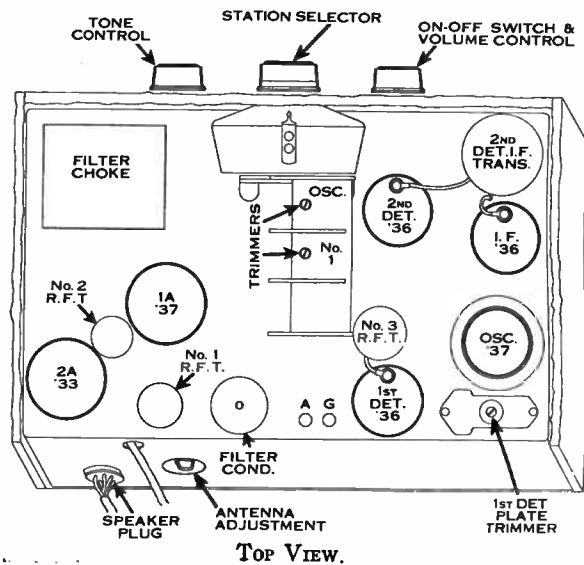
MODEL 82-D (2nd Type) Above Serial No. 5760301



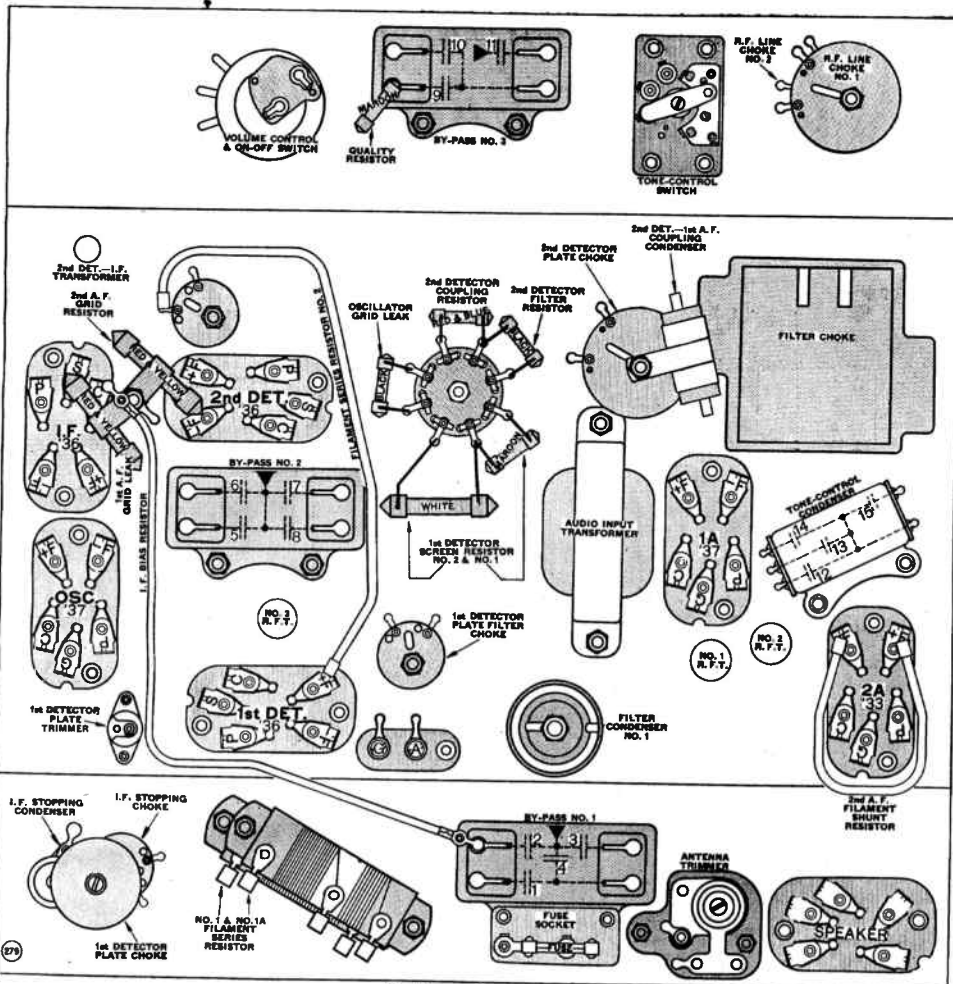
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CIRCUIT OF SPEAKER USED IN MODEL 82-D.

The protective lamp (75 watts) is connected in series with the electrolytic filter condenser in the chassis. If the 110-volt D. C. supply plug is reversed, the lamp will light. When the 110-volt plug is properly inserted, the lamp does not light. This action is due to the fact that the electrolytic condenser passes current if the polarity of the applied D. C. voltage is not correct.



TOP VIEW.



BOTTOM CHART.

By-pass Condensers

By-pass No. 1

- 1—Ground coupling condenser.
- 2—Negative 110-volt line by-pass.
- 3—Not used.
- 4—1st-detector grid filter condenser.

By-pass No. 2

- 5—1st-detector screen by-pass.
- 6—1st-detector plate filter condenser.
- 7—Filter condenser No. 2.
- 8—I. F. screen by-pass.

By-pass No. 3

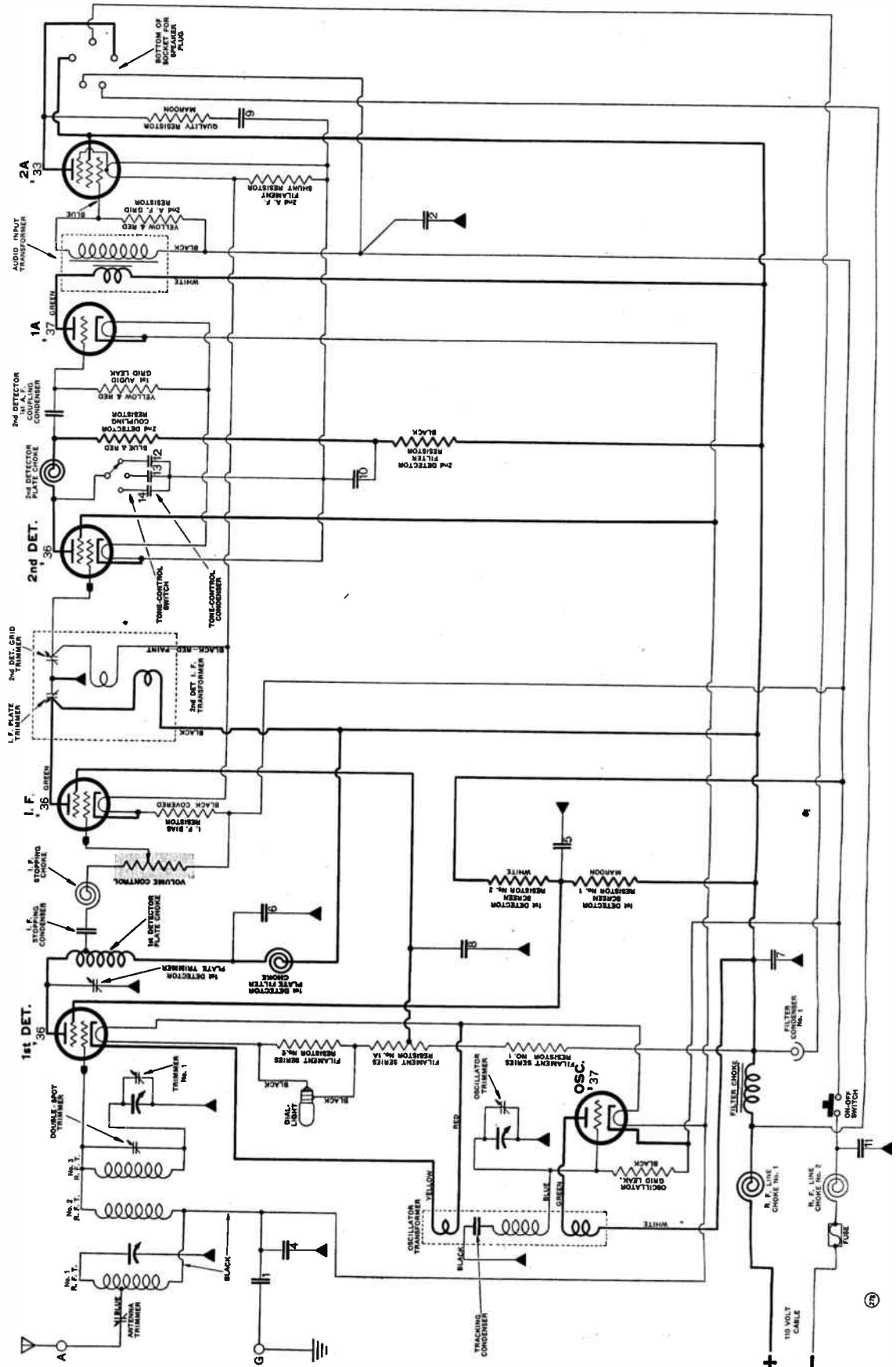
- 9—Quality condenser.
- 10—2nd-detector plate filter condenser.
- 11—Negative 110-volt line by-pass.

Tone-Control Condenser

- 12—Tone-control condenser.
- 13—Tone-control condenser.
- 14—Tone-control condenser.
- 15—Not used.

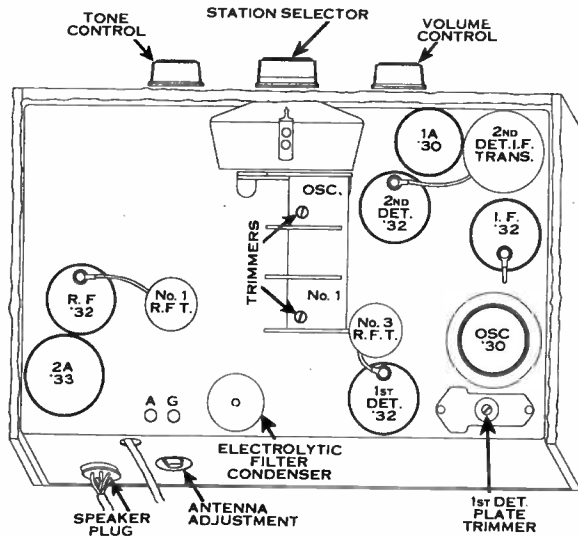
ATWATER KENT RADIO

MODEL 82-D (2nd Type) Above Serial No. 5760301

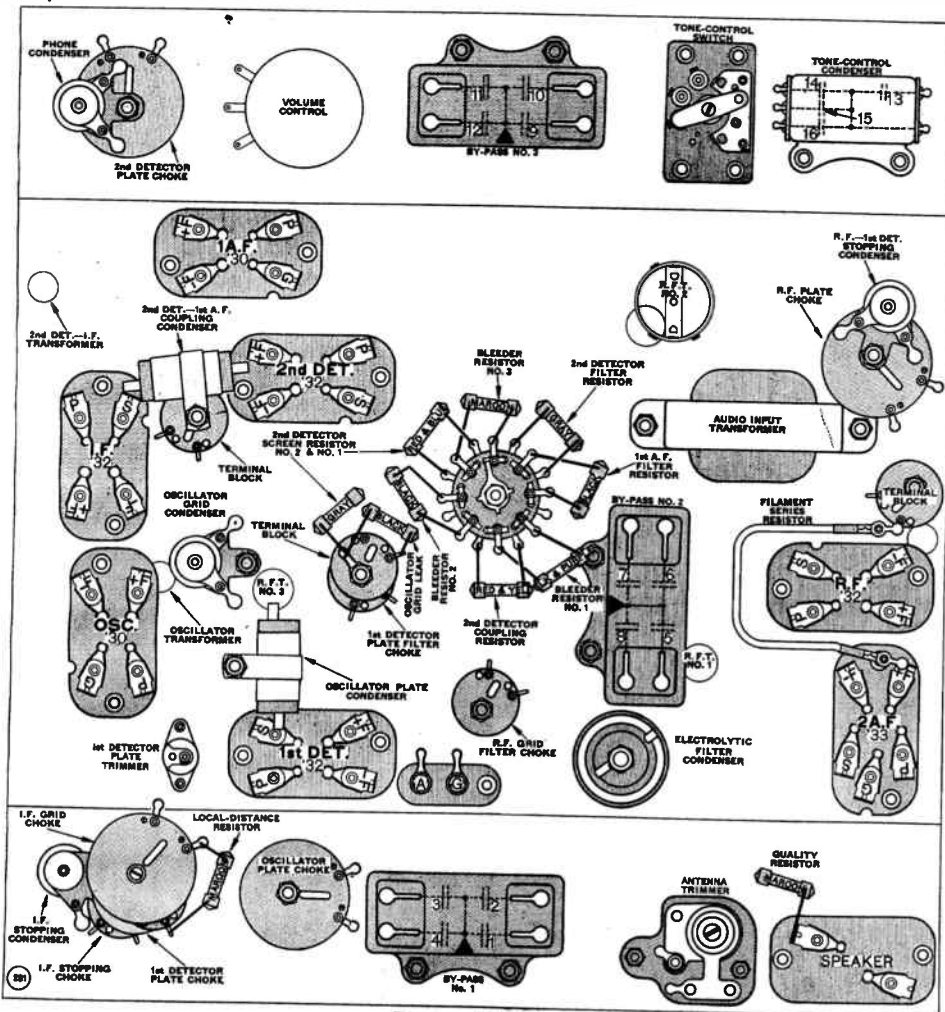


ATWATER KENT RADIO

MODEL 82-Q (2nd Type) Above Serial No. 2550940



TOP VIEW.



BOTTOM CHART.

By-pass Condensers

By-pass No. 1

- 1—2nd-detector screen by-pass.
- 2—R. F. grid filter condenser.
- 3—1st-detector screen by-pass.
- 4—1st-detector plate filter condenser.

By-pass No. 2

- 5—+B by-pass.
- 6—1st-detector—I. F. grid filter condenser.
- 7—2nd-detector grid-circuit by-pass.
- 8—R. F.—I. F. screen by-pass.

By-pass No. 3

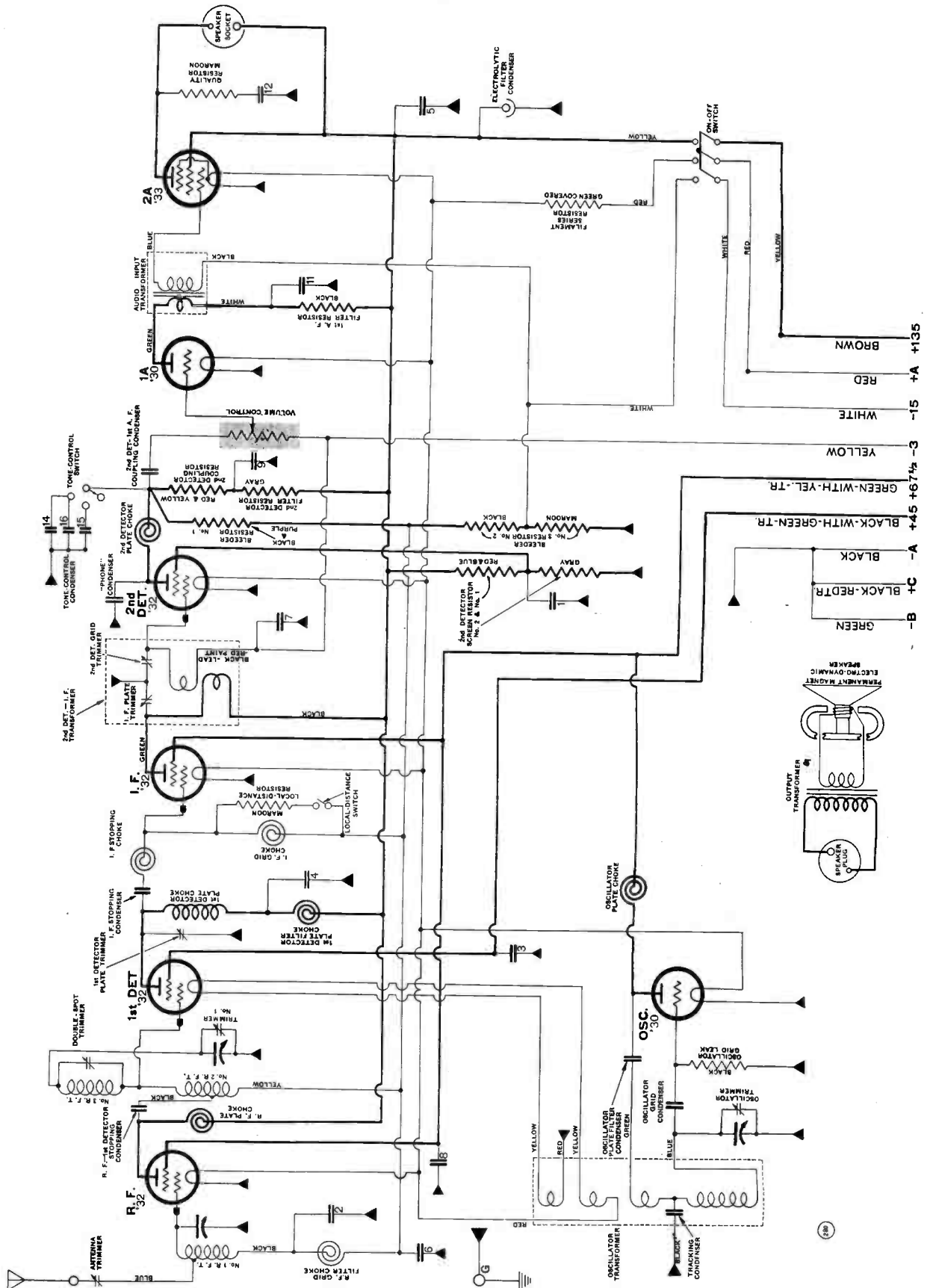
- 9—2nd-detector plate filter condenser.
- 10—Not used.
- 11—1st-A. F. plate filter condenser.
- 12—Quality condenser.

Tone-control Condenser

- 13—Not used.
- 14—Tone-control condenser.
- 15—Tone-control condenser.
- 16—Tone-control condenser.

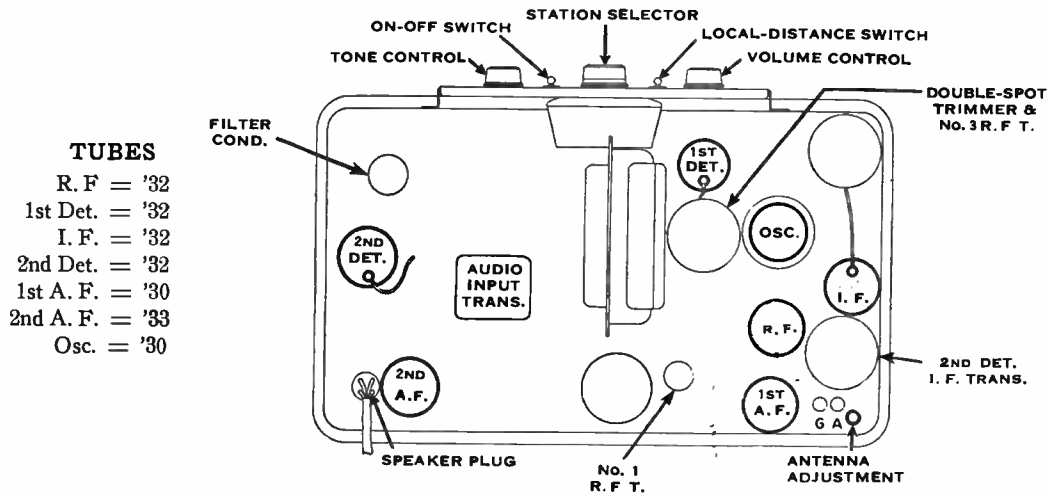
ATWATER KENT RADIO

MODEL 82-Q (2nd Type) Above Serial No. 2550940



ATWATER KENT RADIO

MODEL 85-Q (2nd Type) Above Serial No. 163767

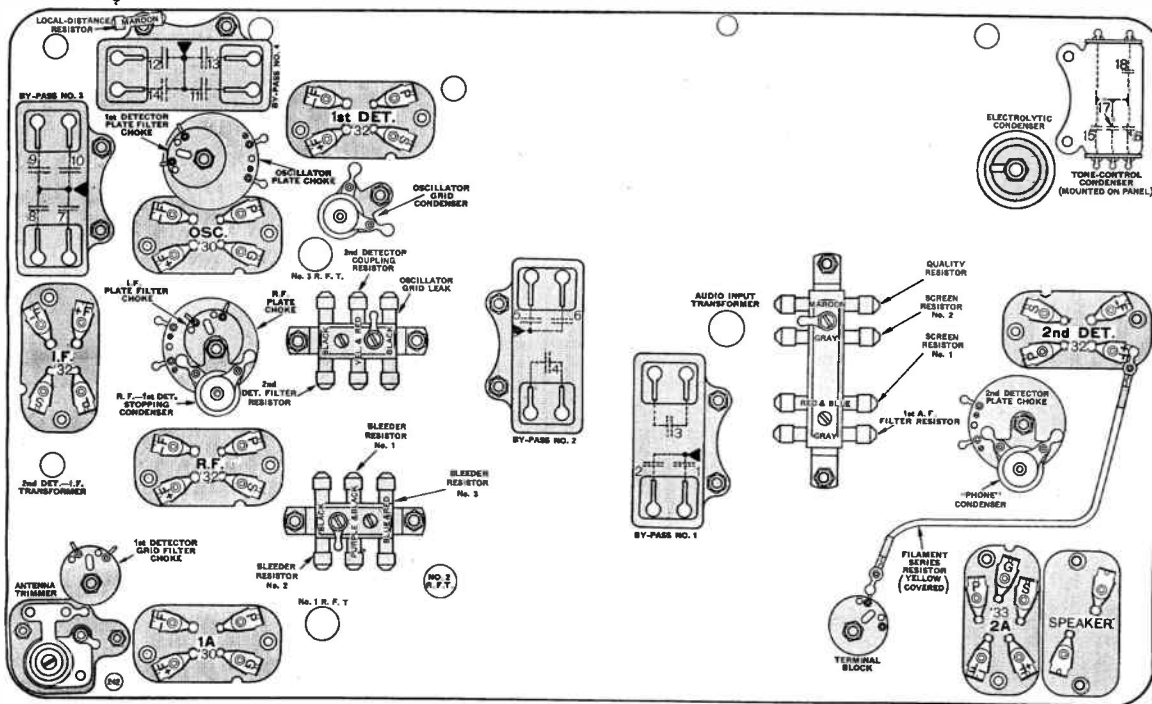


TUBES

- R. F. = '32
- 1st Det. = '32
- I. F. = '32
- 2nd Det. = '32
- 1st A. F. = '30
- 2nd A. F. = '33
- Osc. = '30

TOP VIEW.

The coil shield in the upper-right corner encloses the coupling unit between the 1st-detector and the I. F. tubes.
The coil shield at bottom center encloses No. 2 R. F. T.



BOTTOM CHART.

By-pass Condensers

By-pass No. 1

- 1—2nd-detector plate filter condenser.
- 2—Quality condenser.
- 3—Not used.

By-pass No. 2

- 4—2nd-detector—1st A. F. coupling condenser.
- 5—2nd-detector grid-circuit by-pass.
- 6—Tracking condenser.

By-pass No. 3

- 7—1st-detector grid filter condenser.
- 8—R. F.—I. F. screen by-pass.
- 9—I. F. plate filter condenser.
- 10—R. F.—I. F. grid filter condenser.

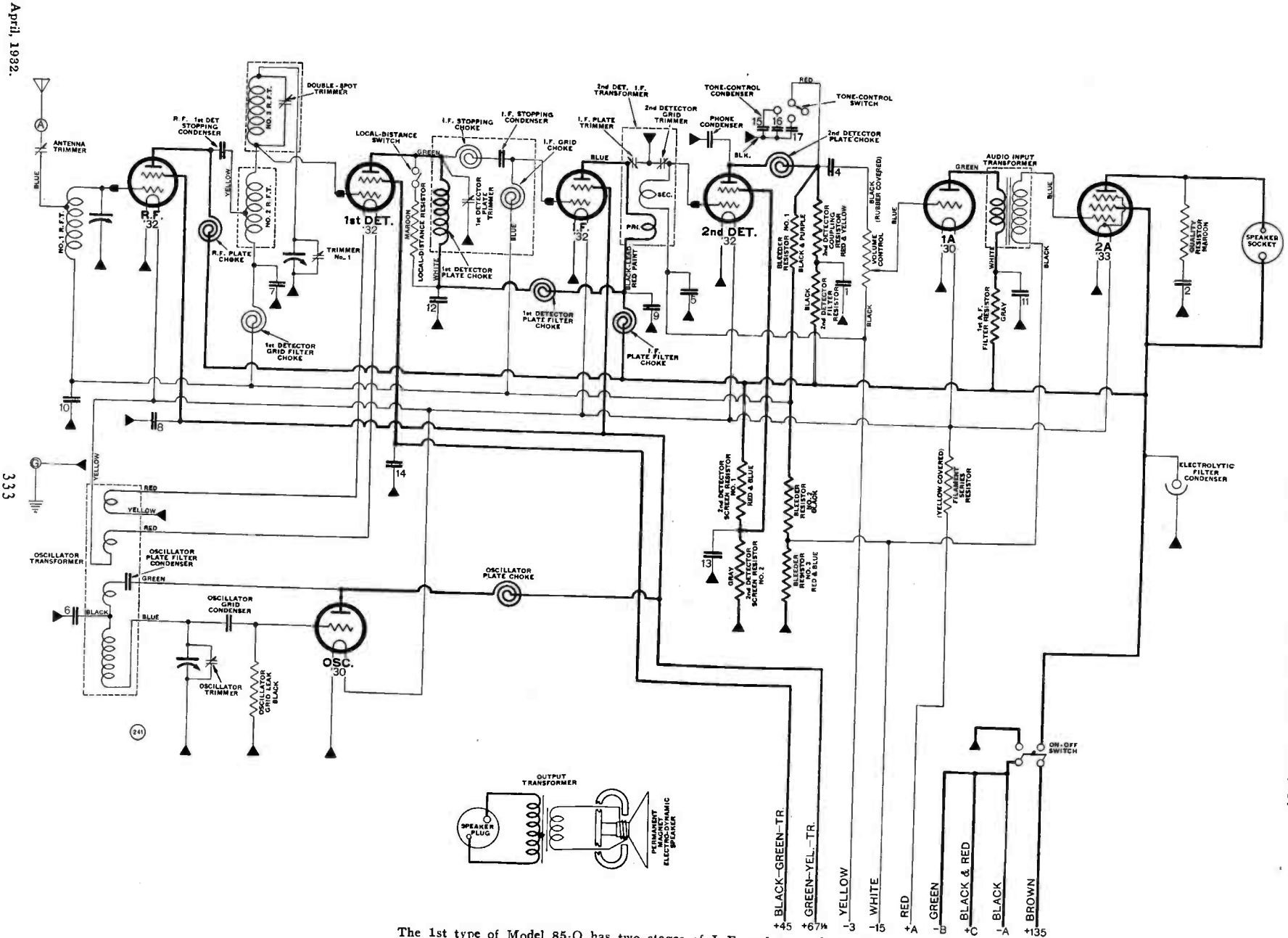
By-pass No. 4

- 11—1st-A. F. plate filter condenser.
- 12—1st-detector plate filter condenser.
- 13—2nd-detector screen by-pass.
- 14—1st-detector screen by-pass.

