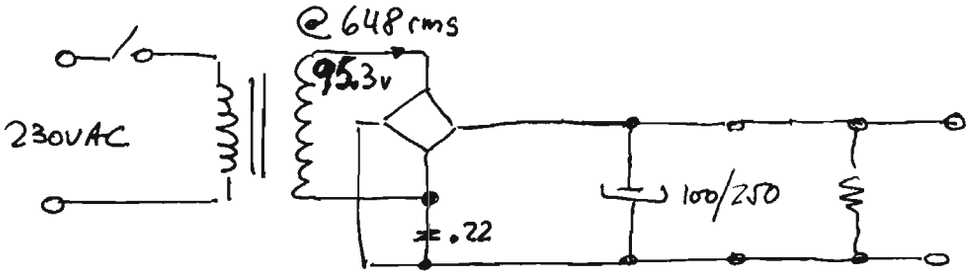
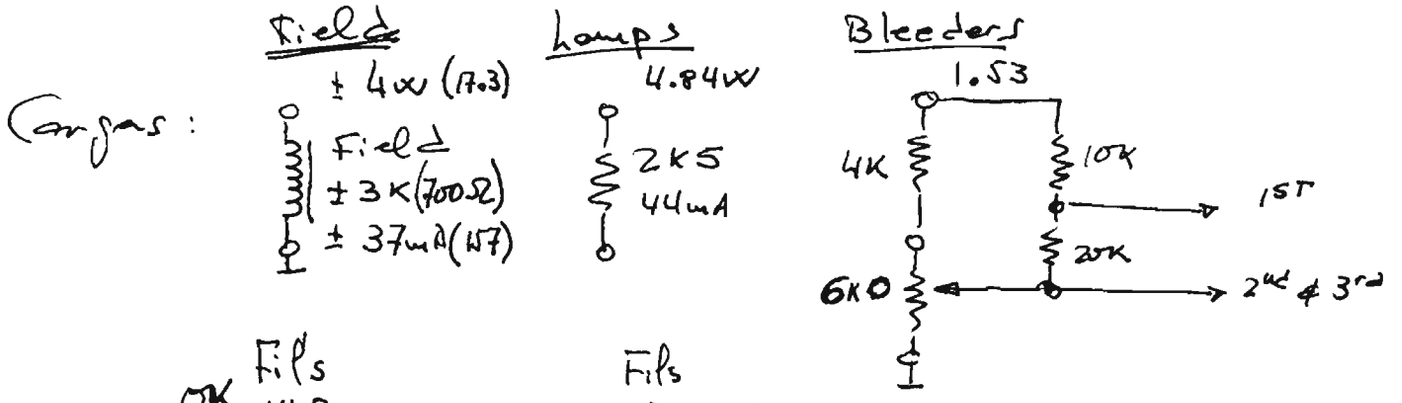
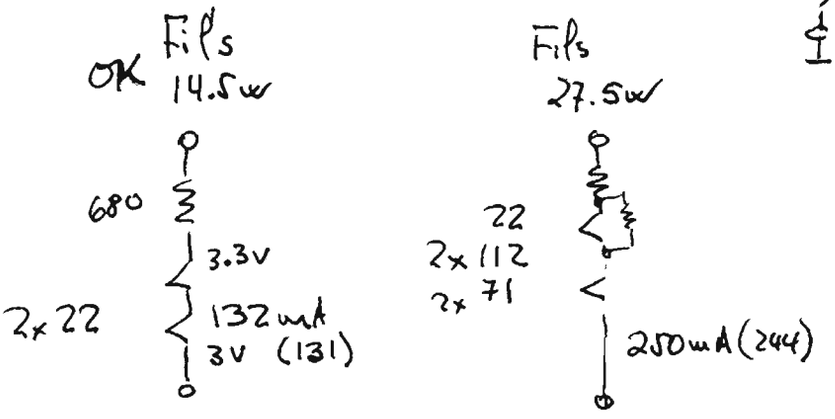
FA para Atwater Kent 61



Cargas:



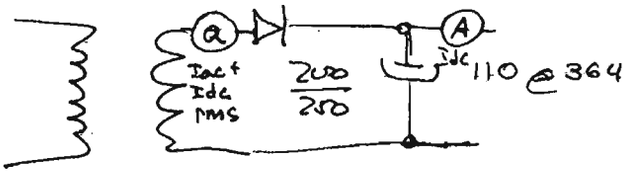


Sin ALT ni LAMP @ 110VDC 14mA ± 7K R (entre + y -)