Tone-control Condenser

- 15—Tone-control condenser.
- 16—Tone-control condenser.
- 17—Tone-control condenser.
- 18—Not used.

MODEL 85-Q (2nd Type) Above Serial No. 163767



The 1st type of Model 85-Q has two stages of I. F. and no R. F. stage.

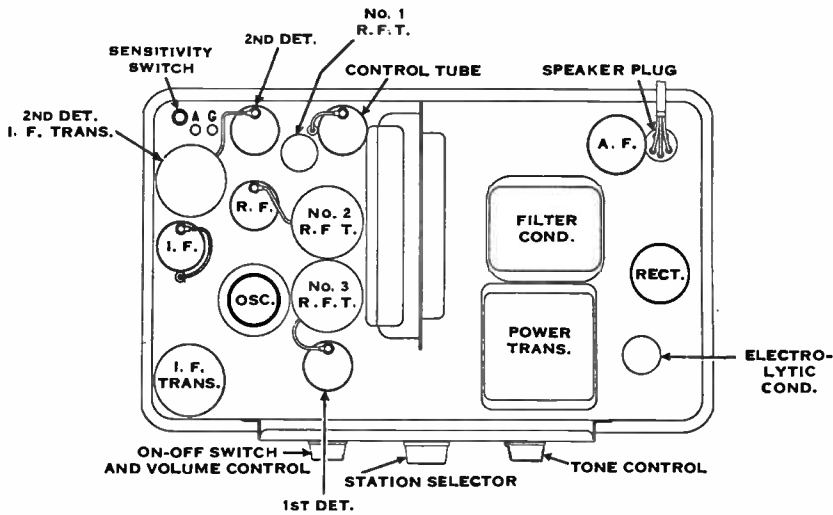
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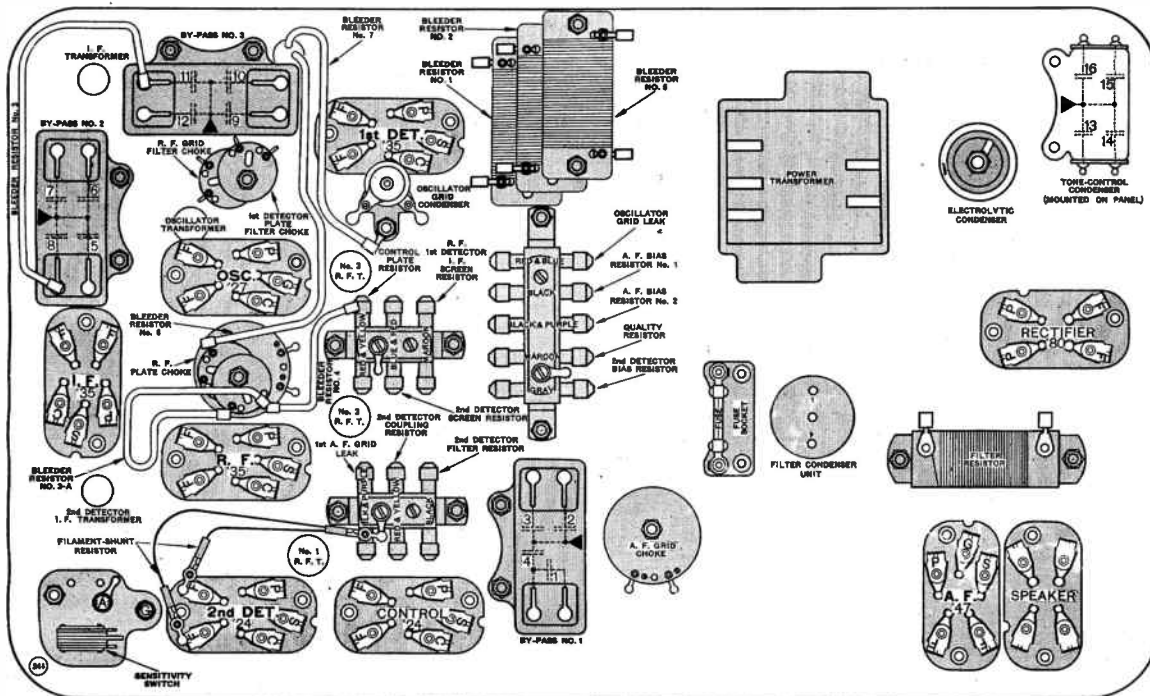
ATWATER KENT RADIO

MODEL 86 (2nd Type) Above Serial No. 5876861
 MODEL 86-F (2nd Type) Above Serial No. 7168925

- TUBES**
- R. F. = '35
 - 1st Det. = '35
 - I. F. = '35
 - 2nd Det. = '24
 - A. F. = '47
 - Osc. = '27
 - Control = '24
 - Rectifier = '80



TOP VIEW.



BOTTOM CHART.

The filter resistor is not used in 86-F.

By-pass Condensers

By-pass No. 1

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

By-pass No. 2

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

By-pass No. 3

- 9—1st-detector plate filter condenser.
- 10—Screen by-pass.
- 11—1st-detector bias by-pass.
- 12—2nd-detector plate filter condenser.

Tone-control Condenser

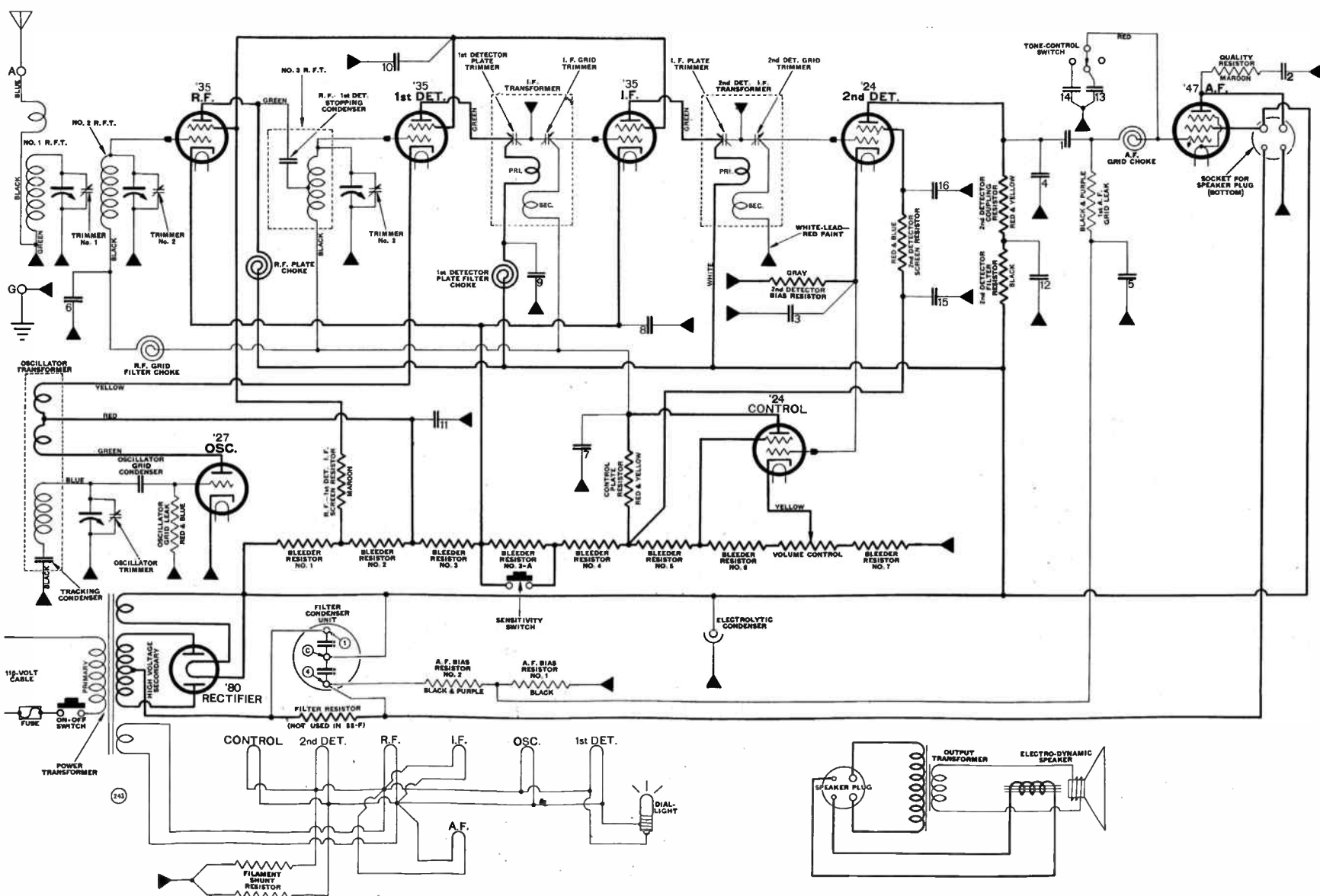
- 13—Tone-control condenser.
- 14—Tone-control condenser.
- 15—2nd-detector screen by-pass.
- 16—2nd-detector screen by-pass.

ATWATER KENT RADIO

MODEL 86 (2nd Type) Above Serial No. 5876861
 MODEL 86-F (2nd Type) Above Serial No. 7168925

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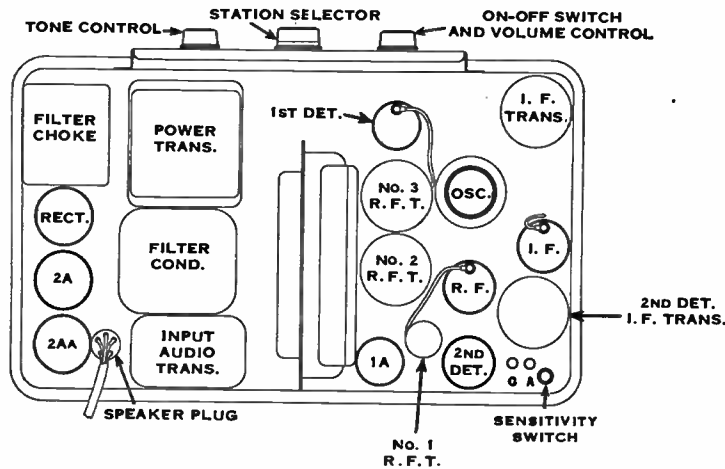


In Model 86-F, the filter resistor is not used, and the control plate resistor is red and gray.

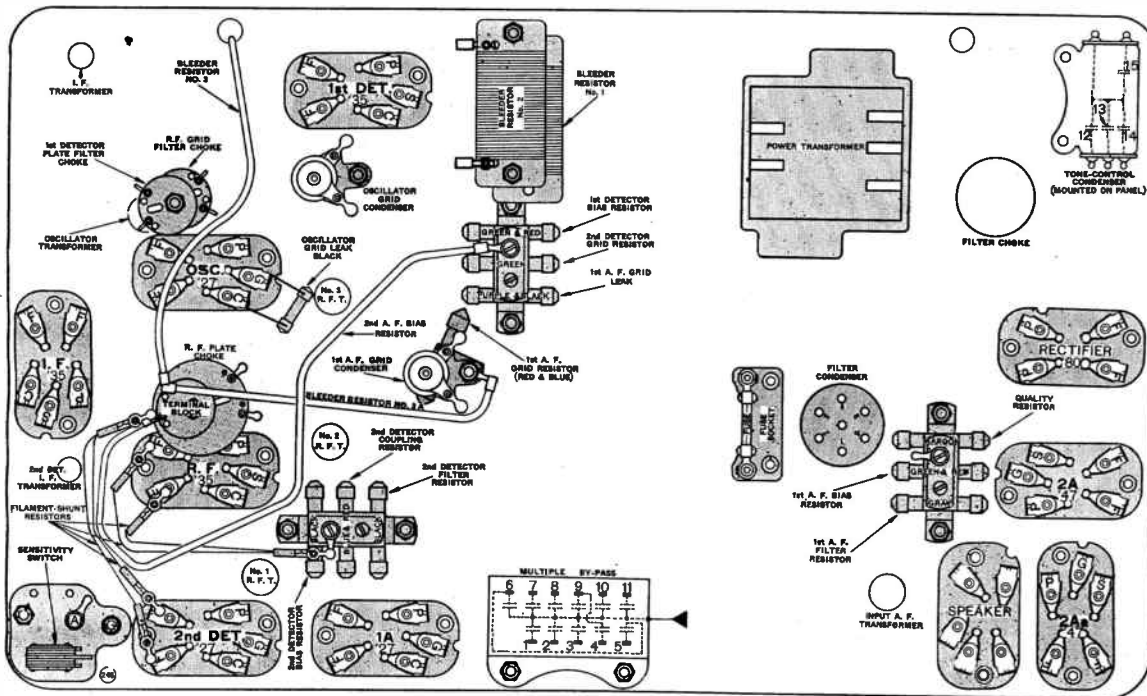
ATWATER KENT RADIO

MODEL 87 (3rd Type) Above Serial No. 2525871

- TUBES**
- R. F. = '35
 - 1st Det. = '35
 - I. F. = '35
 - 2nd Det. = '27
 - 1st A. F. = '27
 - 2nd A. F. = '47(2)
 - Osc. = '27
 - Rectifier = '80



TOP VIEW.



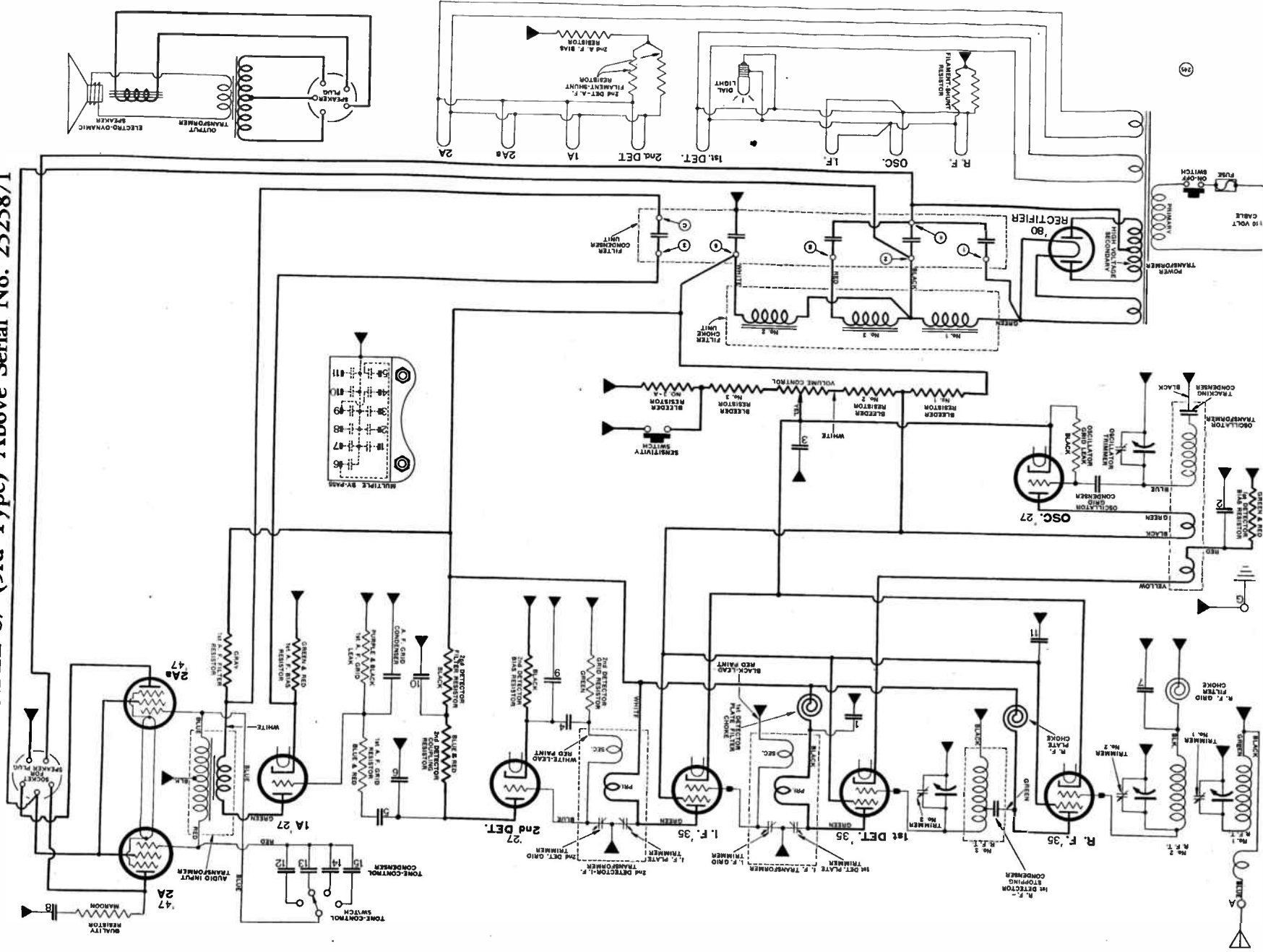
BOTTOM CHART.

By-pass Condensers

- 1—1st-detector plate filter condenser.
- 2—1st-detector bias by-pass.
- 3—R. F.—I. F. bias by-pass.
- 4—2nd-detector grid-circuit by-pass.
- 5—2nd-detector—1st-A. F. coupling condenser.
- 6—Phone condenser.
- 7—R. F. grid filter condenser.
- 8—Quality condenser.
- 9—2nd-detector bias by-pass.
- 10—2nd-detector plate filter condenser.
- 11—Screen by-pass.

ATWATER KENT RADIO

MODEL 87 (3rd Type) Above Serial No. 2525871



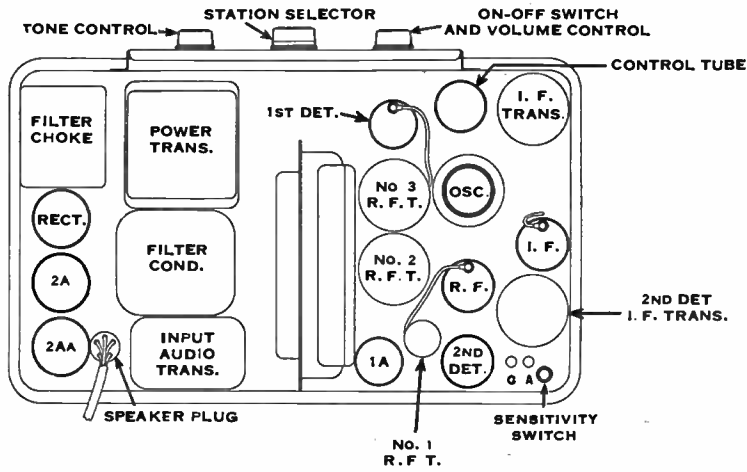
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ATWATER KENT RADIO

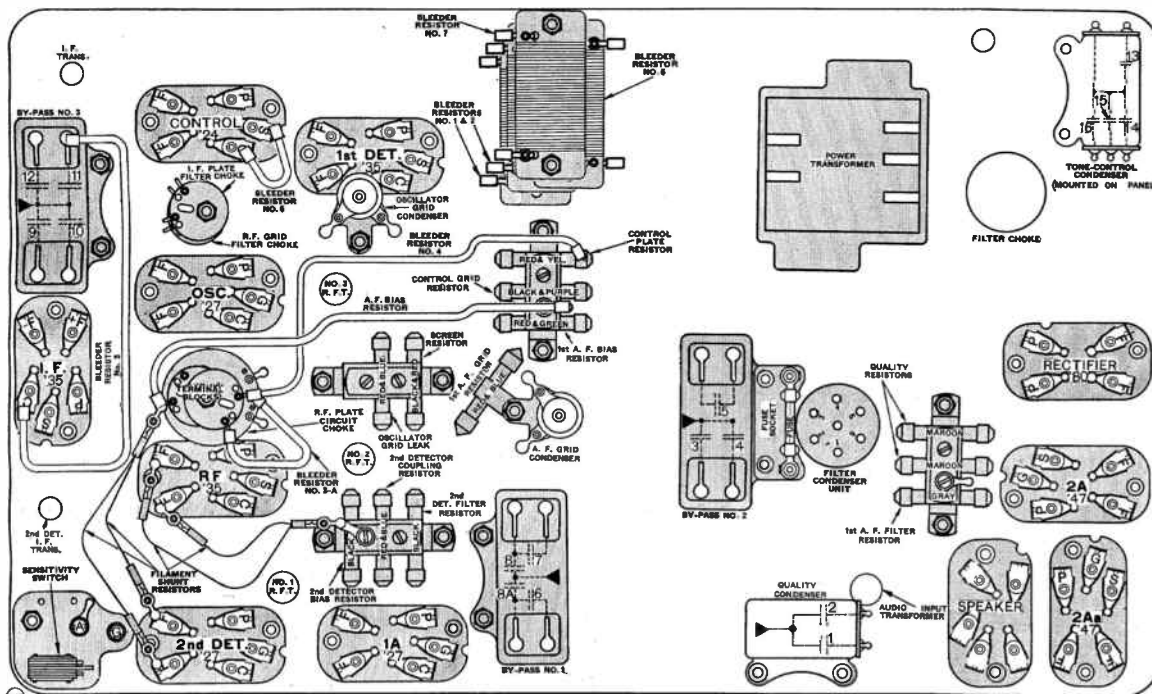
MODEL 89 (3rd Type) Above Serial No. 6755181
MODEL 89-F (3rd Type) Above Serial No. 1585395
MODEL 89-P (3rd Type) Above Serial No. 1935904

- TUBES**
- R. F. = '35
 - 1st Det. = '35
 - I. F. = '35
 - 2nd Det. = '27
 - 1st A. F. = '27
 - 2nd A. F. = '47(2)
 - Osc. = '27
 - Control = '24
 - Rectifier = '80



TOP VIEW.

Model 89-P has two binding posts for pick-up connection at the rear of the chassis, and a radio-phonograph toggle switch is mounted on the front panel.



BOTTOM CHART.

By-pass Condensers

By-pass No. 1

- 6—2nd-detector—1st-A. F. coupling condenser.
- 7—Not used.
- 8—2nd-detector bias by-pass.
- 8A—Phone condenser.

By-pass No. 2

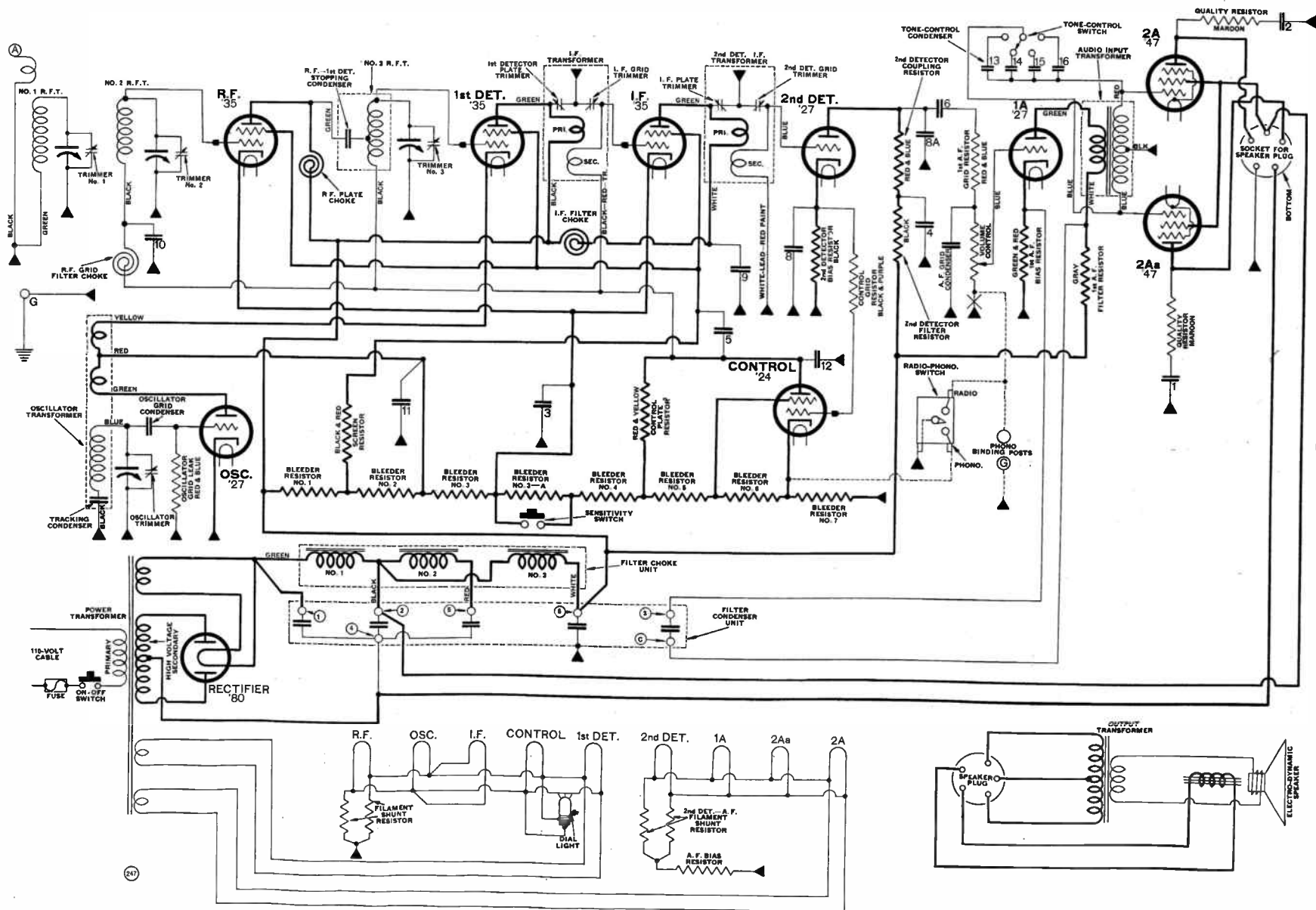
- 3—R. F.—I. F. bias by-pass.
- 4—2nd-detector plate filter condenser.
- 5—Screen by-pass.

By-pass No. 3

- 9—I. F. plate filter condenser.
- 10—R. F. grid filter condenser.
- 11—1st-detector bias by-pass.
- 12—Control plate by-pass.

Tone-control Condenser

- 13—Tone-control condenser.
- 14—Tone-control condenser.
- 15—Tone-control condenser.
- 16—Tone-control condenser.

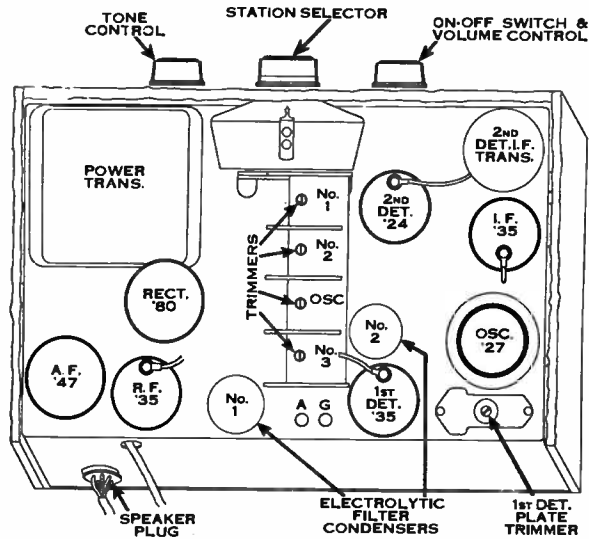


ATWATER KENT RADIO
MODEL 89 (3rd Type) Above Serial No. 6755181
MODEL 89-F (3rd Type) Above Serial No. 1585395
MODEL 89-P (3rd Type) Above Serial No. 1935904

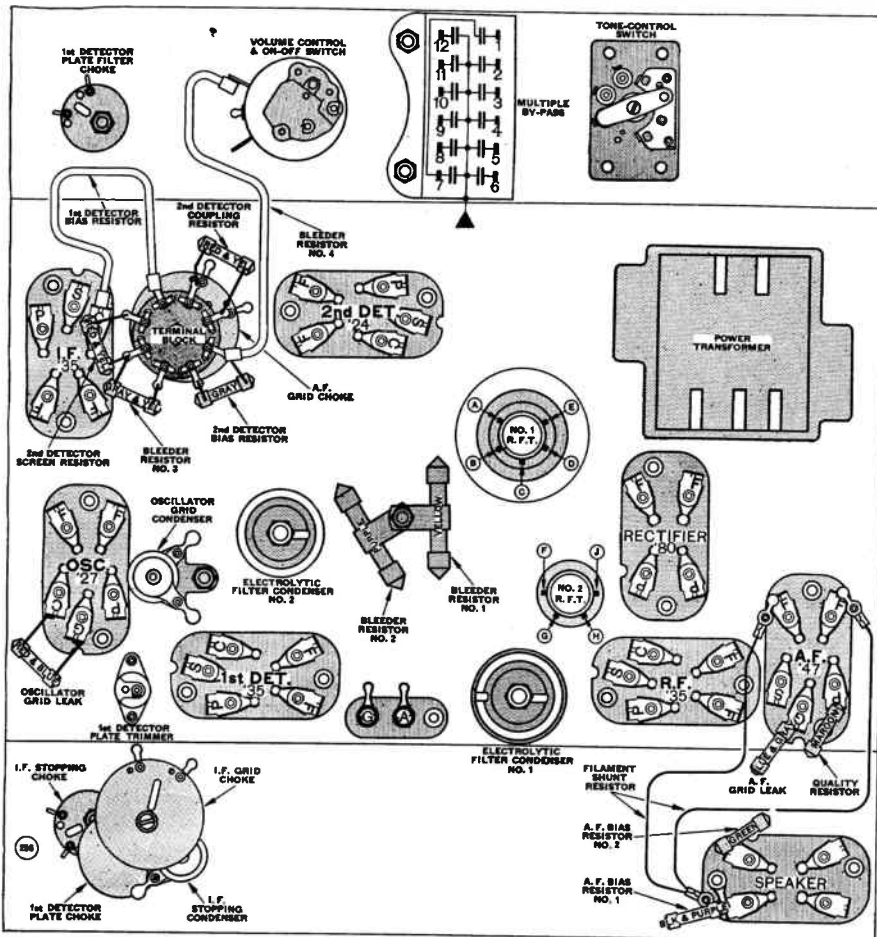
The phonograph equipment, circuit, and parts in Model 89-P are the same as described on pages 236 to 240 of the Service Manual.
 The phonograph-switching circuit in 89-P is shown above in dotted lines.

ATWATER KENT RADIO

MODEL 90, 90-F



TOP VIEW.



BOTTOM CHART.

In some sets, the colors of bleeders No. 1 and No. 2 may be reversed. This does not affect the operation.

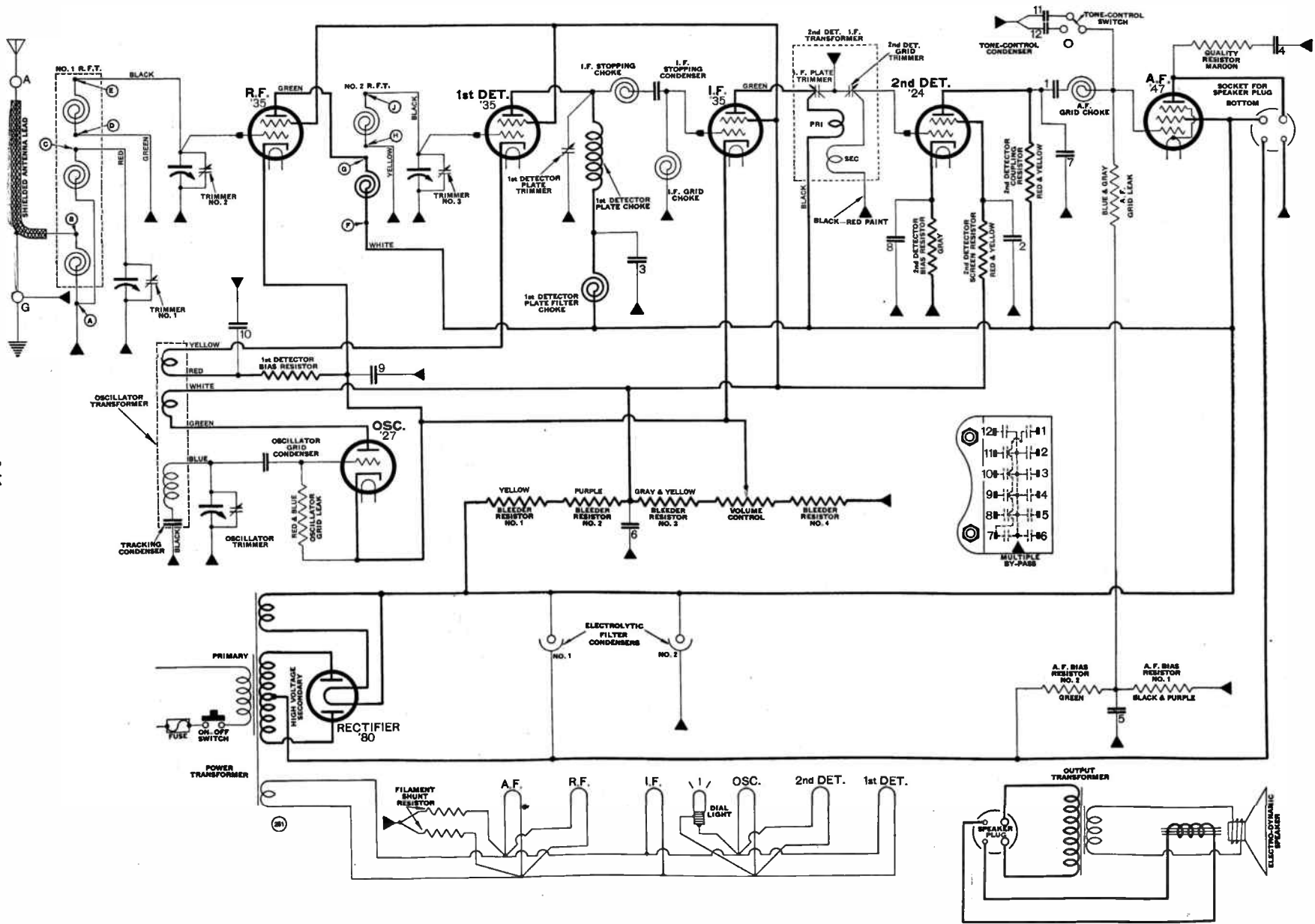
In late-type sets, the connections to R. F. T. No. 2 are as follows:—Yellow to F, black to G, white to H, green to J.

By-pass Condensers

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

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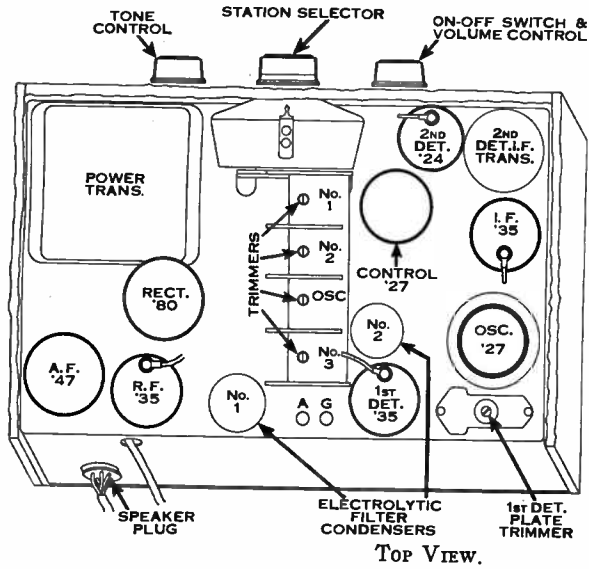
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The colors of bleeders No. 1 and No. 2 may be reversed in some sets. This does not affect the operation.

ATWATER KENT RADIO
MODEL 90, 90-F

ATWATER KENT RADIO
MODEL 92, 92-F TOP VIEW
MODEL 92 (Late Type) BOTTOM CHART

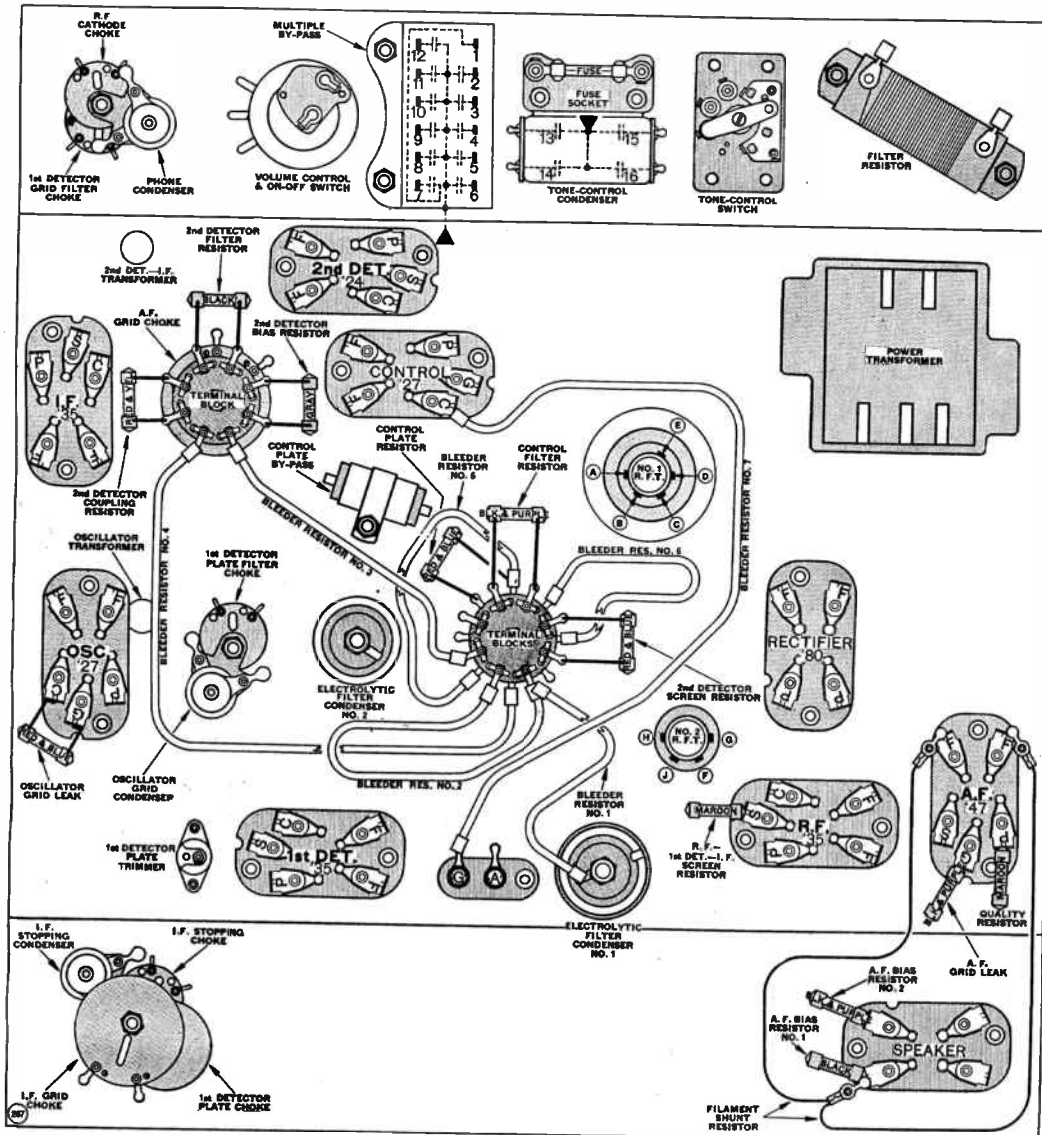


By-pass Condensers in Late-Type 92 and 92-F

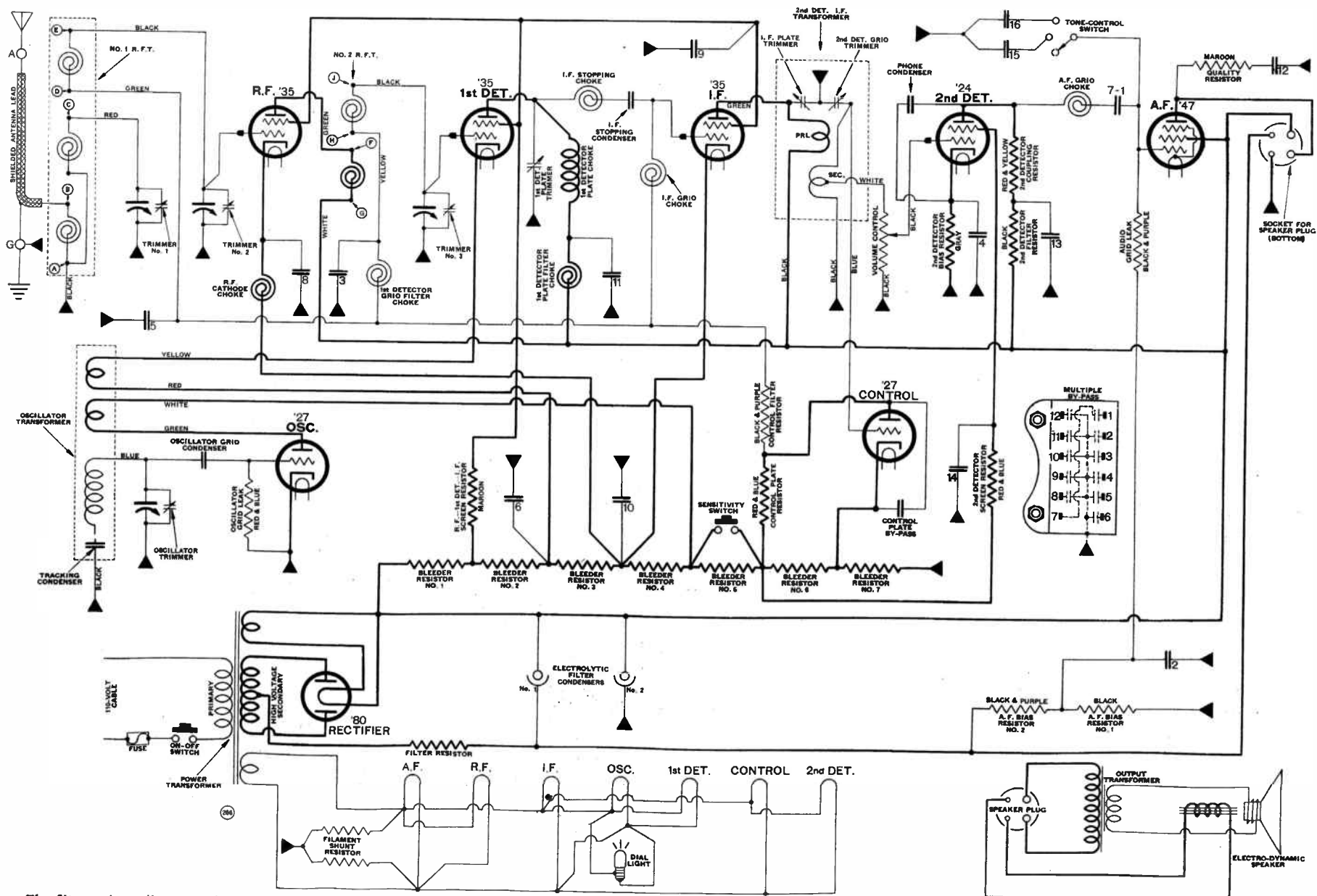
- 1—2nd-detector—A. F. coupling condenser.
- 2—A. F. bias by-pass.
- 3—1st-detector grid filter condenser.
- 4—2nd-detector bias by-pass.
- 5—R. F. grid filter condenser.
- 6—1st-detector bias by-pass.
- 7—2nd-detector—A. F. coupling condenser.
- 8—R. F. bias by-pass.
- 9—R. F. 1st-detector—I. F. screen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

Tone-control Condenser

- 13—2nd-detector plate filter condenser.
- 14—2nd-detector screen by-pass.
- 15—Tone condenser.
- 16—Tone condenser.



BOTTOM CHART OF LATE TYPE MODEL 92.

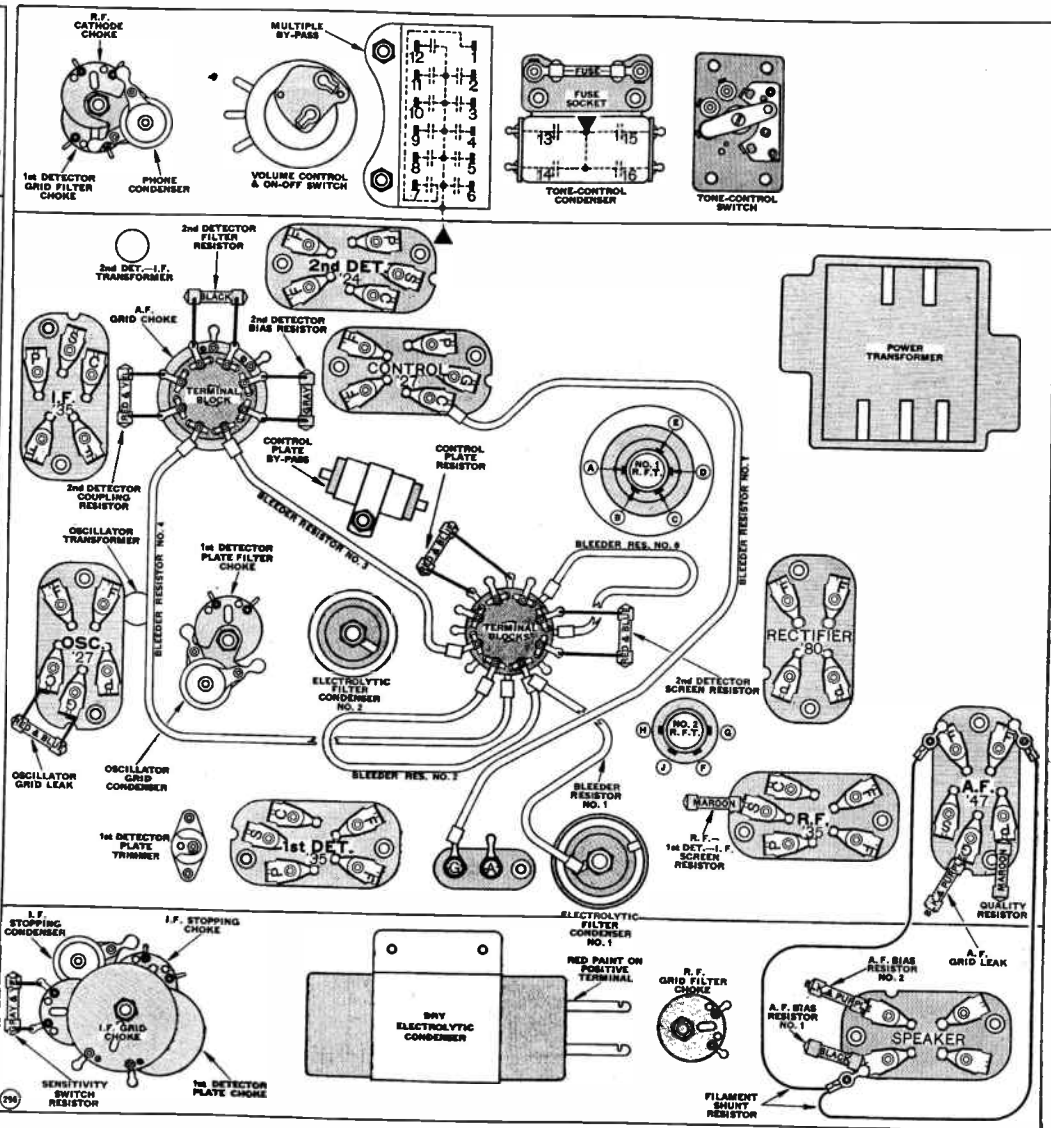
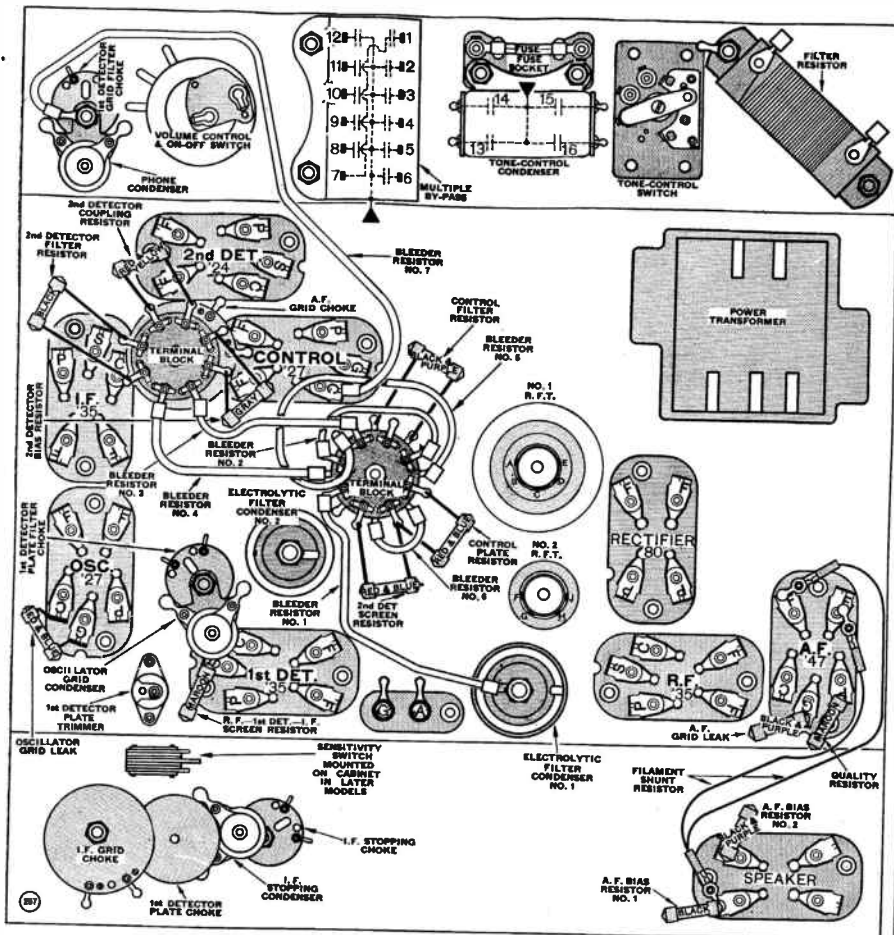


ATWATER KENT RADIO
MODEL 92

The filter resistor (in the high-voltage center-tap lead) is not used in Model 92-F. The changes from early to late type consist of the addition of a choke in the R.F. cathode, the use of a separate control-plate by-pass, and a slight re-arrangement of leads to the multiple by-pass.

MODEL 92 (Early Type) CHART

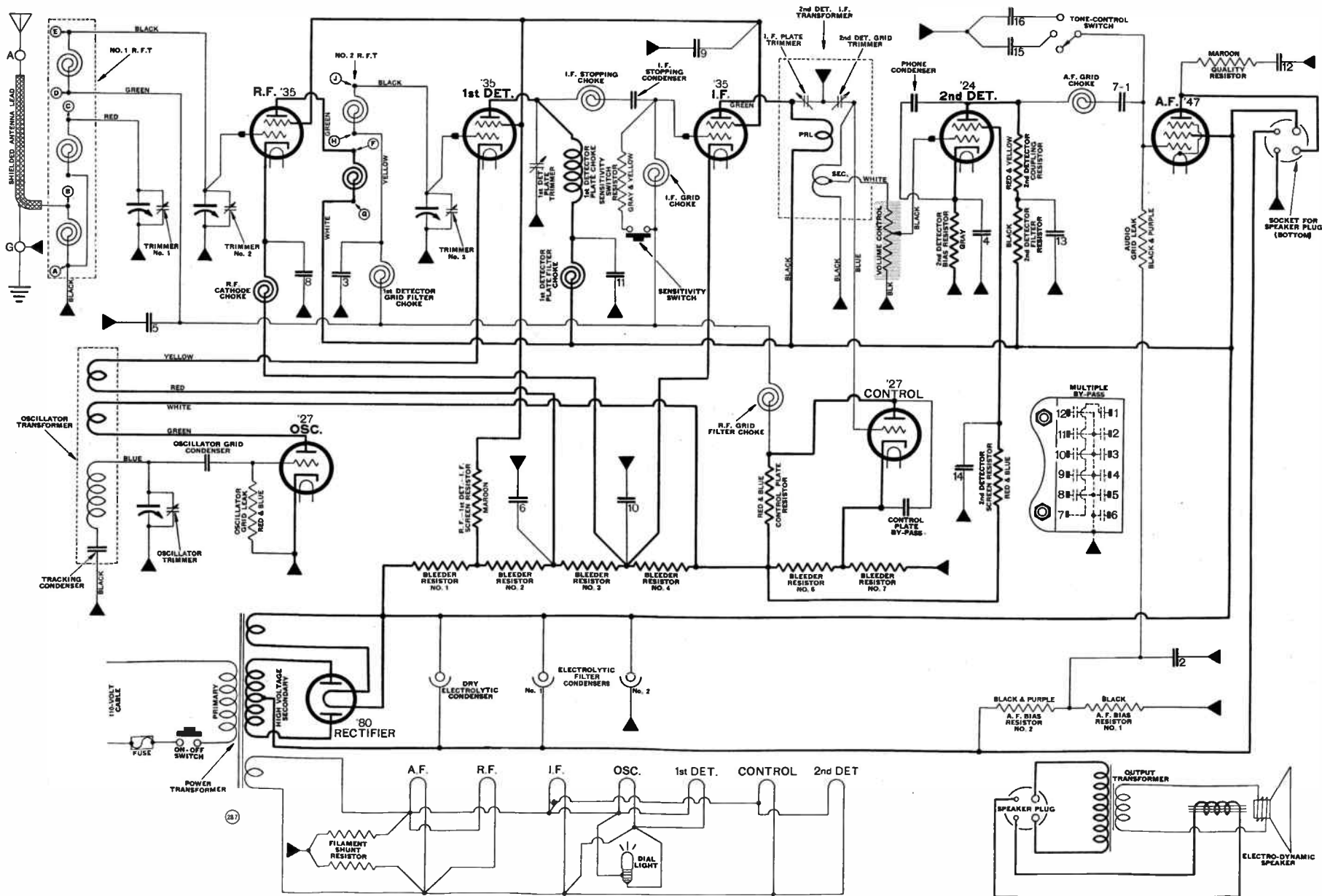
MODEL 92-F CHART



By-pass Condensers in Early-Type Model 92

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

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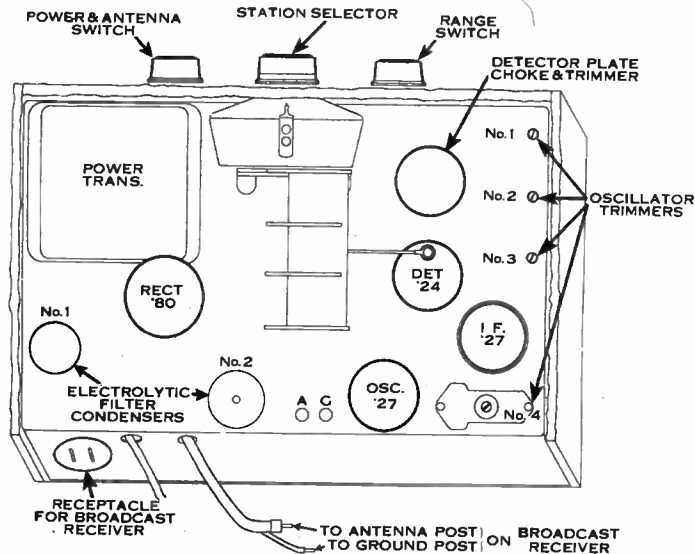


ATWATER KENT RADIO
MODEL 92-F

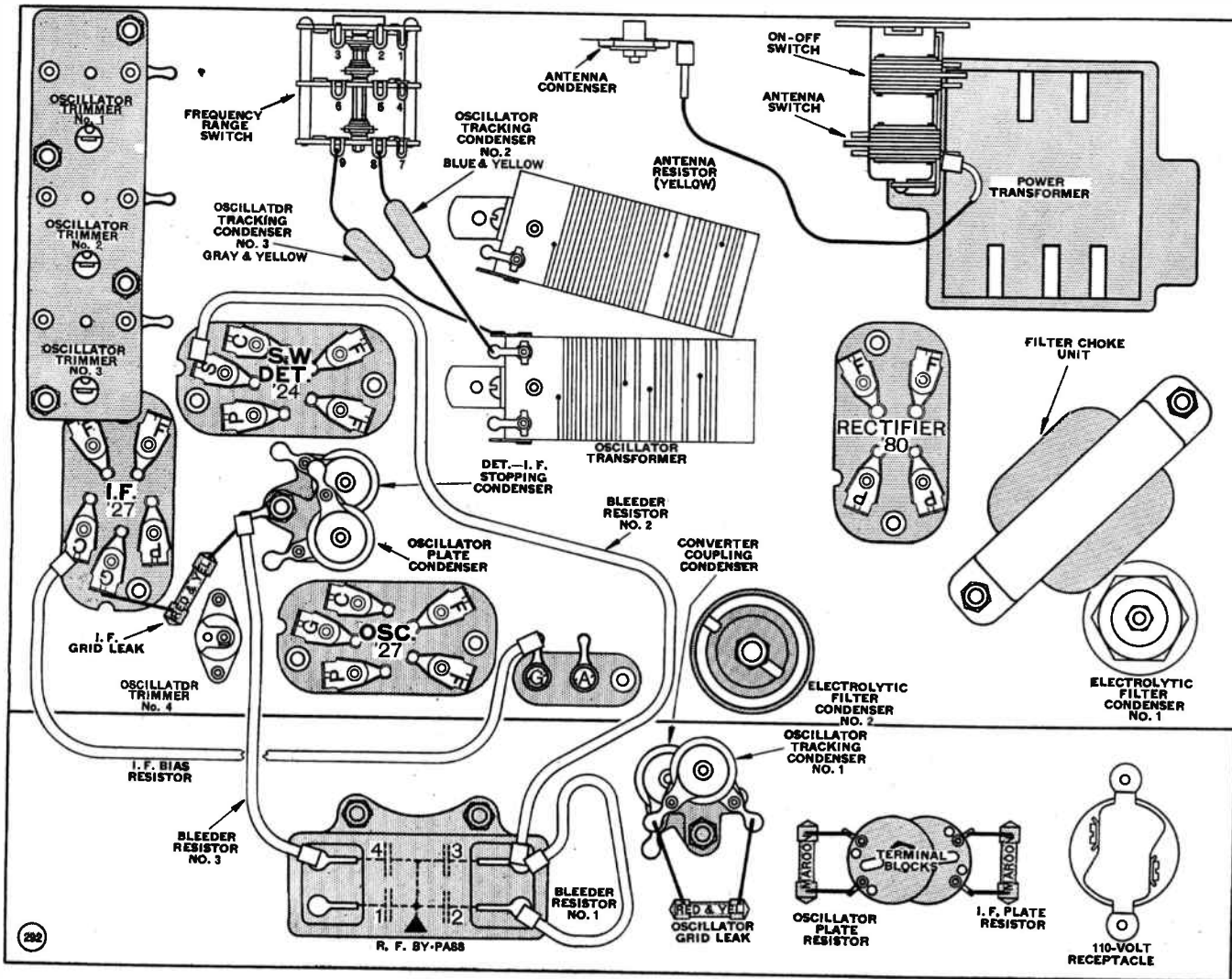
The differences in this circuit, compared to the 60-cycle Model 92, are the omission of bleeder No. 5, the addition of a dry electrolytic filter condenser, and location of the sensitivity switch in the I. F. grid circuit instead of in the bleeder circuit.

ATWATER KENT RADIO

MODEL 93 SHORT WAVE CONVERTER



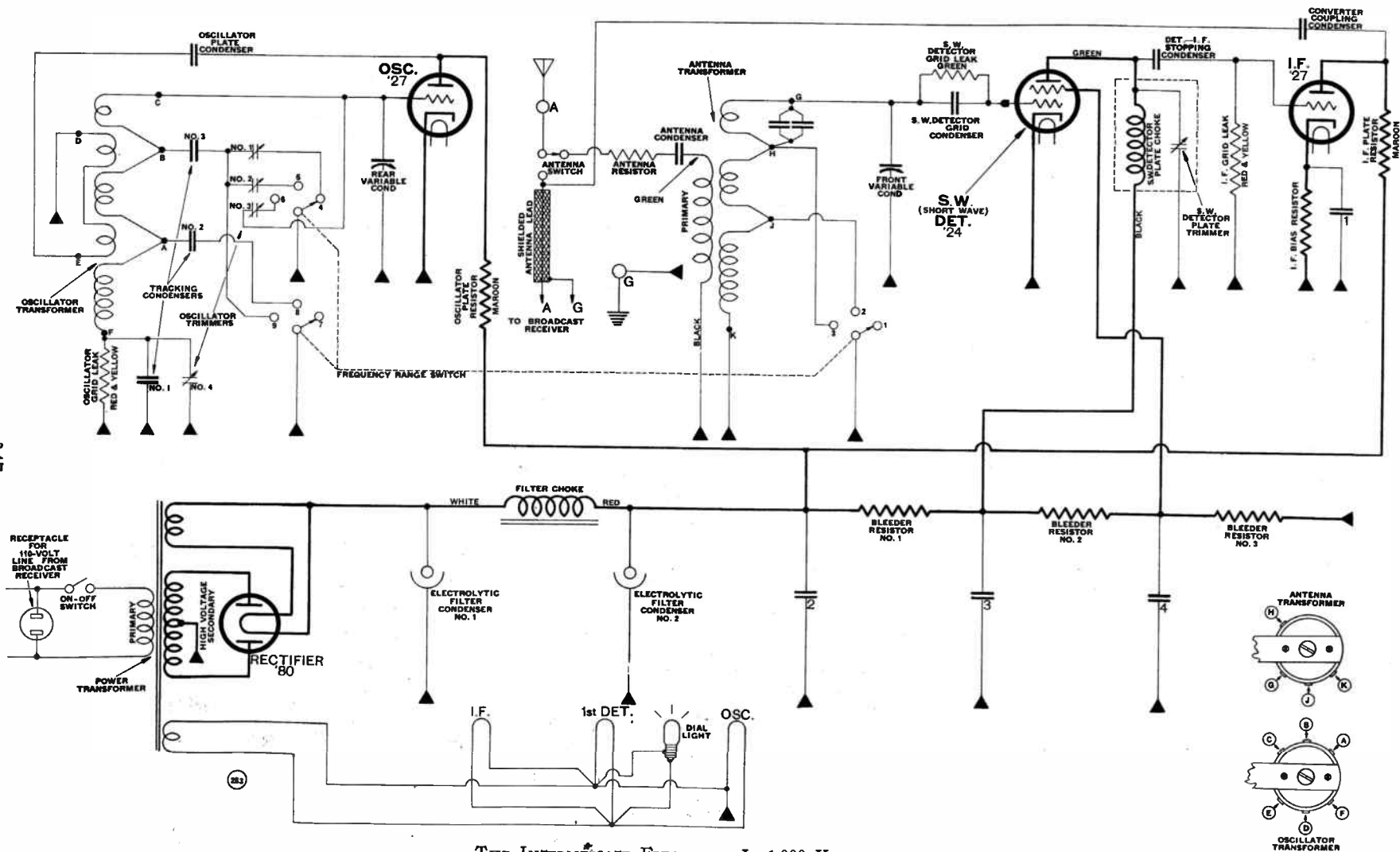
TOP VIEW.



BOTTOM CHART.

In servicing this converter, do not change the original position of the wiring as it will disturb the dial calibration. An antenna choke, No. 26510, not shown above, is connected across the antenna condenser in some Model 93 converters.

MODEL 93 SHORT WAVE CONVERTER

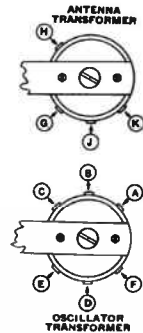


THE INTERMEDIATE FREQUENCY IS 1,000 KILOCYCLES.

The two fixed condensers across contacts G and H of the antenna transformer are listed as "compensating condensers" in the parts list.

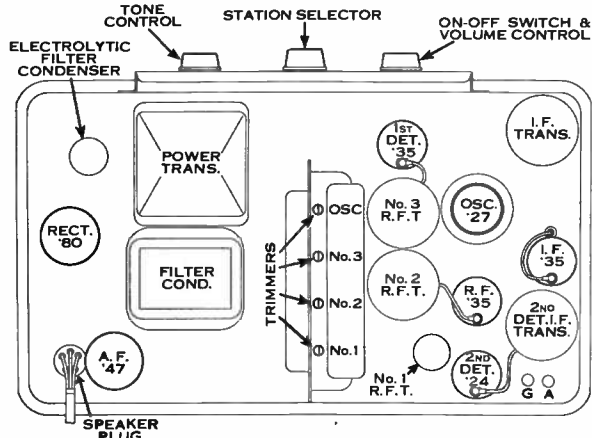
In a few early-type sets, a paper-and-foil condenser is used instead of electrolytic filter condenser No. 1.

In some Model 93 converters, an antenna choke, not shown above, is connected across the antenna condenser. This choke is No. 26510.

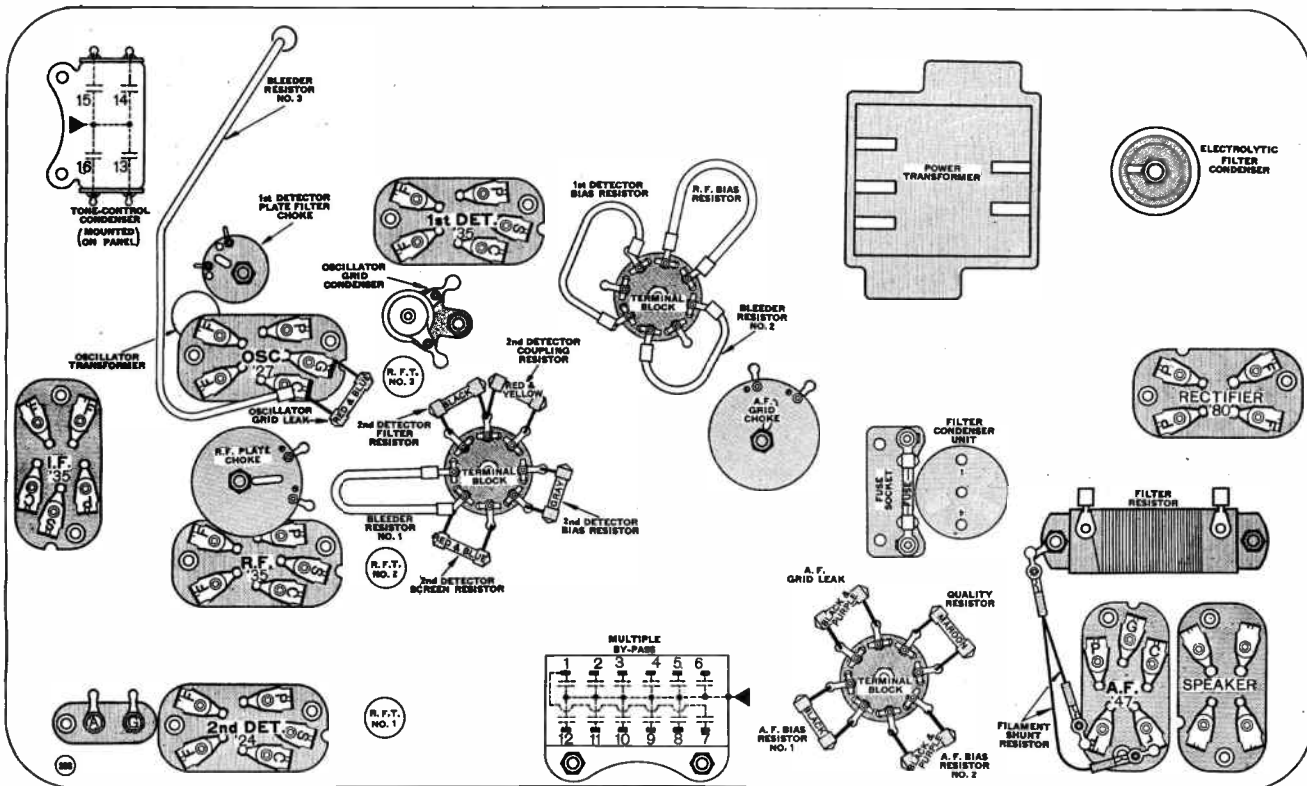


ATWATER KENT RADIO

MODEL 94, 94-F



TOP VIEW.



BOTTOM CHART.

The filter resistor is not used in Model 94-F.

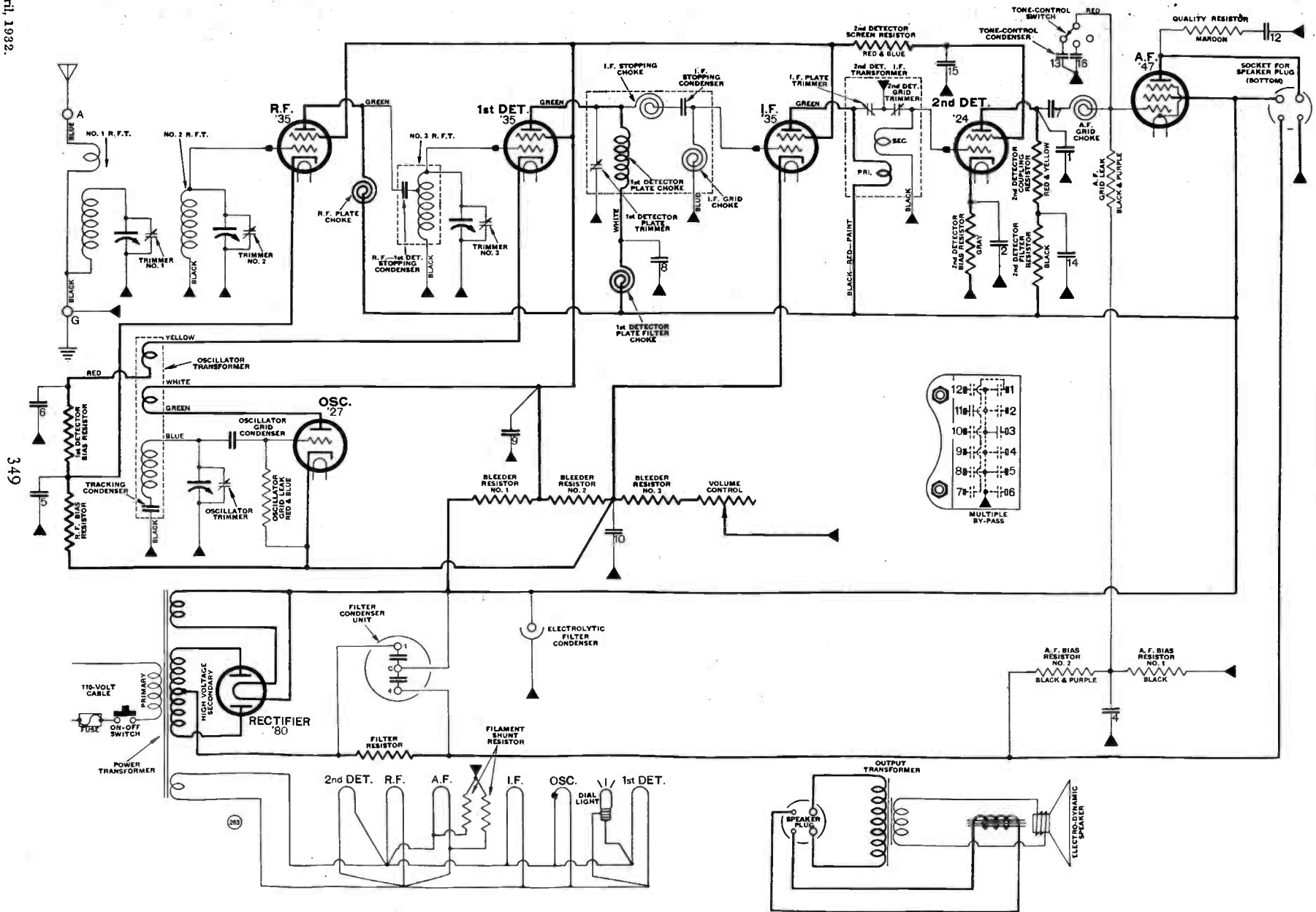
Condensers in Multiple By-pass

- 1—Phone condenser.
- 2—2nd-detector bias by-pass.
- 3—Not used.
- 4—A. F. bias by-pass.
- 5—R. F. bias by-pass.
- 6—1st-detector bias by-pass.

- 7—2nd-detector—A. F. coupling condenser.
- 8—1st-detector plate filter condenser.
- 9—R. F. 1st-detector—I. F. screen by-pass.
- 10—I. F. bias by-pass.
- 11—Not used.
- 12—Quality condenser.

Tone-control Condenser (on panel)

- 13—Tone condenser.
- 14—2nd-detector plate filter condenser.
- 15—2nd-detector screen by-pass.
- 16—Tone condenser.



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ATWATER KENT RADIO
MODEL 94, 94-F

The filter resistor (in the high-voltage center-tap lead) is not used in Model 94-F.

ATWATER KENT RADIO

MODEL 96, 96-F TOP VIEW

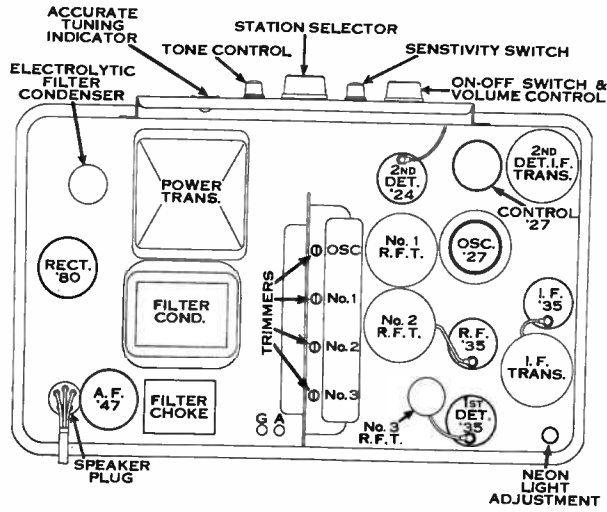
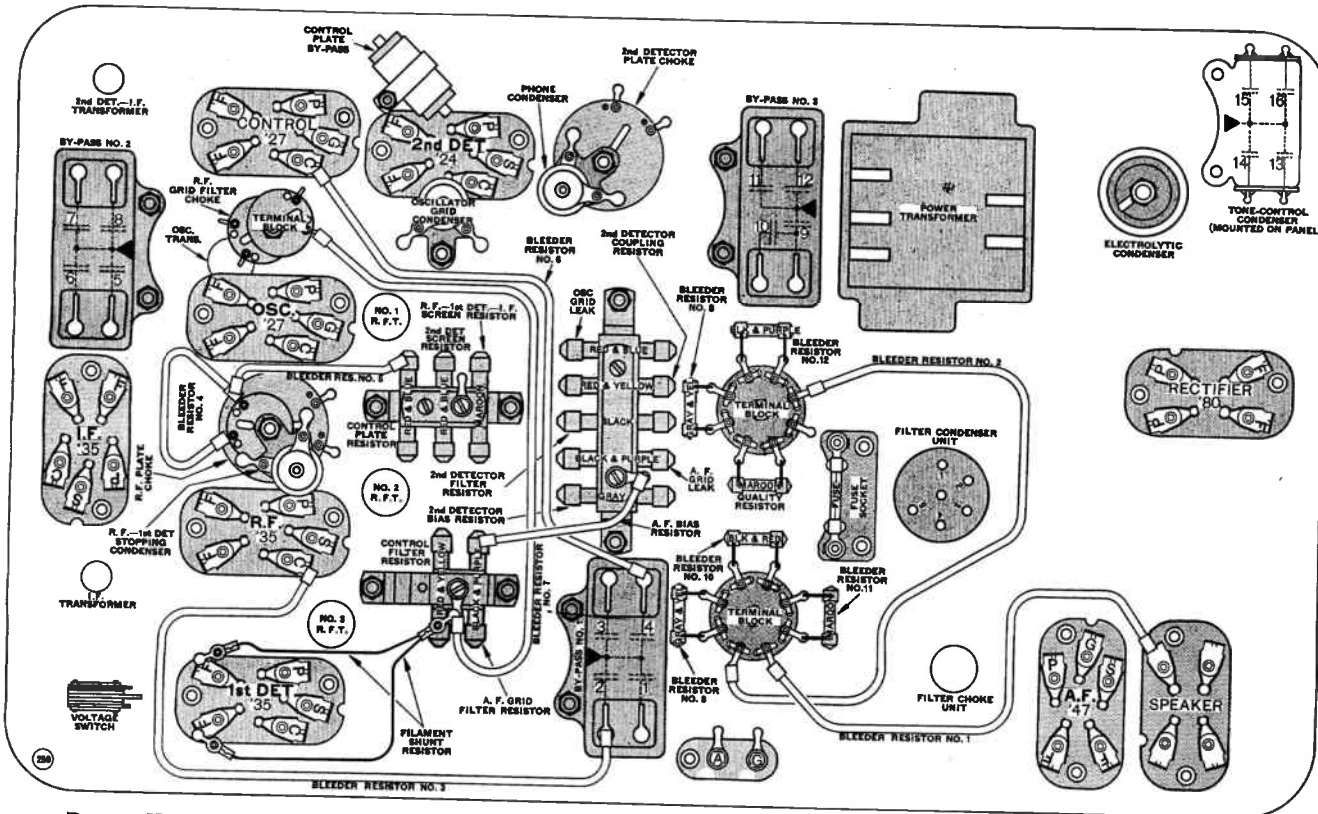


CHART OF MODEL 96 (1st Type) Below Serial No. 7289385



By-pass No. 1

- 1—2nd-detector plate filter condenser.
- 2—1st-detector bias by-pass.
- 3—R. F. 1st-detector — I. F. screen by-pass.
- 4—Control plate filter condenser.

By-pass No. 2

- 5—A. F. grid filter condenser.
- 6—R. F.—I. F. bias by-pass.
- 7—1st-detector—I. F. grid filter condenser.
- 8—R. F. grid filter condenser.

By-pass No. 3

- 9—Phone condenser.
- 10—2nd-detector — A. F. coupling condenser.
- 11—2nd-detector bias by-pass.
- 12—Quality condenser.

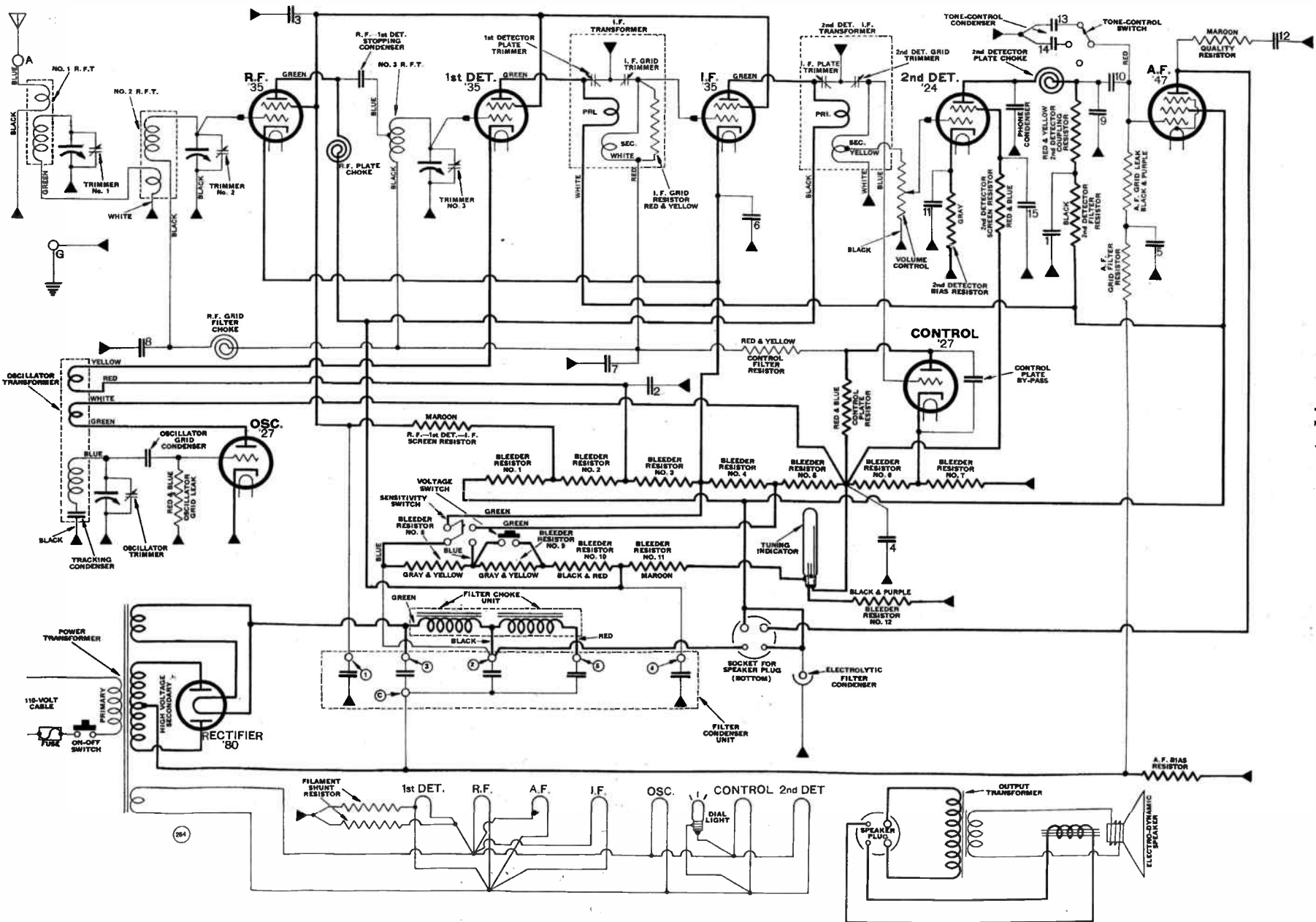
Tone-control Condenser (on panel)

- 13—Tone condenser.
- 14—Tone condenser.
- 15—2nd-detector screen by-pass.
- 16—Not used.

ATWATER KENT RADIO
 MODEL 96 (1st Type) Below Serial No. 7289385

April, 1938.

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ATWATER KENT RADIO

CHART OF MODEL 96 (2nd Type) Serial Nos. 7289385 to 7291674

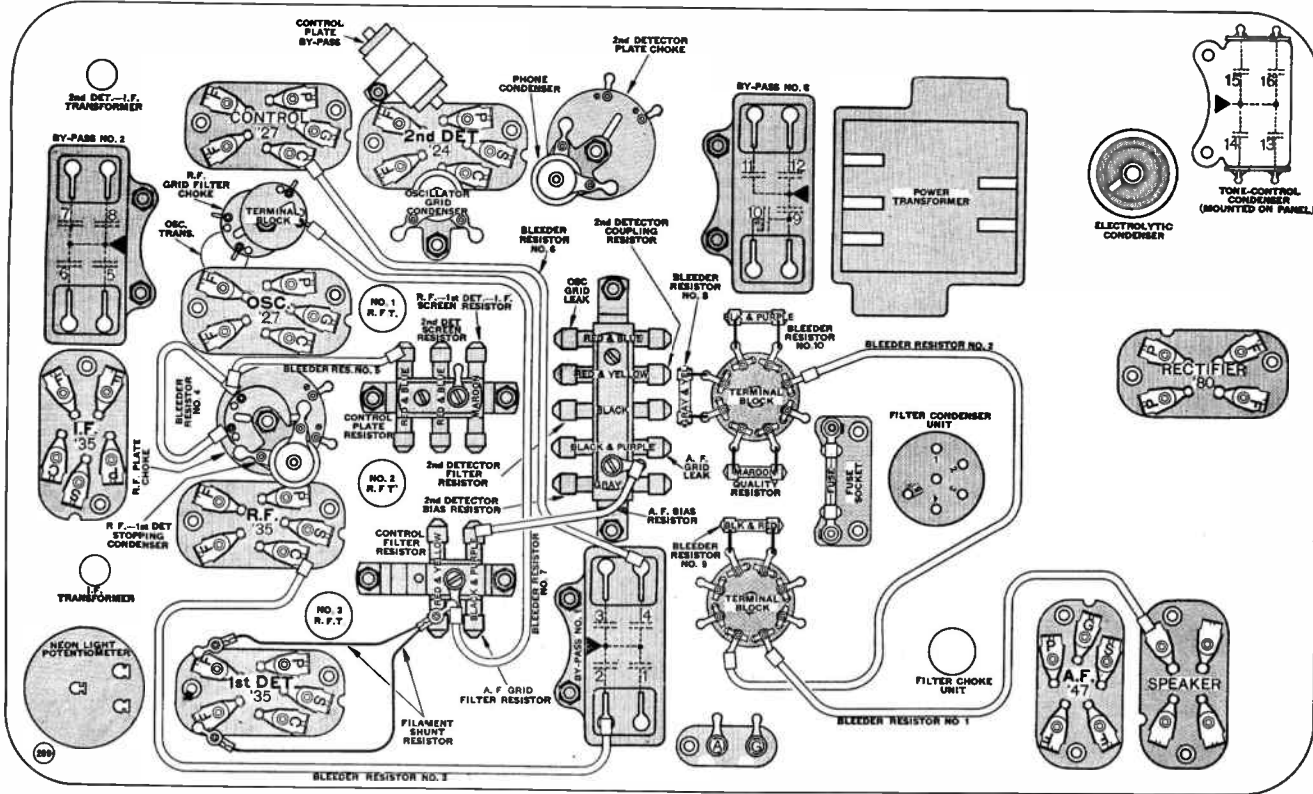
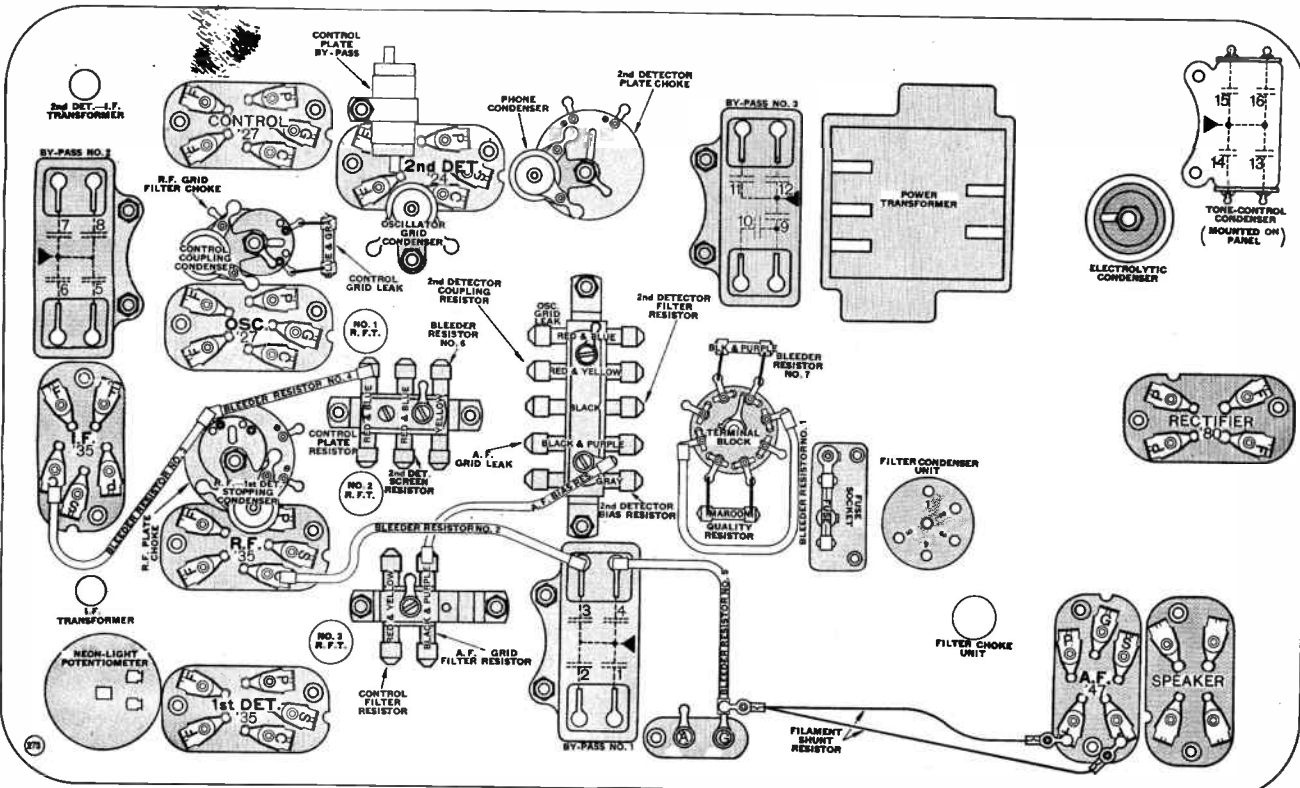


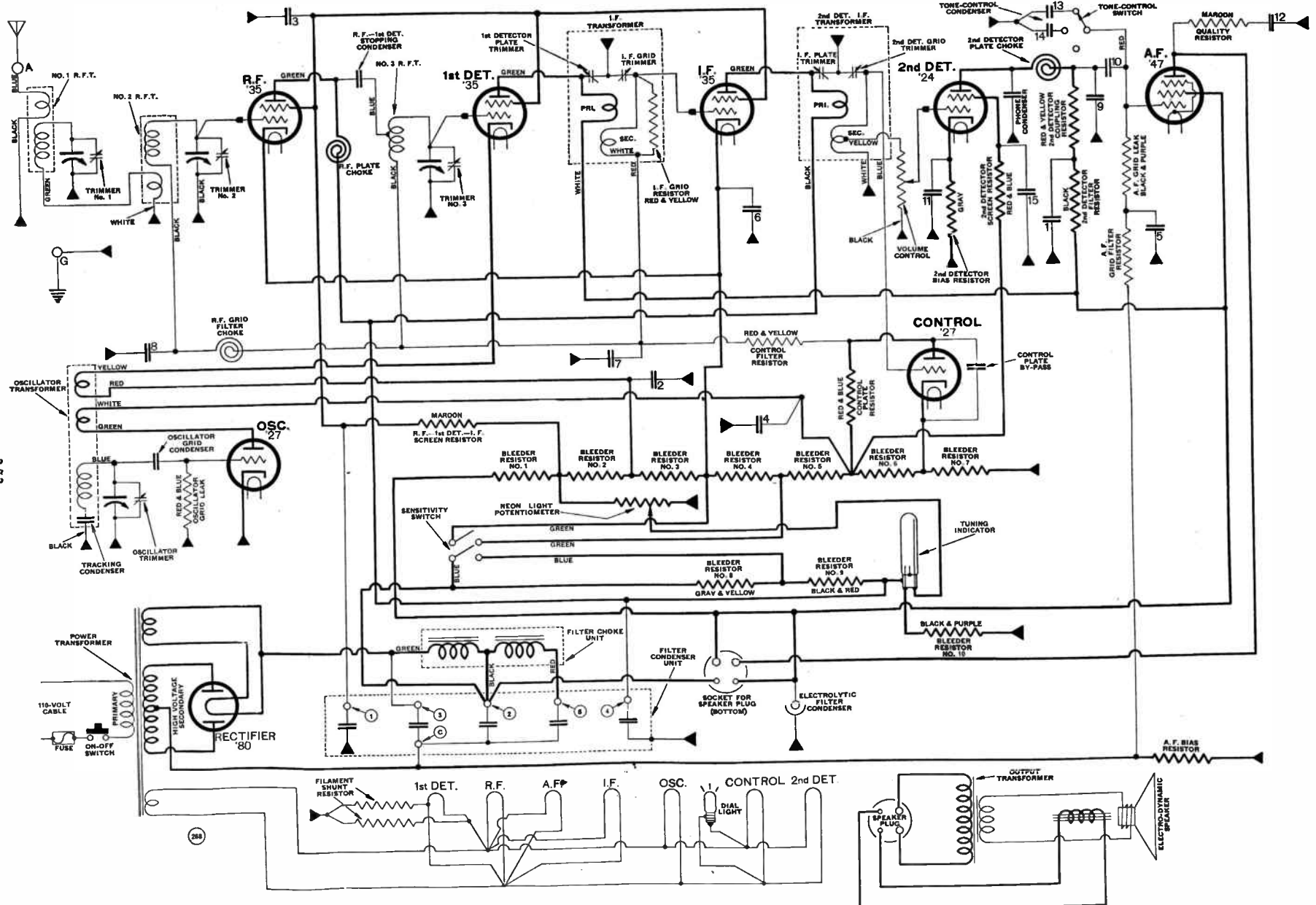
CHART OF MODEL 96 (3rd Type) Above Serial No. 7291674



In some late type Model 96 receivers, a flexible type 1st-detector bias resistor (No. 16320) is connected between condenser B (in by-pass No. 1) and the lower contact of the potentiometer. In this case, bleeder No. 2 is connected from the lower contact of the potentiometer to the R. F. cathode. Also in some of these sets, a flexible bleeder No. 8 (No. 24450) is connected in series with the lead to the center contact of the potentiometer.

April, 1932.

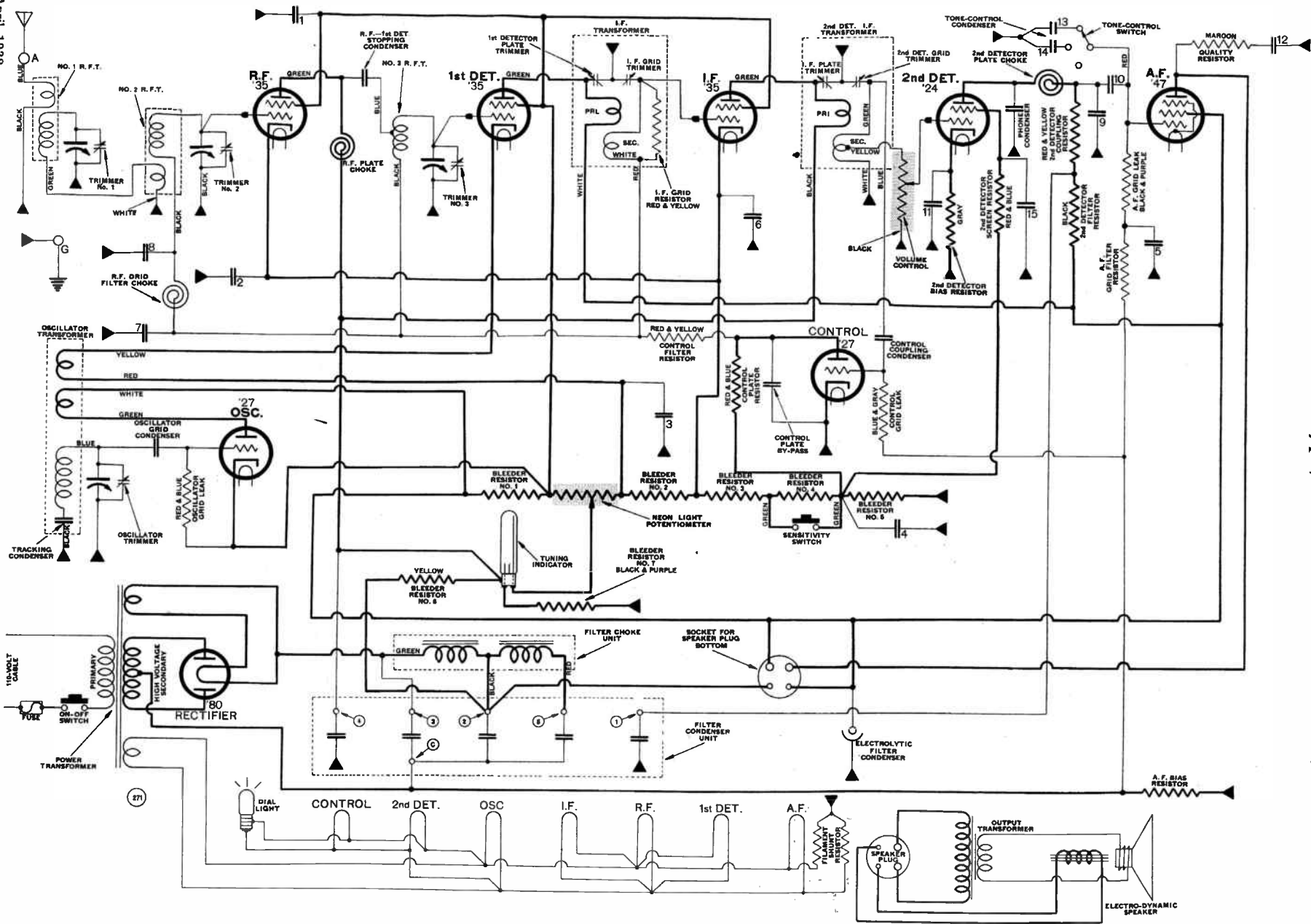
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ATWATER KENT RADIO

MODEL 96 (2nd Type) Serial Nos. 7289385 to 7291674

The neon-light potentiometer in 2nd type Model 96 does not have any identifying color.



MODEL 96 (3rd Type) Above Serial No. 7291674

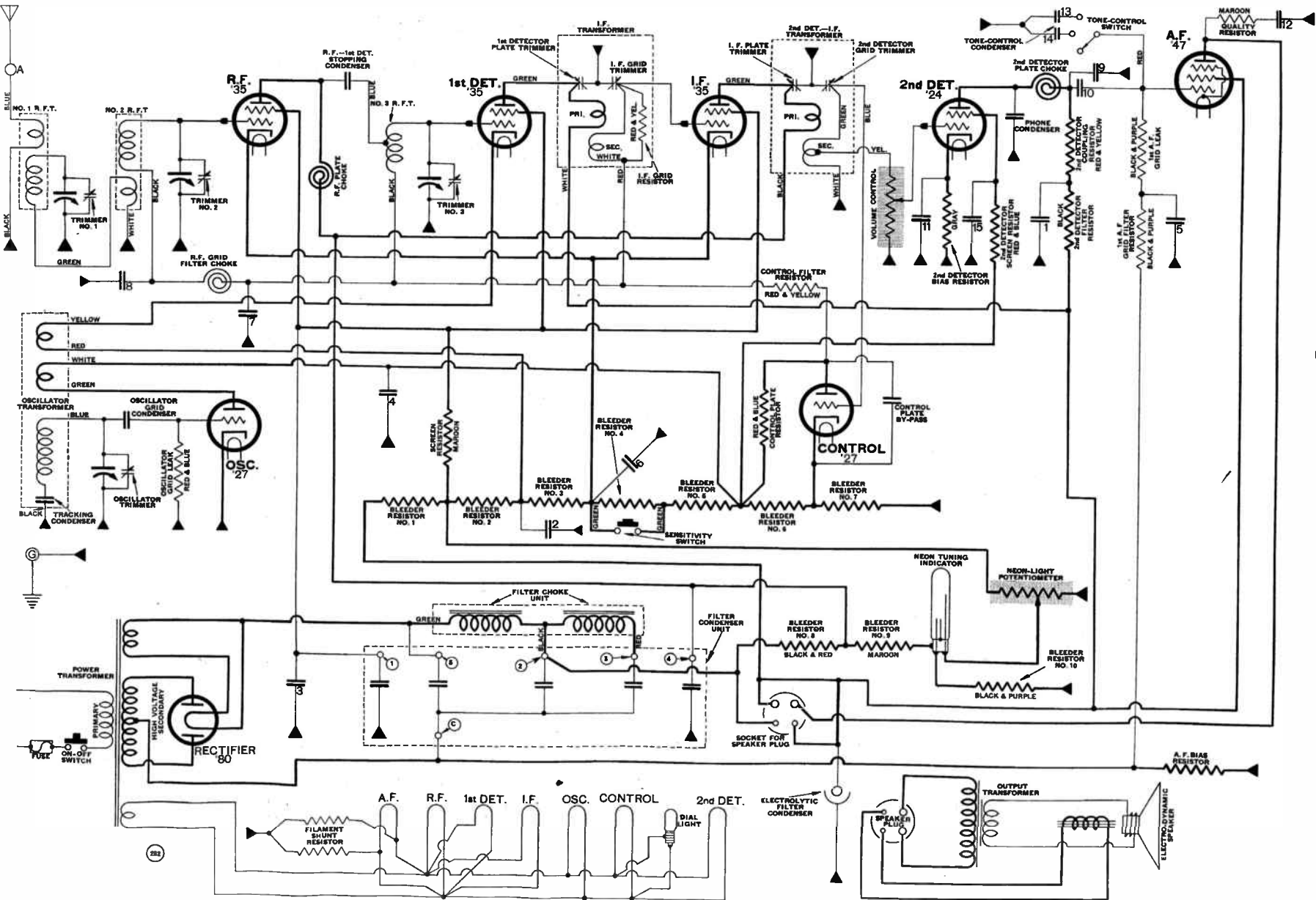
ATWATER KENT RADIO

The neon-light potentiometer used in 3rd type Model 96 is marked with red paint as identification.

In some late type Model 96 receivers, a flexible type 1st-detector bias resistor (No. 16320) is connected in series with the red lead from the oscillator transformer, after by-pass 3. Also in some of these sets, a flexible bleeder No. 8 (No. 24450) is connected in series with the lead to the center contact of the potentiometer.

April, 1932.

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See Page 362 for Chart of Model 96-F

ATWATER KENT RADIO MODEL 96-F

ATWATER KENT RADIO

MODEL 99, 99-F, 99-P TOP VIEW

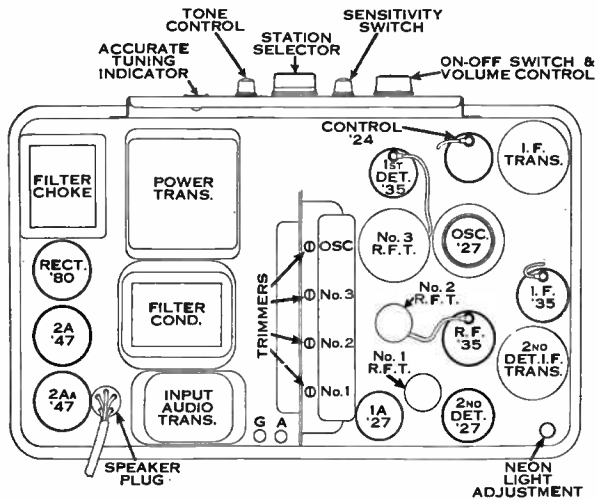
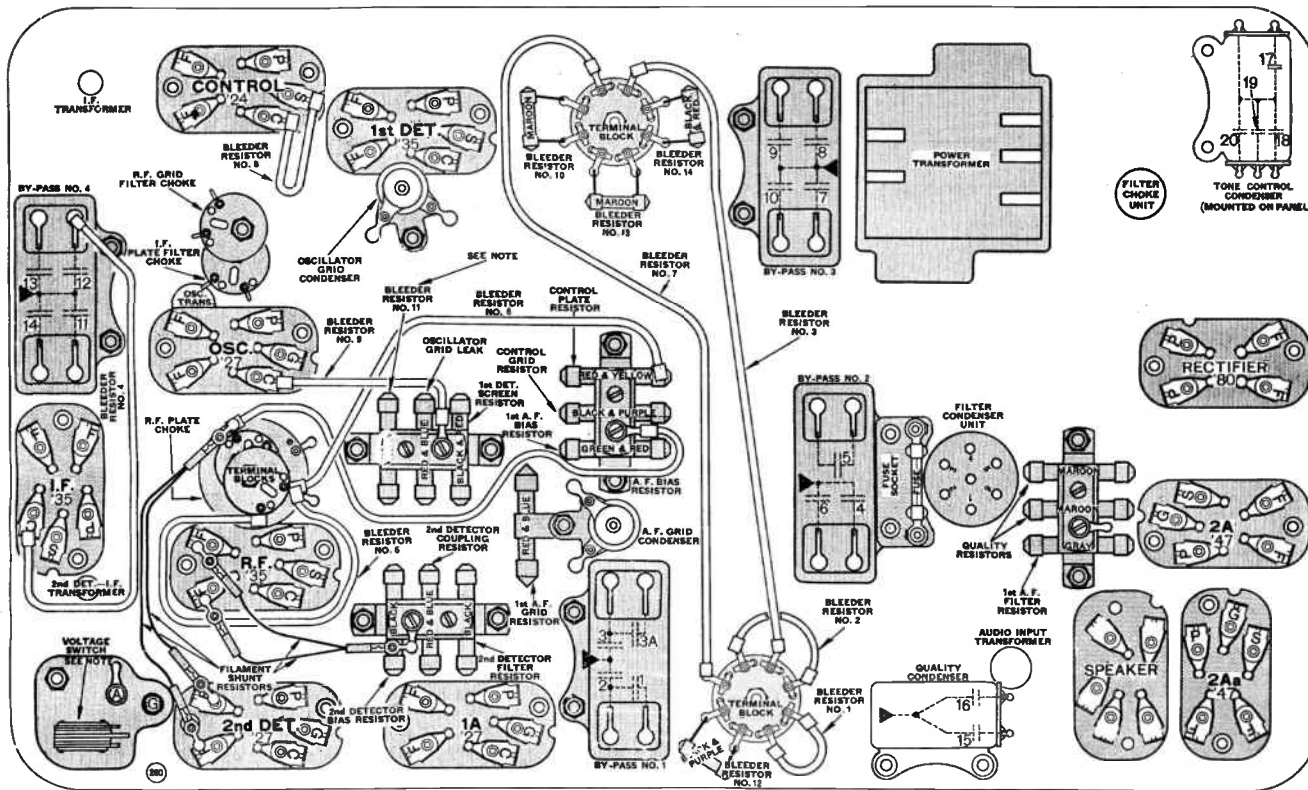


CHART OF MODEL 99 (1st Type) Below Serial No. 4882380



Bleeder Resistor No. 11 is Yellow.

By-pass No. 1

- 1—2nd-detector — A. F. coupling condenser.
- 2—Phone condenser.
- 3—2nd-detector bias by-pass.
- 3A—Not used.

By-pass No. 2

- 4—2nd-detector plate filter condenser.
- 5—Screen by-pass.
- 6—R. F. bias by-pass.

By-pass No. 3

- 7—R. F. plate filter condenser.
- 8—Control plate filter condenser.
- 9—1st-detector screen by-pass.
- 10—Control cathode by-pass.

By-pass No. 4

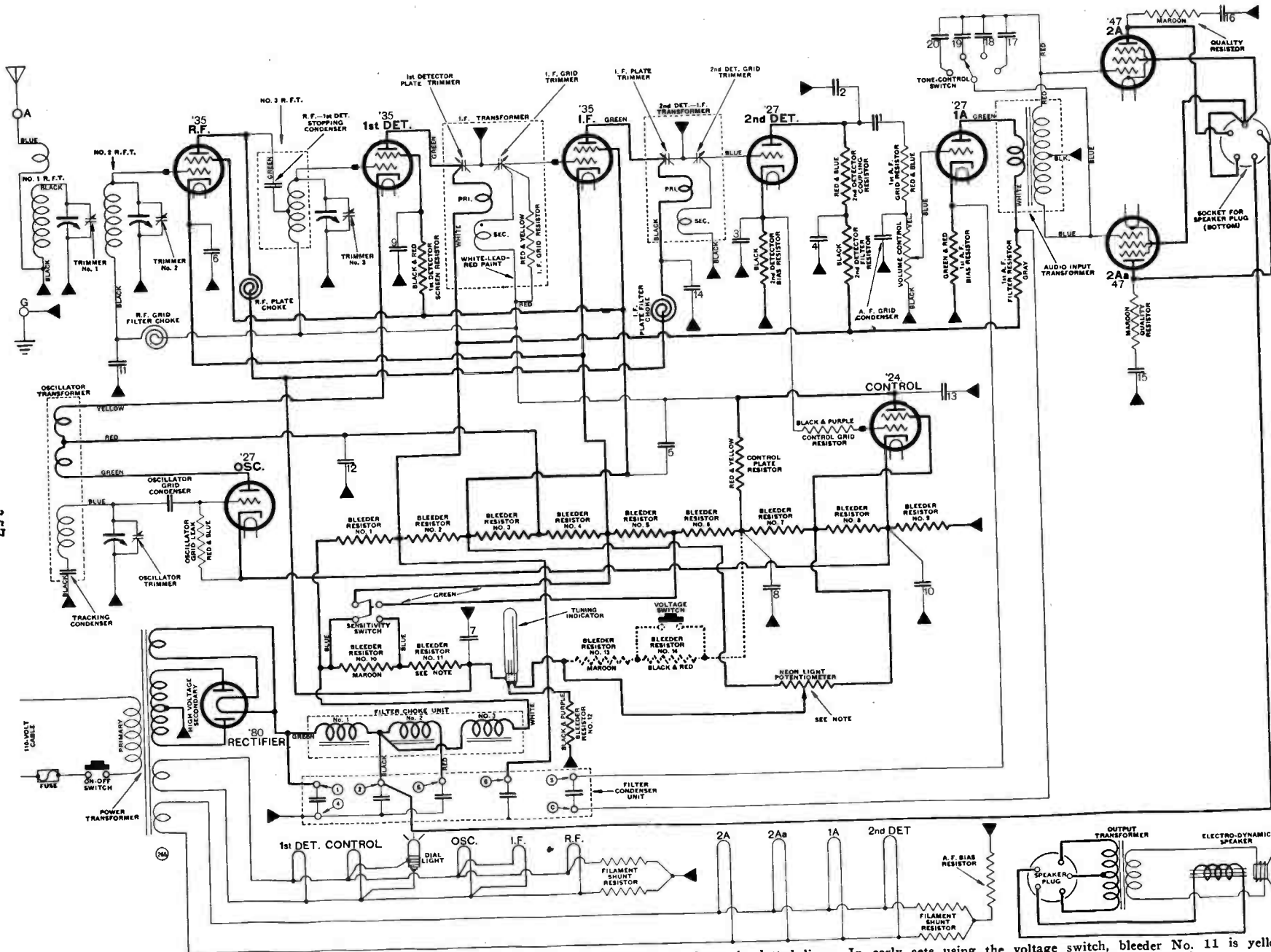
- 11—R. F. grid filter condenser.
- 12—1st-detector bias by-pass.
- 13—Control plate by-pass.
- 14—I. F. plate filter condenser.

Quality Condenser

- 15—Quality condenser.
- 16—Quality condenser.

Tone-control Condenser (on panel)

- 17—Tone condenser.
- 18—Tone condenser.
- 19—Tone condenser.
- 20—Tone condenser.



NOTE—In 1st type sets, the neon-light potentiometer is not used, and the circuit is connected as shown in dotted lines. In early sets using the voltage switch, bleeder No. 11 is yellow. In sets using the potentiometer, bleeder No. 11 is yellow-and-gray. In a few sets using the potentiometer, bleeder No. 11 consists of two gray resistors in parallel. The neon-light potentiometer in 2nd type Model 99 does not have any identifying color.

1st Type Below Serial No. 4882380
MODEL 99 (1st and 2nd Types)
 2nd Type from 4882380 to 4884901

ATWATER KENT RADIO

ATWATER KENT RADIO

CHART OF MODEL 99 (2nd Type) Serial Nos. 4882380 to 4884901

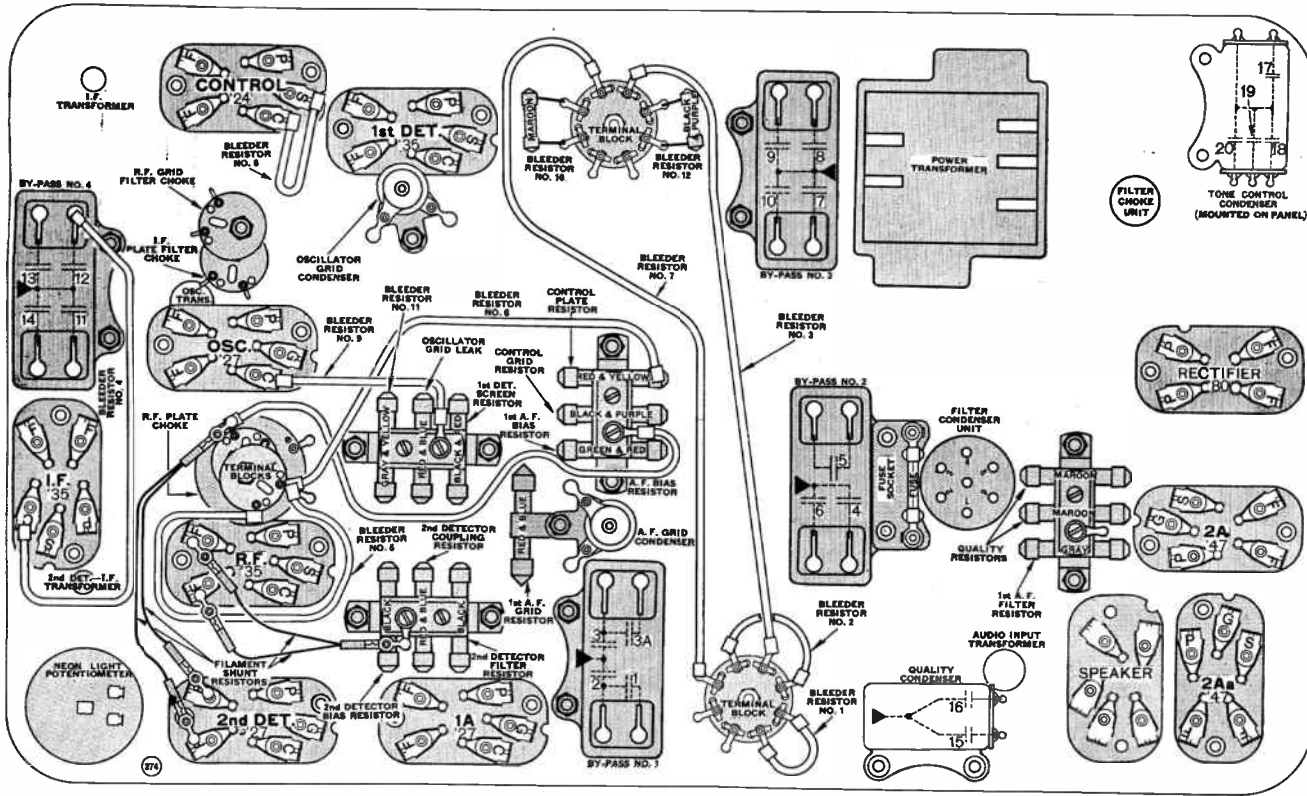
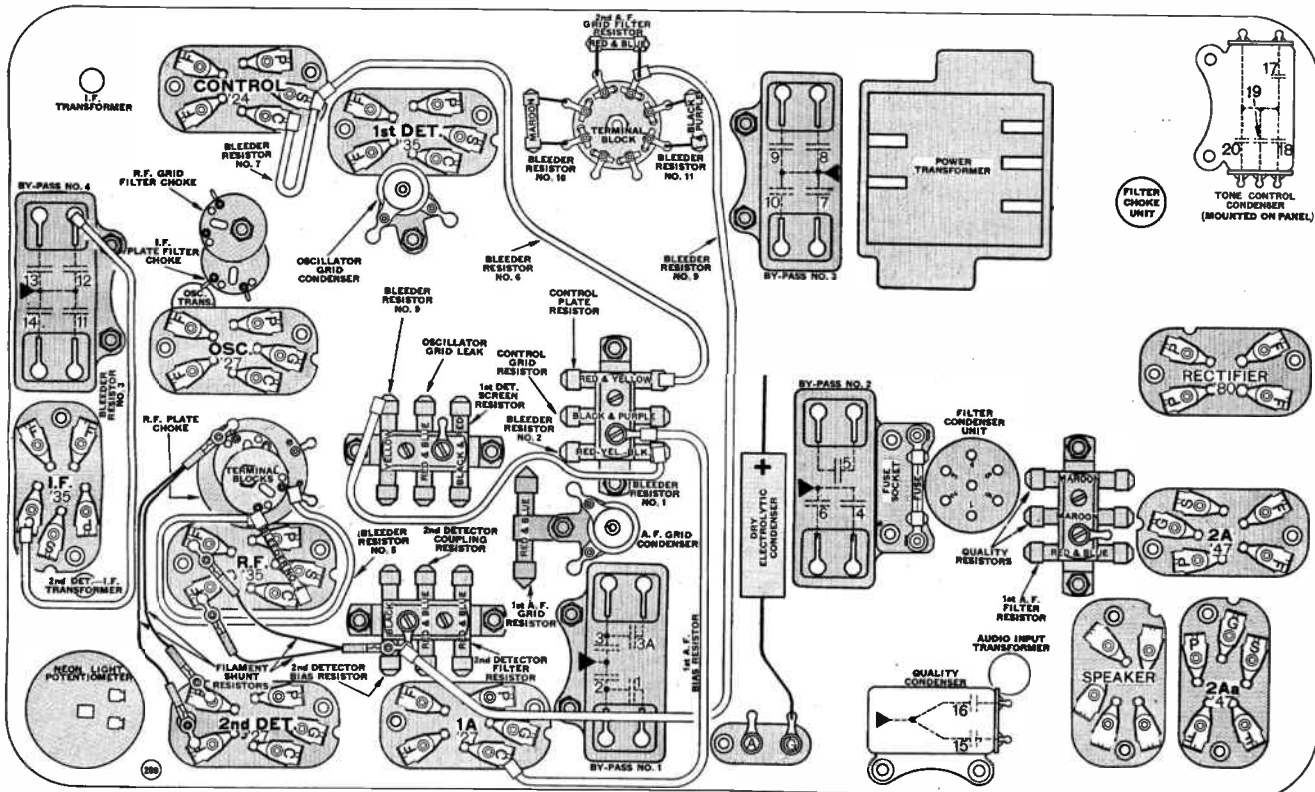
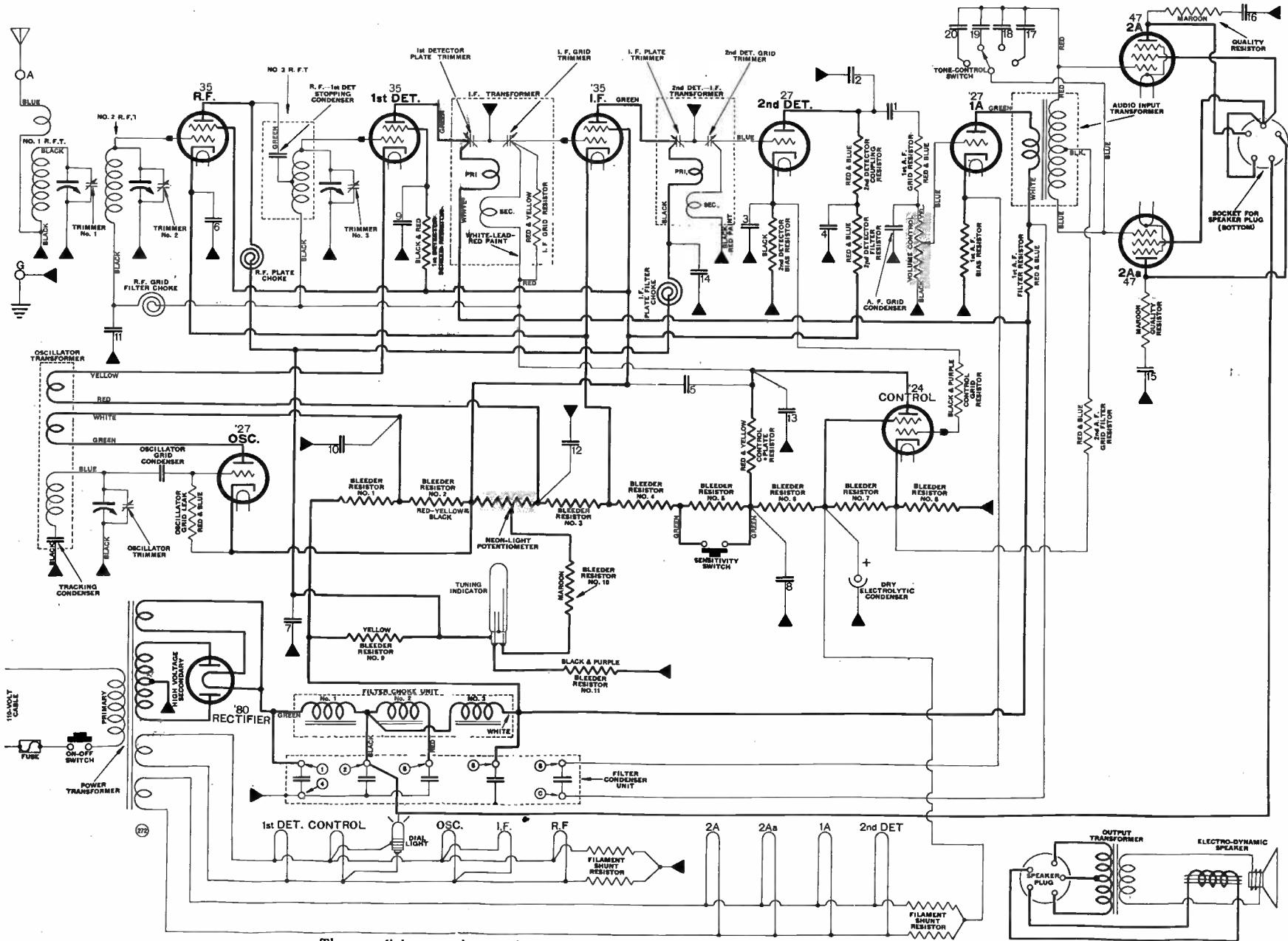


CHART OF MODEL 99 (3rd Type) Above Serial No. 4884901
MODELS 99-F AND 99-P



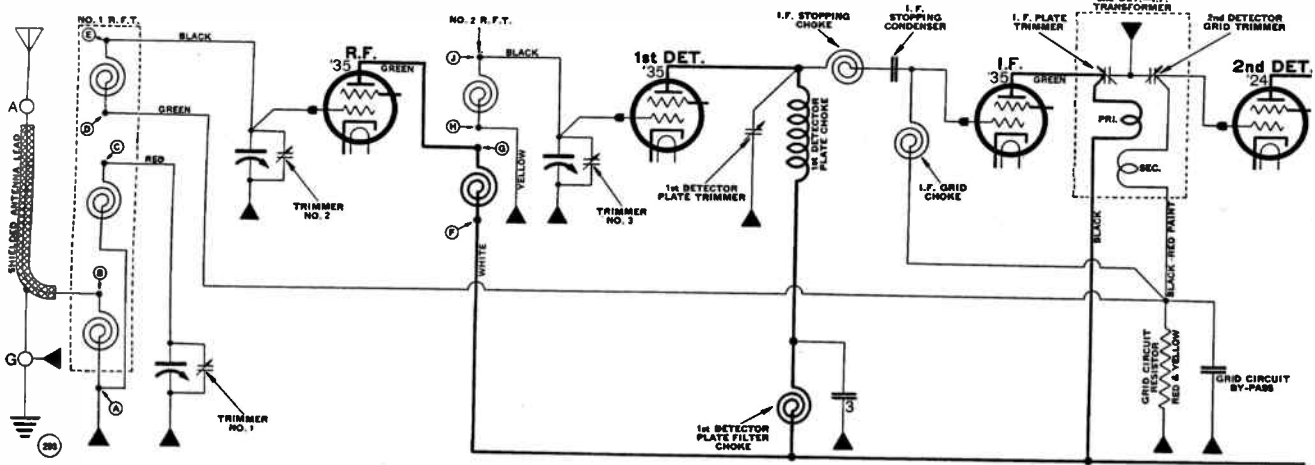
See Page 360 for Circuit of Model 99-F and 99-P.



The neon-light potentiometer in 3rd type Model 99 is marked with green paint as identification.

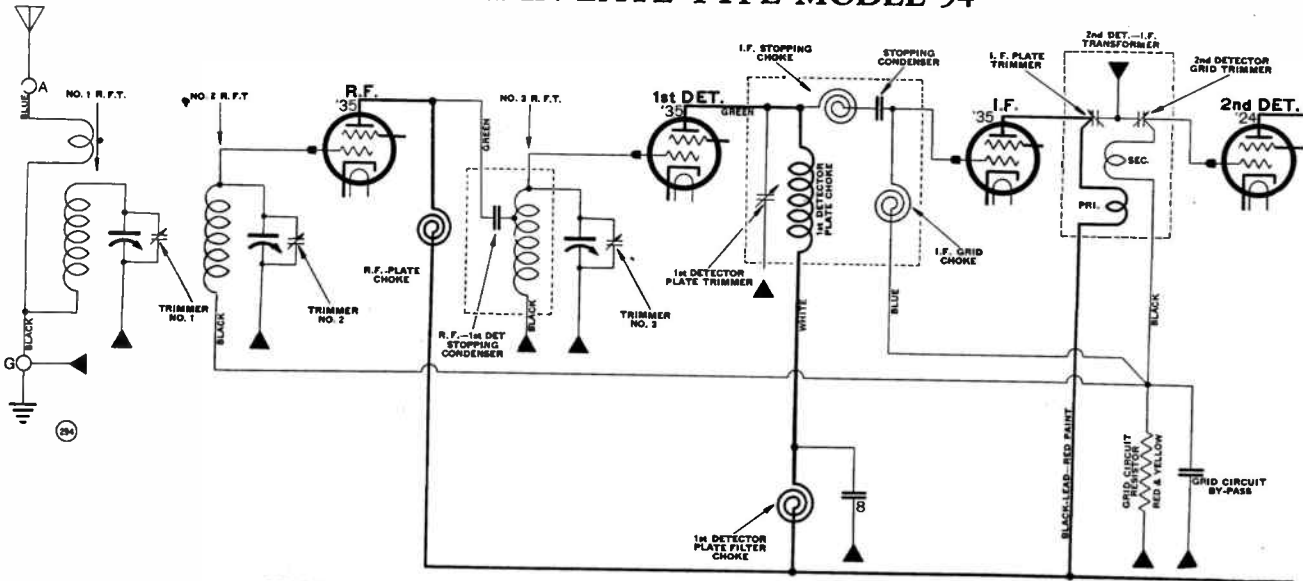
ATWATER KENT RADIO

CHANGE IN LATE TYPE MODEL 90



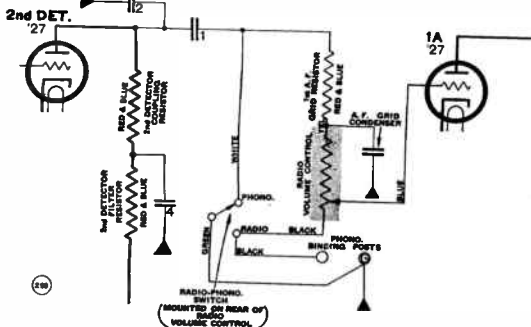
In late type Model 90, the grid returns of the R. F., I. F., and 2nd-detector tubes are connected to ground through a red-and-yellow resistor as shown above.

CHANGE IN LATE TYPE MODEL 94



In late type Model 94, the grid returns of the R. F., I. F., and 2nd-detector tubes are connected to ground through a red-and-yellow resistor as shown above.

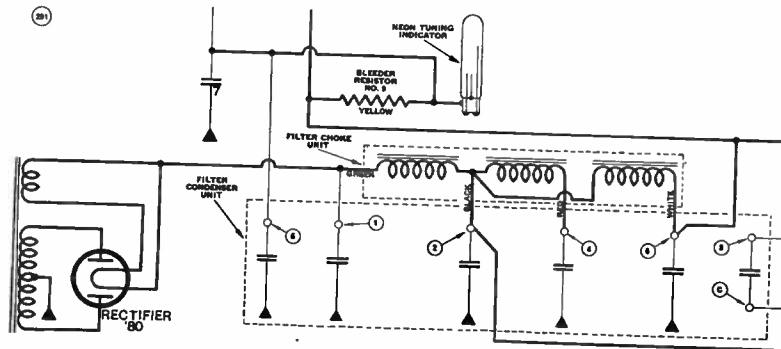
MODEL 99-P



PHONOGRAPH SWITCHING CIRCUIT

The rest of the circuit is the same as the 3rd type Model 99, except that there is no sensitivity switch and bleeder No. 5 is omitted.

MODEL 99-F



FILTER CIRCUIT OF MODEL 99-F

The rest of the circuit is the same as the 3rd type Model 99.

TUBULAR RESISTORS

(Large Size, 1½ inches long)			(Small Size, 1 inch long)		
Part No.	*Identifying Color	List Price	Part No.	*Identifying Color	List Price
15285	Gray	.50	20920	Red-yellow	.25
15444	Yellow	.25	20930	Black-purple	.25
15545	Maroon	.25	20940	Green	.25
15592	Black	.25	20950	Maroon	.25
15891	Black-red	.25	20960	Gray-yellow	.25
15892	Green	.25	20970	Gray	.25
16282	Blue-red	.25	20980	Red-blue	.25
16724	White	.25	21040	Black	.25
19346	Green-red	.30	21050	Blue-gray	.25
19581	Red-yellow	.25	23120	Red-black	.25
19649	Black-purple	.25	23130	Red-gray	.25
20151	Purple	.25	26160	White	.25
20223	Red-gray	.25			
21784	Gray-green (Superseded by 22211)	.25			
22211	Yellow-gray	.25			
22407	Black-yellow-red	.25			

* When replacing a tubular resistor, use a resistor of the same identifying color and size. The background color of the resistor is disregarded in the identification except in the case of the all-white or all-black resistors. If a resistor has black-and-red coloring on a white base, the identification is black and red, not black, white and red.

BY-PASS AND TONE-CONTROL CONDENSERS

Part No.	*Code Markings	List Price	Part No.	*Code Markings	List Price
15262	B-1, H-1, H-9, H-20	\$1.00	19690	H-32	\$1.00
15263	B-2, H-2	.90	19710	H-33	1.00
15640	H-16	1.00	19980	H-34	1.00
15770	H-15	1.00	19990	H-35	1.00
15780	H-17	1.10	20010	B-8	1.00
15790	H-18, H-21	1.00	20350	H-36	1.00
15837	B-3 (Superseded by 16233)		20830	L-B-9, J-2, J-1	2.00
15870	B-7, L-28	1.00	21170	H-37	1.00
16060	H-24, L-29 (304) (Superseded by 18350)***		21180	H-38	1.00
16233	H-4, H-10	.90	21250	B-9	1.00
16461	H-6, H-12	.75	21430	H-39, L-37-A	1.00
16462	H-5, H-11	1.00	21440	H-40, L-44-A	1.00
16490	B-6, L-12	1.00	21450	B-10, L-36-A	.50
16745	H-7, H-8, H-13	1.00	21530	L-42-A, B-11	1.00
16828	B-5	.50	22050	H-41	1.00
16880	H-23, L-26 (439)	1.10	22570	J-3	2.00
16940	H-22, L-10	1.10	23140	J-4	2.00
17360	H-27, L-32	1.10	23310	H-42 (Superseded by 21180)**	
17370	H-25, H-26, L-3, L-39	1.10	23330	H-43	1.00
18350	H-28, L-49	1.10	23590	L-55-A, H-44	1.00
19150	H-29	1.00	23610	L-57-A, H-45	1.00
19160	H-30	1.00	24250	LB-30, J-5	2.00
19560	H-31	1.00	25690	LB-34	2.00

*For information about code markings, see Page 253 in the Service Manual.

**Do not use 23310 in place of 21180.

***See note on Page 243.



IDENTIFICATION OF SMALL FIXED CONDENSERS OF TYPE ILLUSTRATED AT LEFT

Part No.	Identification	List Price	Part No.	Identification	List Price
17440	Copper washers, 7 plates	.50	22220	Brass-washers, 3 plates	.35
17470	"X" scratched on fibre, 4 plates	.35	25650	Black-finished washers, 6 plates	.50
17974	Aluminum washers, 4 plates	.35	26440	Black-finished washers, 4 plates, enlarged mounting hole	.35
21160	Black-finished washers, 4 plates	.35			

THESE PRICES SUPERSEDE ALL PREVIOUS PRICES AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ATWATER KENT RADIO

TABLE OF VOLTAGES ACROSS BLEEDER RESISTORS IN MODELS 85-Q, 86, 87, 89, 90, 92, 92-F, 93, 94, 96, 96-F, 99, 99-F, 99-P

The voltages listed in this table are only approximate, and are measured values, not actual operating values.
Use 250-volt scale of a 1,000-ohm-per-volt D. C. voltmeter.
Turn volume control to maximum.

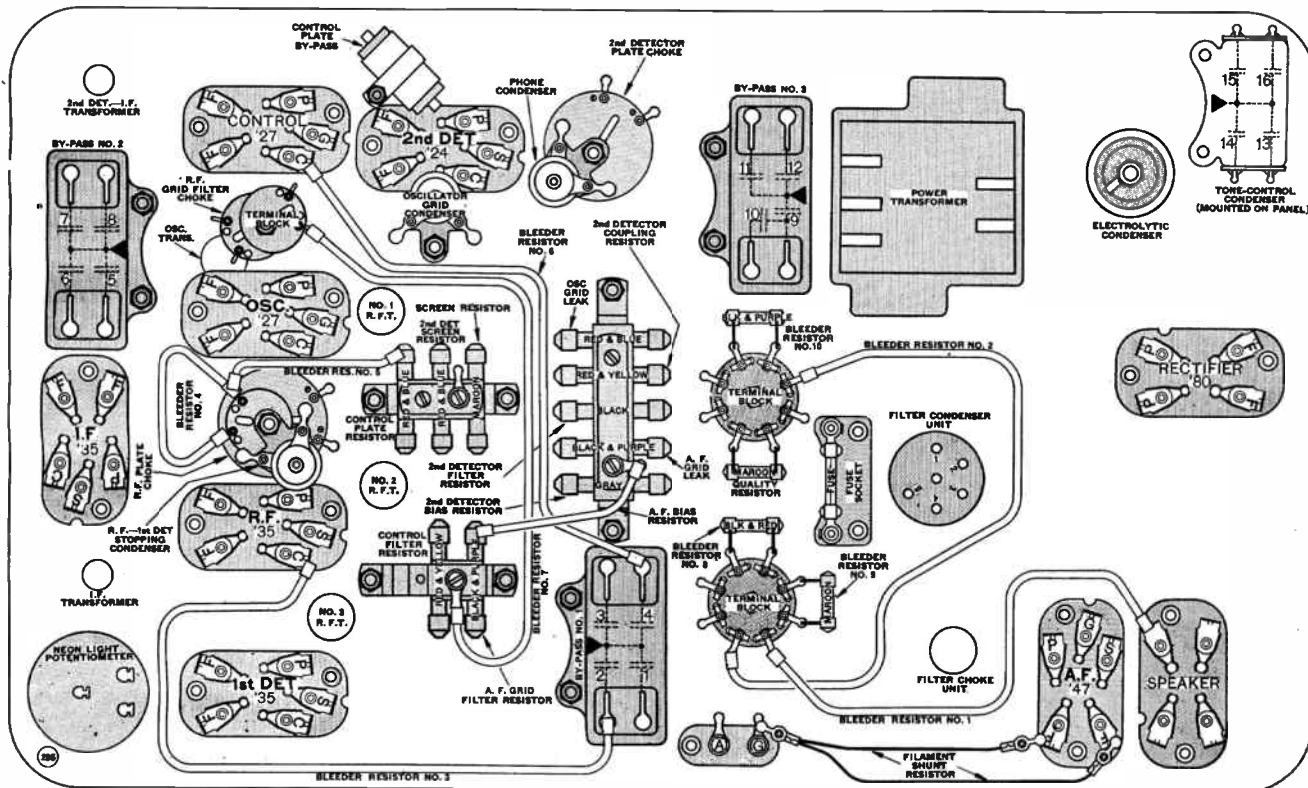
In all sets equipped with sensitivity switch, voltage switch, or neon tuning light potentiometer: Before making measurements, place sensitivity switch in NORMAL position, voltage switch in REDUCED VOLTAGE position, or neon tuning light potentiometer in full counter-clockwise position.

Line voltage=110 volts.

Bleeder Resistor No.	85-Q 2nd Type	86 2nd Type	87 3rd Type	89 3rd Type	90	92	92-F	93	94	96 1st Type	96 2nd Type	96 3rd Type	96-F	99 1st Type	99 2nd Type	99 3rd Type and 99-P	99-F
1	45	65	80	60	74*	68	72	75	95	70	90	80	97	82	93	62	50
2	9	47	45	55	60*	50	48	70	100	50	45	1	54	55	70	115	95
3	15	5	2	8	50	5	5	20	3	5	4	1	5	50	42	8	6
3-A	—	4	7	6	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	3	—	1	2	1	2	—	—	5	4	5	5	8	6	1	1
5	—	50	—	48	—	3	—	—	—	2	1	50	1	5	3	5**	5
6	—	5	—	5	—	62	70	—	—	65	55	32	66	1	1	60	45
7	—	5	—	25	—	15	18	—	—	17	15	112	17	60	49	15	15
8	—	—	—	—	—	—	—	—	—	32	28	—	50	7	7	22	22
9	—	—	—	—	—	—	—	—	—	32	33	—	7	26	27	47	37
10	—	—	—	—	—	—	—	—	—	38	95	—	125	33	24	5	1
11	—	—	—	—	—	—	—	—	—	2	—	—	—	25	35	170	122
12	—	—	—	—	—	—	—	—	—	60	—	—	—	5	98	—	—
13	—	—	—	—	—	—	—	—	—	—	—	—	—	10	—	—	—
14	—	—	—	—	—	—	—	—	—	—	—	—	—	90	—	—	—

* The readings across No. 1 and No. 2 bleeders in Model 90 may be reversed; see note under diagram of Model 90.
** Bleeder No. 5 is not used in 99-P and the grid voltage of the '35 tubes is lower than indicated.

MODEL 96-F BOTTOM CHART



VOLTAGE TABLE FOR MODELS

81, 81-B, 81-C, 82-D, 82-Q, 85-Q, 86, 87, 89, 90, 92, 92-F, 93, 94, 96, 96-F, 99, 99-F, 99-P

The voltages listed in this table are only approximate, and are measured values, not actual operating values.

Use 250-volt scale of a 1,000-ohm-per-volt D. C. voltmeter.

Turn volume control to maximum.

In all sets equipped with sensitivity switch, voltage switch, or neon tuning light potentiometer: Before making measurements, place sensitivity switch in NORMAL position, voltage switch in REDUCED VOLTAGE position, or neon tuning light potentiometer in full counter-clockwise position.

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

Line voltage=110 volts.

		81 81-B 81-C	82-D 2nd Type	82-Q 2nd Type	85-Q 2nd Type	86 2nd Type	87 3rd Type	89 3rd Type	90	92	92-F	93**	94	96 1st Type	96 2nd Type	96 3rd Type	96-F	99 1st Type	99 2nd Type	99 3rd Type and 99-P	99-F	
R. F. Tube	Filament	5.5	—	2	2	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	2.4	2.4
	Plate	125	—	125	132	122	160	120	210	120	125	—	190	100	150	205	195	130	135	215	180	
	Screen	75	—	60	62	45	80	50	75	45	35	—	100	45	40	70	50	55	45	85	70	
	Grid	1	—	3	4	4	8	4	2	2	2	—	3	3	3	3	3	3	3	4	3	
1st Det. Tube	Filament	5.5	5.5	2	2	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	2.4	2.4	2.4
	Plate	95	70	125	132	112	160	115	200	115	120	90	185	110	135	150	150	105	110	255	210	
	Screen	—	50	40	40	40	80	40	70	40	30	20	90	40	35	70	45	40	35	70	55	
	Grid	7	5	3	4	6	8	7	7	5	5	1	10	5	4	4	5	7	5	8	6	
I. F. Tube	Filament	—	6	2	2	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	2.4	2.4	2.4
	Plate	—	95	125	132	115	160	120	205	120	125	115	190	100	150	205	195	130	135	215	180	
	Screen	—	50	60	62	45	80	50	75	45	35	—	100	45	40	70	50	55	45	85	70	
	Grid	—	1	3	4	4	8	4	2	2	2	3	3	3	3	3	3	3	3	4	3	
2nd Det. Tube	Filament	—	5.5	2	2	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	2.4	2.4
	Plate	—	55	45	43	80	90	110	95	90	90	—	80	95	95	90	105	110	105	100	80	
	Screen	—	10	25	28	40	—	—	35	50	55	—	65	55	45	30	50	—	—	—	—	
	Grid	—	2	3	3	6	4	15	7	7	7	—	8	7	7	5	7	15	15	14	12	
1st A. F. Tube	Filament	5.5	5.5	2	2	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	2.4	2.4
	Plate	120	75	55	67	175	100	115	200	195	205	—	185	200	200	195	225	110	115	120	100	
	Screen	123	—	—	—	185	—	—	210	205	215	—	195	210	210	205	235	—	—	—	—	
	Grid	11	3	3	3	4	3	5	4	5	5	—	6	3	4	4	4	4	4	4	4	
2nd A. F. Tube	Filament	—	2	2	2	—	2.4	2.4	—	—	—	—	—	—	—	—	—	2.4	2.4	2.4	2.4	
	Plate	—	85	120	127	—	185	210	—	—	—	—	—	—	—	—	—	215	215	215	210	
	Screen	—	90	125	132	—	190	215	—	—	—	—	—	—	—	—	—	225	225	225	220	
	Grid	—	7	15	15	—	12	14	—	—	—	—	—	—	—	—	—	15	15	12	11	
Osc. Tube	Filament	—	5	2	2	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	2.4	2.4	
	Plate	—	100	60	62	80	80	90	75	80	85	110	100	80	70	80	80	75	65	115	90	
	Screen	—	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	Grid	—	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Control Tube	Filament	5.5	—	—	—	2.4	—	2.4	—	2.4	—	—	—	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	
	Plate	3	—	—	—	25	—	25	—	35	40	—	—	40	35	30	40	30	24	30	23	
	Screen	—	—	—	—	5	—	5	—	—	—	—	—	—	—	—	—	7	7	15	14	
	Grid	2	—	—	—	3	—	3	—	15	17	—	—	17	15	3	15	4	4	3	3	

* The measured oscillator grid voltage will vary dependent on several factors. In some cases, 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.

** In Model 93, make measurements with frequency range switch turned to low frequency scale.

ATWATER KENT RADIO

PARTS AND PRICE LIST, MODEL 81-B, No. 25600, MOTOR CAR RADIO

Note: All parts not listed below will be found under Model 81, No. 20300, on pages 308, 309.

Part No.	Name of Part	List Price	Part No.	Name of Part	List Price
21929	Chassis container, complete.....	\$ 4.00	21837	Antenna cable bushing.....	\$.05
21915	Container, less cover and accessories	2.50	22027	Antenna cable bushing clamp.....	.05
21918	Container cover.....	1.00	21847	Shielded "B" battery cable 8' 10".....	1.00
21823	Thumb screw.....	.05	22247	Shielded "B" battery cable, per foot .....	.12
21062	Mounting bolt.....	.10	21068	"B" battery cable bushing.....	.05
21142	Mounting washer.....	.01	22018	Speaker-to-chassis cable bushing clamp (outside).....	.05
21824	Mounting nut.....	.02	22019	Speaker-to-chassis cable bushing clamp (inside).....	.05
21838	Antenna cable.....	.25			

PARTS AND PRICE LIST, MODEL 81-C, No. 25700, MOTOR CAR RADIO

Note: All parts not listed below will be found under Model 81, No. 20300, on pages 308, 309.

21931	Chassis container, complete.....	\$ 4.00	22247	Shielded "B" battery cable, per foot..	\$.12
21938	Container, less lid and accessories	2.50	21068	"B" battery cable bushing.....	.05
21939	Container lid.....	.75	22027	"B" battery cable bushing clamp...	.05
21061	Mounting bolt 1 3/4" long.....	.10	21838	Antenna cable.....	.25
21142	Mounting bolt washer.....	.01	21837	Antenna cable bushing.....	.05
21141	Mounting bolt lock washer.....	.70/c	22027	Antenna cable bushing clamp.....	.05
21064	Wing nut.....	.05	22018	Speaker-to-chassis cable bushing clamp (outside).....	.05
21943	Mounting strap 1 3/4" x 12".....	.10	22019	Speaker-to-chassis cable bushing clamp (inside).....	.05
21847	Shielded "B" battery cable 8' 10".....	1.00			

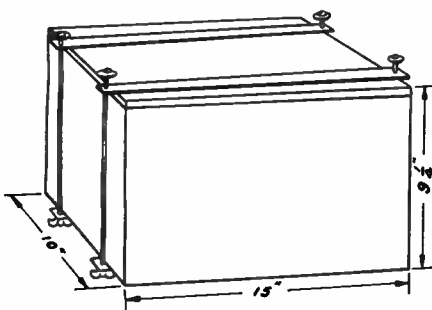
PARTS & PRICE LIST, MODEL 81-B & 81-C "B" BATTERY CONTAINERS

LONG TYPE No. 21932

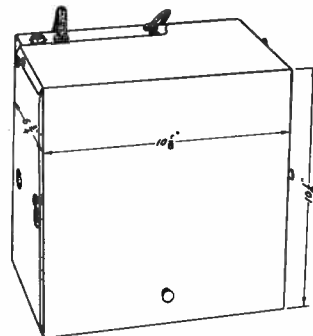
21932	Long "B" battery container, complete	\$ 3.50
21928	Container, less lid and accessories	2.50
21924	Container lid	1.00
22712	Gasket rubber, per foot.....	.05
21068	"B" battery cable bushing.....	.05
22027	"B" battery cable bushing clamp...	.05

SQUARE TYPE No. 21933

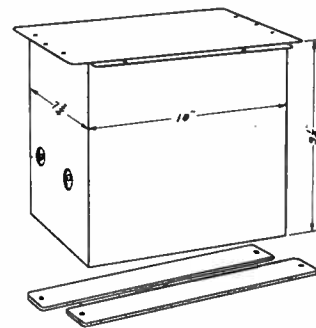
21933	Square "B" battery container, complete	\$ 3.50
21906	Container, less lid and accessories	2.50
21909	Container lid.....	1.00
21068	"B" battery cable bushing.....	.05
22027	"B" battery cable bushing clamp..	.05



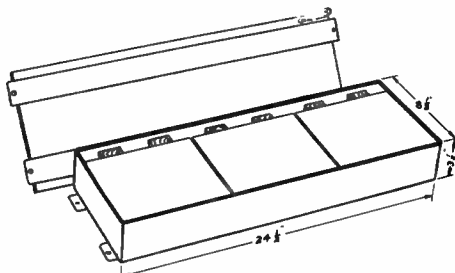
MODEL 81 CHASSIS AND BATTERY CONTAINER.
(For under-floor mounting.)



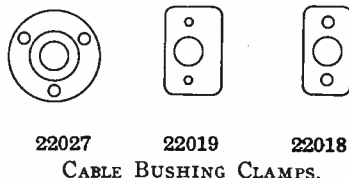
MODEL 81-B CHASSIS AND "C" BATTERY CONTAINER No. 21929.
(For dash mounting.)



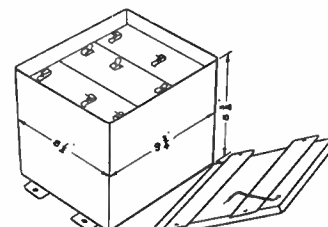
MODEL 81-C CHASSIS AND "C" BATTERY CONTAINER No. 21931.
(Mounted under floor or through hole cut in floor.)



LONG "B" BATTERY CONTAINER No. 21932
FOR USE WITH MODEL 81-B OR 81-C.



22027 22019 22018
CABLE BUSHING CLAMPS.



SQUARE "B" BATTERY CONTAINER No. 21933
FOR USE WITH MODEL 81-B OR 81-C.

THESE PRICES SUPERSEDE ALL PREVIOUS PRICES AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

PARTS AND PRICE LIST FOR MODEL 93, No. 27200
SHORT WAVE CONVERTER

Part No.	Name of Part	List Price	Part No.	Name of Part	List Price
22263	CABINET, COMPLETE, WITH ESCUTCHEON	\$ 6.50		CHOKES	
19527	Cabinet feet.....	.12	25810	Filter choke unit.....	\$ 2.25
22384	Escutcheon .....	.65	22494	S. W. detector plate choke.....	.25
19552	Escutcheon rivet.....	.50/c	21877	S. W. detector plate choke shield..	.30
25750	Dial plate and bracket assembly..	.65	22037	Shield cover.....	.05
22333	Dial plate.....	.30	26510	Antenna choke.....	.50
15734	Dial plate rivet.....	.30/c		TRIMMER CONDENSERS	
19644	Dial light 3.2 V.....	.25	25830	S. W. detector plate trimmer.....	.70
17814	Dial knob.....	.30	25670	Oscillator trimmers No. 1, 2 and 3, complete with base.....	1.10
			22355	Oscillator trimmers No. 1, 2 or 3, unmounted .....	.25
25790	FREQUENCY RANGE SWITCH	2.50	22201	Trimmer mica.....	.03
17244	Frequency range switch knob.....	.30	22202	Fibre base for oscillator trimmers No. 1, 2 and 3.....	.25
			20190	Oscillator trimmer No. 4.....	.50
25710	ANTENNA AND ON-OFF SWITCH, WITH BRACKET..	2.50	22662	VARIABLE CONDENSER ROTOR, STATOR & FRAME.	3.00
17461	Antenna switch.....	1.00	20235	Rotor connection (long).....	.10
13664	On-off switch.....	1.00	18809	Dial knob shaft.....	.05
17244	Antenna and on-off switch knob...	.30	20116	Dial knob shaft bracket.....	.30
			17961	Dial rubber and bushing.....	.15
25780	POWER TRANSFORMER.....	7.50	20149	Dial gear and balance weight.....	.75
17824	Power transformer cover.....	.50	22353	Dial pointer .....	.05
17825	Power transformer cover spring..	.10	18823	Dial pointer shim.....	.02
25730	Oscillator transformer.....	1.50	20119	Trimmer mica.....	.03
19502	Oscillator transformer mounting bracket .....	.10		FLEXIBLE RESISTORS	
22442	Antenna transformer primary.....	.50	25720	Antenna resistor.....	.15
22441	Antenna transformer secondary....	1.50	24450	Bleeder resistor No. 1.....	.20
22476	Antenna transformer insulating sheet .....	.02	24450	Bleeder resistor No. 2.....	.20
19502	Antenna transformer mounting bracket .....	.10	21030	Bleeder resistor No. 3.....	.20
			16320	I. F. bias resistor.....	.20
				SOCKETS	
22538	ELECTROLYTIC CONDENSER, No. 1	2.50	20236	Det., I. F. and osc. socket.....	.30
19728	Electrolytic condenser No. 2.....	2.60	21448	Rectifier socket.....	.30
			17377	Socket insulator.....	.25/c
	SMALL FIXED CONDENSERS			MISCELLANEOUS PART	
16360	Compensating condenser (2 used on ant. trans. sec.).....	.10	22332	Shielded antenna lead.....	.25
25650	Oscillator tracking condenser No. 1.	.35	15622	Rubber bushing.....	.05
22365	Oscillator tracking condenser No. 2 (blue and yellow dots).....	.30	25680	110 V. plug receptacle.....	.60
22366	Oscillator tracking condenser No. 3 (gray and yellow dots).....	.30	19566	110 V. double conductor cable and plug	1.90
22220	Antenna condenser.....	.35	16741	Insulating bushing.....	.05
22220	S. W. detector grid condenser.....	.35	16742	Bushing retaining spring.....	.05
21160	Detector-I. F. stopping condenser..	.35	19536	Antenna binding post.....	.20
17440	Oscillator plate condenser.....	.50	8215	Ground binding post.....	.20
21160	Converter coupling condenser.....	.35	18363	Binding post base.....	.05
			22095	Rubber pad 11/16" x 3/4".....	.01
			22618	Tube shield.....	.15
			22611	Instruction sheet F-1001.....	Net .01
			22396	Panel instruction card F-970....	" .01
			22393	Shipping container.....	" .55

THESE PRICES SUPERSEDE ALL PREVIOUS PRICES AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

PARTS AND PRICE LIST FOR LATER MODELS 82-D, 82-Q, 85-Q, 86, 87 AND 89

ALL PARTS NOT LISTED BELOW WILL BE FOUND ON PAGES 310 TO 317

NAME OF PART	Model 82-D	Model 82-Q	Model 85-Q	Model 86	Model 87	Model 89 ABOVE
	ABOVE SERIAL No. 5760301	ABOVE SERIAL No. 2550940	ABOVE SERIAL No. 163767	ABOVE SER. No. 5876861 Model 86-F ABOVE SER. No. 7168925	ABOVE SERIAL No. 2525871	SER. No. 6755181 Model 89-F ABOVE SER. No. 1585395 Model 89-P ABOVE SER. No. 1935904
R. F. TRANSFORMER group.....		22436 \$3.00	21951 \$3.00	21868 \$3.00	21868 \$3.00	21868 \$3.00
Oscillator transformer.....		25530 1.25				
2nd-detector I. F. transformer, less trimmers.....	22059 \$2.00	22304 2.00	20713 2.00			
I. F. transformer shield.....	21877 22037 .30	22371 22037 .30				
Cardboard cover for I. F. T. shield.....	22037 .05	22037 .05				
VARIABLE CONDENSER RO- TOR, STATOR AND FRAME.....		22438 5.00		21802 9.60	21802 9.60	21802 9.60
R. F.-1st detector stopping condenser.....			21160 .35			
Osc. plate filter condenser or 2nd det.—1st A. F. cplg. cond.....	23250 .35	23250 .35				
Condenser clamp.....	22057 .05	22057 .05				
Double I. F. trimmer condenser.....	24760 .95	24760 .95				
Antenna trimmer base.....	21945 .55	21945 .55	21945 .55			
Mica disc insulator (large).....	19186 .01	19186 .01	19186 .01			
Mica disc insulator (small).....	19236 .01	19236 .01	19236 .01			
Antenna trimmer adjusting knob.....	8932 .05	8932 .05	8932 .05			
R. F. or 1st-detector plate or grid filter choke.....	19210 .25	19210 .25	19210 .25			19210 .25
R. F. plate choke.....			17015 .50			
BLEEDER RESISTOR No. 3A.....				23780 .20	17380 .20	16320 .20
Bleeder resistor No. 4.....				20050 .20		
Filament-series resistor No. 1.....	25980 1.00					
Filament-series resistor No. 1A.....	25990 1.00					
ON-OFF SWITCH.....		22272 1.25				
On-Off switch knob.....		21963 .20				
Sensitivity switch.....		20983 1.50		13664 1.00	13664 1.00	13664 1.00
Sensitivity switch base.....				21793 .05	21793 .05	21793 .05
Sensitivity switch label.....				21749 .01 Net.....	21749 .01 Net.....	21749 .01 Net.....
R. F. SOCKET.....			20237 .25			
Speaker socket.....	21337 .35	21451 .30	21451 .30		21337 .35	21337 .35
Rectifier socket.....					21448 .30	21448 .30
Rubber pad, 1 1/16" x 3/4".....	22095 .01	22095 .01				
Rubber pad, 1" x 1".....			22095A .01	22095A .01	22095A .01	22095A .01
Wooden wedge.....	21202 .01	21202 .01				
Instruction and log card for 60-cycle, battery and D. C. models.....	22342 F-966 .01 Net.....	22222 F-950 .01 Net.....		21789 F-864 .01 Net.....	21831 F-871 .01 Net.....	21791* F-865 .01 Net.....
Instruction and log card for 25-cycle models.....				21795 F-866 .01 Net.....		21796 F-867 .01 Net.....

*Instruction and log card for Model 89-P above Serial 1935904 is Part No. 21797, F-868, .01 net.

THESE PRICES SUPERSEDE ALL PREVIOUS PRICES AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ATWATER KENT RADIO

PARTS AND PRICE LIST
FOR MODELS 90, 92, 94, 96, 99

NAME OF PART	Model 90, 90-F	Model 92, 92-F	Model 94, 94-F	Model 96-F and 1st and 2nd Type 96	Model 96 3rd Type	Model 99 1st and 2nd Types	Model 99-F and 3rd Type 99
CABINET, Complete.....	22287 \$7.60	22288 \$7.60					
Cloth screen.....	20596 .75	20596 .75	18959 \$1.00	18959 \$1.00	18959 \$1.00	18959 \$1.00	18959 \$1.00
Cabinet feet.....	19527 .12	19527 .12					
FRONT PANEL, with braces and escutcheon.....			22191 2.50	22274 2.50	22274 2.50	22097 2.50	22097* 2.50
Front-Panel brace.....			17224 .10	17224 .10	17224 .10	17224 .10	17224 .10
ESCUTCHEON.....	22029 .65	22028 .65	21981 .65	21995 1.00	21995 1.00	21961 1.00	21961 1.00
Escutcheon rivet.....	19552 .50/c	19552 .50/c	8272 .02	8272 .02	8272 .02	8272 .02	8272 .02
DIAL PLATE AND BRACKET ASSEMBLY.....	19750 .65	19750 .65	19750 .65				
Dial-light socket and reflector.....				16420A .40	16420A .40	16420A .40	16420A .40
Dial plate.....	18882 .30	18882 .30	18882 .30	18017 .30	18017 .30	18017 .30	18017 .30
Dial-plate rivet.....	15734 .30/c	15734 .30/c	15734 .30/c	18295 .30/c	18295 .30/c	18295 .30/c	18295 .30/c
Dial lamp.....	19644 .25	19644 .25	19644 .25	19644 .25	19644 .25	19644 .25	19644 .25
Dial knob.....	17814 .30	17814 .30	17814 .30	17814 .30	17814 .30	17814 .30	17814 .30
VOLUME CONTROL, complete less leads...	20840 2.75	20389 3.45	22650 2.75	20389 3.45	20389 3.45	20389 3.45	20389 3.45
Volume-control mounting bracket.....			19777 .20	21965 .20	21965 .20	21965 .20	21965 .20
Volume-control mounting insulation.....	20135 .05						
Volume-control mounting nut.....	20093 .03	20093 .03	20093 .03	20093 .03	20093 .03	20093 .03	20093 .03
Volume-control knob.....	17244 .30	17244 .30	17244 .30	22052 .30	22052 .30	22052 .30	22052 .30
TONE-CONTROL Condenser.....		20010 1.00	20010 1.00	20010 1.00	20010 1.00	21530 1.00	21530 1.00
Tone-control condenser clamp.....			18223 .05	18223 .05	18223 .05	18223 .05	18223 .05
Tone-control switch, complete.....	20730 .75	20730 .75	20730 .75	20730 .75	20730 .75	24540 .75	24540 .75
Tone-control-switch base.....	20274 .60	20274 .60	20274 .60	20274 .60	20274 .60	18148 .60	18148 .60
Tone-control-switch shaft and blade.....	22297 .15	22297 .15	22297 .15	22297 .15	22297 .15	22297 .15	22297 .15
Tone-control-switch shaft key.....	20096 .30/c	20096 .30/c	20096 .30/c	20096 .30/c	20096 .30/c	20096 .30/c	20096 .30/c
Tone-control-switch knob.....	17244 .30	17244 .30	17244 .30	21963 .20	21963 .20	21963 .20	21963 .20
NEON TUNING LIGHT.....				22011 2.00	22011 2.00	22011 2.00	22011 2.00
Neon tuning light socket.....				21959 .70	21959 .70	21959 .70	21959 .70
Neon tuning light socket insulator.....				21898 .01	21898 .01	21898 .01	21898 .01
Neon tuning light socket mounting strap.....				21899 .05	21899 .05	21899 .05	21899 .05
Neon tuning light clamping spring.....				22039 .05	22039 .05	22039 .05	22039 .05
ADJUSTMENT POTENTIOMETER for neon tuning light.....				22152 2.50	22345 2.50	22152 2.50	22344 2.50
Adjustment potentiometer knob.....				21963 .20	21963 .20	21963 .20	21963 .20
Adjustment potentiometer label.....				22139 .01 Net	22139 .01 Net	22139 .01 Net	22139 .01 Net

* Front panel for Model 99-F is Part No. 22492; \$2.50 list.

THIS LIST SUPERSEDES ALL PREVIOUS LISTS. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ATWATER KENT RADIO

PARTS AND PRICE LIST (Continued)
FOR MODELS 90, 92, 94, 96, 99

NAME OF PART	Model 90, 90-F	Model 92, 92-F	Model 94, 94-F	Model 96-F and 1st and 2nd Type 96	Model 96 3rd Type	Model 99 1st and 2nd Types	Model 99-F and 3rd Type 99
POWER TRANSFORMER, 60 cycle.....	20890 \$7.50	24860 \$7.50	24870 \$7.50	23430 \$7.50	23430 \$7.50	21660 \$8.25	25640 \$8.25
Power transformer, 25 cycle.....	23190 9.50	23560 9.50	23560 9.50	23560 9.50			22610 10.75
Power Transformer, 220 volts.....	23040 11.50	23060 11.50					
Power-transformer cover or lid, 60 cycle.....	17824 .50	17824 .50	17824 .50	17824 .50	17824 .50	17824 .50	17824 .50
Power-transformer-cover spring, 60 cycle.....	17825 .05	17825 .05	17825 .05	17825 .05	17825 .05	17825 .05	17825 .05
Power-transformer cover or lid, 25 cycle.....	20469 .50	17824 .50	20469 .50	20469 .50			21032 .50
AUDIO INPUT TRANSFORMER.....						21670 3.75	21670 3.75
R. F. TRANSFORMER group.....	22188 2.00	22188 2.00	22189 3.00	22275 3.00	22275 3.00	22072 3.00	22072 3.00
R. F. Transformer cap (aluminum).....			19443 .05	19443 .05	19443 .05	19443 .05	19443 .05
R. F. Transformer shield.....	21871 .30	21871 .30	17295 .50	17295 .50	17295 .50	17295 .50	17295 .50
OSCILLATOR TRANSFORMER.....	24790 1.25	24790 1.25	24940 1.25	25050 1.25	25050 1.25	21580 1.25	25870 1.25
Oscillator-transformer shield.....	20313 .50	20313 .50	20313 .50	20313 .50	20313 .50	20313 .50	20313 .50
I. F. transformer, less trimmers.....				20716 2.00	20716 2.00	20716 2.00	20716 2.00
2nd detector I. F. transformer, less trimmers.....	22059 2.00	22061 2.00	19573 2.00	22063 2.00	22063 2.00	21949 2.00	21949 2.00
I. F. transformer shield.....	21877 .30	21877 .30	17295 .50	17295 .50	17295 .50	17295 .50	17295 .50
Cardboard cover for I.F.T. shield.....	22037 .05	22037 .05					
Cardboard inner tube for I.F.T. shield.....			22343 .05	22343 .05	22343 .05	22343 .05	22343 .05
FILTER-CHOKE UNIT.....				24930 5.75	24930 5.75	21680 5.75	21680 5.75
Filter-choke cover or lid.....						17302 .20	17302 .20
R. F. plate choke.....			17015 .50	17015 .50	17015 .50	17015 .50	17015 .50
1st-detector plate choke.....	20307 1.00	20307 1.00	20307 1.00				
R. F. grid filter or cathode choke.....		19210 .25		19210 .25	19210 .25	19210 .25	19210 .25
I. F. stopping choke.....	19210 .25	19210 .25	19210 .25				
I. F. plate filter choke.....						19210 .25	19210 .25
I. F. grid choke.....	17390 .60	17390 .60	17390 .60				
1st-detector grid filter choke.....		19210 .25					
2nd-detector plate or A. F. grid choke.....	17390 .60	17390 .60	17390 .60	17390 .60	17390 .60		
1st-detector plate filter choke.....	19210 .25	19210 .25	19210 .25				
FILTER CONDENSER UNIT, paper and foil type.....			20370 7.50	15850† 7.95	15850 7.95	21520 7.95	21520** 7.95
Filter-condenser cover and spring.....			20398 .45	18188 .45	18188 .45	18188 .45	18188 .45
Filter condenser No. 1 (Electrolytic).....	19728 2.60	19728 2.60	19060 2.50	19060 2.50	19060 2.50		
Filter condenser No. 2 (Electrolytic).....	19060 2.50	19060 2.50					
Fibre insulating case for electrolytics.....	19551 .10	19551 .10					
Dry electrolytic condenser.....		22397* 1.70					22646 .75
Dry electrolytic condenser clamp.....		22346* .05					22388 .05

* Used in 92-F only.
** Filter condenser unit for Model 99-F is Part No. 25130; \$9.95 list. Condenser cover = No. 16396; cover spring = No. 15833.
† Filter condenser unit for Model 96-F is Part No. 25190; \$9.95 list. Condenser cover = No. 15827; cover spring = No. 15833; condenser lid = No. 15322.

THIS LIST SUPERSEDES ALL PREVIOUS LISTS. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ATWATER KENT RADIO

PARTS AND PRICE LIST (Continued)
FOR MODELS 90, 92, 94, 96, 99

NAME OF PART	Model 90, 90-F	Model 92, 92-F	Model 94, 94-F	Model 96-F and 1st and 2nd Type 96	Model 96 3rd Type	Model 99 1st and 2nd Types	Model 99-F and 3rd Type 99
MOUNTING ACCESSORIES FOR ELECTROLYTICS							
Clamp for electrolytics with fibre case.....	19936 .10	19936 .10					
Clamp for electrolytics without fibre case.....	19716 .10	19716 .10	19716 .10	19716 .10	19716 .10		
Clamp screw.....	19543 .25/c	19543 .25/c	19543 .25/c	19543 .25/c	19543 .25/c		
Clamp nut.....	19784 .01	19784 .01	19784 .01	19784 .01	19784 .01		
Clamp rivet.....	17068 .01	17068 .01	17068 .01	17068 .01	17068 .01		
SMALL FIXED CONDENSERS (See page 361 for identification.)							
R. F.-1st detector stopping condenser.....				21160 .35	21160 .35		
Oscillator grid condenser.....	21160 .35	21160 .35	21160 .35	21160 .35	21160 .35	21160 .35	21160 .35
I. F. stopping condenser.....	21160 .35	21160 .35	21160 .35				
Phone condenser.....		17440 .50		17440 .50	17440 .50		
A. F. grid condenser.....						22220 .35	22220 .35
Control grid condenser.....					22220 .35		
Grid circuit by-pass condenser.....	26490 .50		26490 .50				
Grid circuit by-pass condenser clamp.....	22433 .05		22433 .05				
Control plate by-pass condenser.....		23250 .35		23250 .35	23250 .35		
Control plate by-pass condenser clamp.....		22057 .05		22057 .05	22057 .05		
TRIMMER CONDENSERS							
Single I. F. trimmer.....	20190 .50	20190 .50	19330 .70				
Double I. F. trimmer.....	24760 .95	24760 .95	18150 .95	18150 .95	18150 .95	18150 .95	18150 .95
Trimmer-condenser sealing wax (used in all sets).....		.50/lb.					
MULTIPLE-TYPE BY-PASS CONDENSER (other by-pass condensers are listed on page 361)							
VARIABLE CONDENSER ROTOR, STATOR AND FRAME.....	20830 2.00	24250 2.00	24250 2.00				
Rotor connection, long.....	21096 6.00	21096 6.00	21097 6.00	22209 9.60	22209 9.60	21802 9.60	21802 9.60
Rotor connection, short.....	20235 .10	20235 .10	20235 .10	18844 .10	18844 .10	18844 .10	18844 .10
Stopping spring.....				20796 .10	20796 .10	20796 .10	20796 .10
Dial-knob shaft.....	18809 .05	18809 .05	18809 .05	17941 .05	17941 .05	17941 .05	17941 .05
Dial-knob shaft bracket.....	20116 .30	20116 .30	20116 .30	18144 .35	18144 .35	18144 .35	18144 .35
Dial-knob-shaft-bracket support.....				17935 .03	17935 .03	17935 .03	17935 .03
Dial rubber and bushing.....	17961 .15	17961 .15	17961 .15	17961 .15	17961 .15	17961 .15	17961 .15
Dial pointer.....	17959 .05	17959 .05	17959 .05	17959 .05	17959 .05	17959 .05	17959 .05
Dial-pointer shim.....	18823 .02	18823 .02	18823 .02	18823 .02	18823 .02	18823 .02	18823 .02
Dial gear and balance weight.....	20149 .75	20149 .75	20149 .75				
Dial gear.....				18615 .40	18615 .40	18615 .40	18615 .40
Balance weight.....				18117 .35	18117 .35	18117 .35	18117 .35

THIS LIST SUPERSEDES ALL PREVIOUS LISTS. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ATWATER KENT RADIO

PARTS AND PRICE LIST (Continued)
FOR MODELS 90, 92, 94, 96, 99

NAME OF PART	Model 90, 90-F	Model 92, 92-F	Model 94, 94-F	Model 96-F and 1st and 2nd Type 96	Model 96 3rd Type	Model 99 1st and 2nd Types	Model 99-F and 3rd Type 99
Pointer control arm.....				17962 .30	17962 .30	17962 .30	17962 .30
Trimmer mica.....	20119 .03	20119 .03	20119 .03	17062 .03	17062 .03	17062 .03	17062 .03
FLEXIBLE AND WIRE-WOUND RESISTORS (for tubular resistors, see page 361).							
1st-detector bias resistor.....	21030 .20		21030 .20		16320 .20		
R. F. bias resistor.....			19820 .20				
1st A. F. bias resistor.....							24470 .20
A. F. bias resistor.....				24980 .20	25840 .20	21420 .20	
Filament shunt resistor.....	17077 .15	17077 .15	17077 .15	17077 .15	17077 .15	17077 .15	17077 .15
Bleeder resistor No. 1.....		24340 .20	24470 .20	24340 .20	24340 .20	24340 .20	24340 .20
Bleeder resistor No. 2.....		24450 .20	24450 .20	24450 .20	18520 .20	24340 .20	
Bleeder resistor No. 3.....		23780 .20	18520 .20	17380 .20	18520 .20	24340 .20	16320 .20
Bleeder resistor No. 4.....	20040 .20	20040 .20		20050 .20	21420 .20	21080 .20	20040 .20
Bleeder resistor No. 5.....		17380* .20		20040 .20	25850 .20	23780 .20	20050** .20
Bleeder resistor No. 6.....		24340 .20		24340 .20		20040 .20	24470 .20
Bleeder resistor No. 7.....		21030 .20		21030 .20		24340 .20	25950 .20
Bleeder resistor No. 8.....					24450 .20	20120 .20	25840 .20
Bleeder resistor No. 9.....						24530 .20	
Filter resistor.....		19180* 1.00	19180* 1.00				
SOCKETS							
R. F., I. F., oscillator, 1st detector, 2nd detector, 1st A. F., pentode and auto- matic volume control socket.....	20236 .30	20236 .30	20236 .30	20236 .30	20236 .30	20236 .30	20236 .30
Rectifier socket.....	21448 .30	21448 .30	21448 .30	21448 .30	21448 .30	21448 .30	21448 .30
Speaker socket.....	21336 .30	21336 .30	21336 .30	21336 .30	21336 .30	21337 .35	22412 .35
Socket insulator (fibre sheet).....	17377 .25/c	17377 .25/c	17377 .25/c	17377 .25/c	17377 .25/c	17377 .25/c	17377 .25/c
Socket eyelet.....	8249 .50/c	8249 .50/c	8249 .50/c	8249 .50/c	8249 .50/c	8249 .50/c	8249 .50/c
Fuse socket.....		18449 .15	18449 .15	18449 .15	18449 .15	18449 .15	18449 .15
TUBE SHIELD.....	15213 .15	15213 .15	15213 .15	15213 .15	15213-G .15	15213 .15	15213-G .15
Tube-shield base.....	15214 .03	15214 .03	15214 .03	15214 .03	15214 .03	15214 .03	15214 .03
Tube-shield base rivet.....	16771 .30/c	16771 .30/c	16771 .30/c	16771 .30/c	16771 .30/c	16771 .30/c	16771 .30/c
110-VOLT DOUBLE-CONDUCTOR CABLE AND PLUG.....	19566 1.90	19566 1.90	19566 1.90	19566 1.90	19566 1.90	19566 1.90	19566 1.90
110-volt plug (male).....	18897 .15	18897 .15	18897 .15	18897 .15	18897 .15	18897 .15	18897 .15
110-volt cable bushing.....	16741 .05	16741 .05	16741 .05	16741 .05	16741 .05	16741 .05	16741 .05
Bushing retaining spring.....	16742 .05	16742 .05	16742 .05	16742 .05	16742 .05	16742 .05	16742 .05

* Not used in 25-cycle sets.

** Not used in Model 99-P.

THIS LIST SUPERSEDES ALL PREVIOUS LISTS. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ATWATER KENT RADIO

PARTS AND PRICE LIST (Continued)
FOR MODELS 90, 92, 94, 96, 99

NAME OF PART	Model 90, 90-F	Model 92, 92-F	Model 94, 94-F	Model 96-F and 1st and 2nd Type 96	Model 96 3rd Type	Model 99 1st and 2nd Types	Model 99-F and 3rd Type 99
BINDING-POST BASE.....	18363	18363	18363	18363	18363	18363	18363
	.05	.05	.05	.05	.05	.05	.05
Binding post, marked "A".....	19536	19536	19536	19536	19536	19536	19536
	.20	.20	.20	.20	.20	.20	.20
Binding post, ground.....	8215	8215	8215	8215	8215	8215	8215
	.20	.20	.20	.20	.20	.20	.20
		20983		21958*	17242	21958	17242**
SENSITIVITY SWITCH.....		1.50		1.60	1.00	1.60	1.00
Sensitivity switch knob.....				21963	21963	21963	21963
				.20	.20	.20	.20
Voltage switch.....				13664		13664	
				1.00		1.00	
Voltage switch label.....				21966		21966	
				.01 Net.		.01 Net.	
MISCELLANEOUS PARTS							
Self-tapping screw (3/8" long).....	19547	19547	19547	19547	19547	19547	19547
	.02	.02	.02	.02	.02	.02	.02
Self-tapping screw (7/8" long).....	21007	21007	21007	21007	21007	21007	21007
	.02	.02	.02	.02	.02	.02	.02
Self-tapping screw (1" long).....	19717	19717	19717	19717	19717	19717	19717
	.02	.02	.02	.02	.02	.02	.02
Line fuse (2 amperes).....		18534	18534	18534	18534	18534	18534
		.05	.05	.05	.05	.05	.05
Control-grid lead and cap.....	19623	19623	19623	19623	19623	19623	19623
	.12	.12	.12	.12	.12	.12	.12
Fibre disc (1" dia.) with two lugs (used as a terminal block for wire connections).....			22530	22530	22530	22530	22530
			.05	.05	.05	.05	.05
Rubber pad (1 1/16" x 3/4").....	22095	22095	22095				
	.01	.01	.01				
Rubber pad (1" x 1").....				22095A	22095A	22095A	22095A
				.01	.01	.01	.01
Wooden wedge.....	21202	21202					
	.01	.01					
Multiple terminal block (8 lugs).....	24110	24110	24110	24110	24110	24110	24110
	.15	.15	.15	.15	.15	.15	.15
Bottom plate.....			19869	19869	19869	19869	19869
			1.30	1.30	1.30	1.30	1.30
Ground clamp assembly.....	13989	13989	13989	13989	13989	13989	13989
	.30	.30	.30	.30	.30	.30	.30
Cardboard packing tube (fits on speaker field case).....	19699	19699					
	.10	.10					
Instruction and log card for 60-cycle models.....	21985	21986	21987	21988	22136	21989	22137
	F-880	F-881	F-882	F-883	F-894	F-884	F-895
	.01 Net.	.01 Net.	.01 Net.	.01 Net.	.01 Net.	.01 Net.	.01 Net.
Instruction and log card for 25-cycle models.....	22259	22261	22262				
	F-956	F-957	F-953				
	.01 Net.	.01 Net.	.01 Net.				
Instruction folder.....					22351		22352
					F-968		F-969
					.01 Net.		.01 Net.
Panel instruction card.....	22046	22047	22048	22049	22049	22051	22051
	F-886	F-887	F-888	F-889	F-889	F-890	F-890
	.01 Net.	.01 Net.	.01 Net.	.01 Net.	.01 Net.	.01 Net.	.01 Net.
Neon tuning light adjusting tag.....				22138	22138	22138	22138
				F-896	F-896	F-896	F-896
				.01 Net.	.01 Net.	.01 Net.	.01 Net.
Shipping container for 60-cycle, battery and D. C. models.....	22119	22121	22058	22122	22122	22014	22014
	.55 Net.	.55 Net.	.65 Net.	.65 Net.	.65 Net.	.65 Net.	.65 Net.
	22265	22269	22266	22122			22268
Shipping container for 25-cycle models.....	.55 Net.	.55 Net.	.65 Net.	.65 Net.			.65 Net.

* Sensitivity switch in Model 96-F is Part No. 17242; \$1.00 list.
** Not used in Model 99-P.

THIS LIST SUPERSEDES ALL PREVIOUS LISTS. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ATWATER KENT RADIO

PARTS AND PRICE LIST FOR MODEL 99-P, NO. 27400 RECEIVER

NOTE.—All parts not listed below will be found under Model 99 (3rd Type) on page 367.
Phonograph parts will be found on page 239.

Part No.	Name of Part	List Price	Part No.	Name of Part	List Price
22455	Volume control and radio-phonograph switch	\$ 3.45	18589	110 V. double conductor cable and plug	\$ 1.00
22422	Volume control mounting bracket.	.20	22443	Panel instruction card F-973...Net	.01
22454	Phonograph post assembly.....	.45	22444	Phonograph instruction sheet F-974	Net .01
17242	On-off switch.....	1.00	22446	Shipping container.....	" .65
21963	On-off switch knob.....	.20			

PARTS AND PRICE LIST FOR SPEAKERS USED IN MODELS 90, 92, 94, 96 AND 99

MODEL NUMBER OF SET	SPEAKER PART NUMBER	PARTS LIST
90, 90-F 92, 92-F	17300	Parts for No. 17300 speaker are listed on page 318, with the exception that in some late type No. 17300, the No. 19679 output transformer is replaced by the following parts: No. 21672 Output transformer, less case.....\$3.00 No. 21418 Output transformer case..... .40 No. 21424 Output transformer fibre insulator..... .02
94, 94-F 96, 96-F	26300	Parts for No. 26300 speaker are the same as used on the No. 24600 speaker listed on page 318.
99, below Serial No. 4884901 All 99-F	26400 (early type) below Serial No. 7803050	Parts for early-type No. 26400 speaker are the same as used on No. 19800 speaker listed on page 318.
99, above Serial No. 4884901 All 99-P	26400 (late type) above Serial No. 7803050	Parts for late-type No. 26400 speaker are the same as used on No. 19800 speaker listed on page 318, with the following exceptions: No. 18870 Field coil.....\$3.00 No. 22416 Speaker plug (green)..... .65 No. 22349 Instruction tag..... .01 net

CORRECTION IN MODEL 80, 83 DIAGRAM

In the diagram of Models 80 and 83 on page 282 the chassis connection to the oscillator cathode and grid leak should be omitted. The oscillator grid leak should be connected to the cathode.