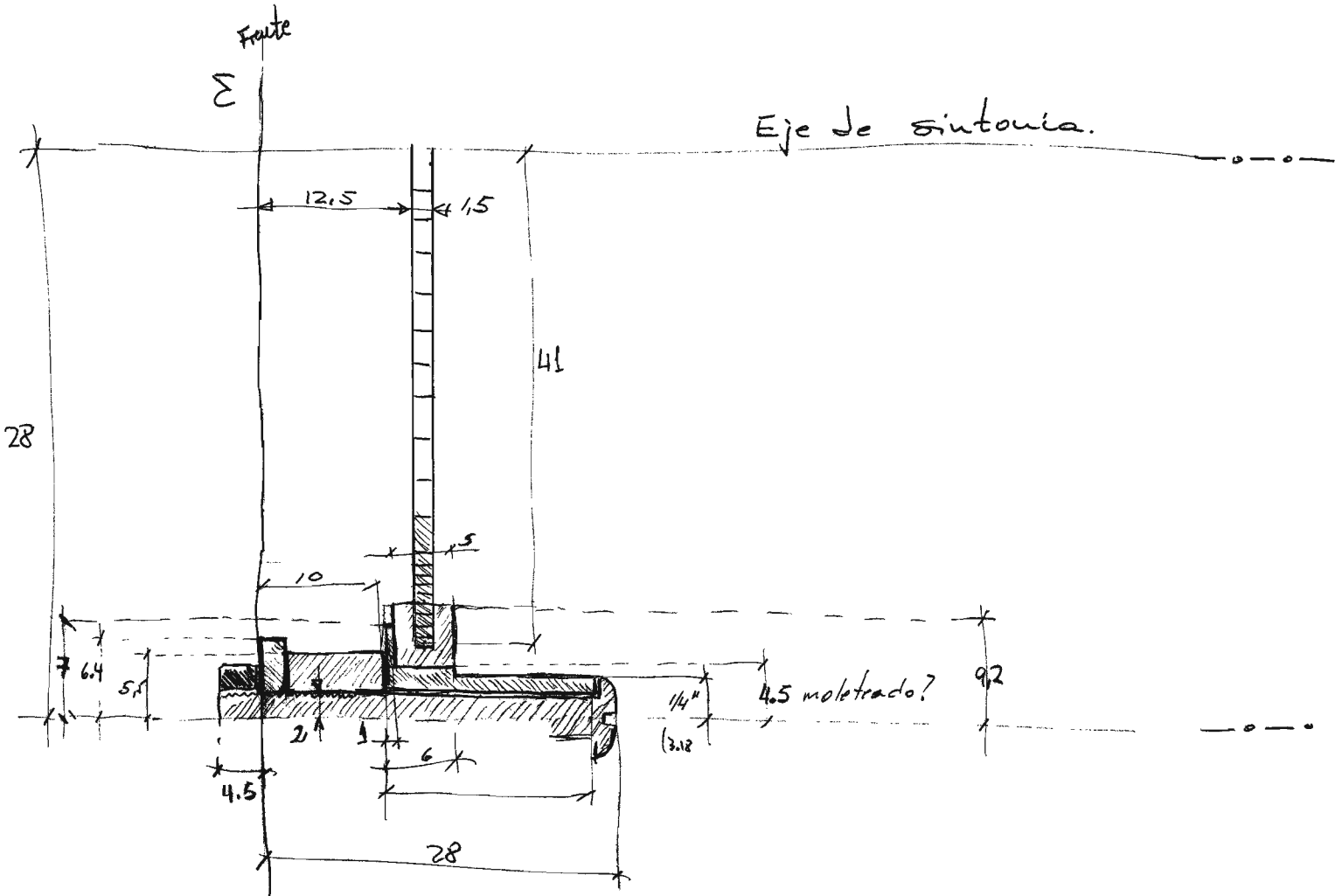
Pongo 1R+2R " 145.4 ± 754 en Prio " "

Pongo las otras cada sola " 258 ± 410 " " "

Vac carga 91.6 481 (Iac + Idc) rms



Como exper. para calculo de Xfos



MODEL 61 AND 61-C

Voltage Readings on Atwater Kent Model 61, 61-C Receiver (Direct Current)

Use High-Resistance D. C. Voltmeter (About 0-50-250).

	MEASURE ACROSS	APPROX. VOLTAGE 110 V. Line	APPROX. VOLTAGE 120 V. Line	NO READING INDICATES ‡
FILAMENT VOLTAGES	—F1R to +F1R.	2.9	3.2	Open R.F.C. No. 1 or No. 2, open filter choke, open filament series resistor No. 1, open 2nd-R.F. grid bias resistor, open R.F.C. No. 3 or 4.
	—F2R to +F2R.	2.9	3.2	
	—F3R to +F3R.	2.9	3.2	
	—FD to +FD.	4.6	5	Open filter choke, open 3rd-R.F. or 1st-A.F. bias resistor, or open filament series resistor No. 2.
	—F1A to +F1A.	4.6	5	
	—F2A to +F2A.	4.6	5	
	—F2Aa to +F2Aa	4.5	4.9	
PLATE VOLTAGES	—F1R to P1R.	78	85	Open primary No. 2 R.F.T.††
	—F2R to P2R.	78	85	Open primary No. 3 R.F.T.
	—F3R to P3R.	78	85	Open R.F.C. No. 5 or open primary No. 4 R.F.T.
	—FD to PD.	32	35	Open detector filter resistor, open primary No. 1 A.F.T., or open R.F.C. No. 6.
	—F1A to P1A.	50	55	Open 1st-A.F. filter resistor, or open primary No. 2 A.F.T.
	—F2A to P2A.	80	87	Open "quality" choke or primary of output transformer.
	—F2Aa to P2Aa.	75	82	
GRID VOLTAGES	—F1R to G1R.	4.6	5	Open secondary No. 1 R.F.T.
	—F2R to G2R.	1.4	1.5	Open secondary No. 2 R.F.T.
	—F3R to G3R.	0.9	1.0	Open secondary No. 3 R.F.T.
	—F1A to G1A.	1.4	1.5	Open secondary No. 1 A.F.T.
	—F2A to G2A.	9	10	Open secondary No. 2 A.F.T.
	—F2Aa to G2Aa.	9	10	
SCREEN VOLTAGES	—F3R to S3R.	60	65	Open volume control circuit.
	—F2R to S2R.	46	50	
	—F1R to S1R.*	46	50	Open No. 1 screen-grid resistor.†

* Volume-control knob at minimum for this test.

† If 1st-R. F. screen-grid voltage is about 100, with volume-control knob set at minimum, No. 2 R. F. screen-grid resistor may be open.

†† In later Model 61 and 61-C, the primaries of No. 2, 3 and 4 R. F. T. are replaced by R. F. choke coils mounted under the chassis.

‡ Low plate, grid, screen, or filament voltages may indicate a shorted by-pass for the respective circuits.

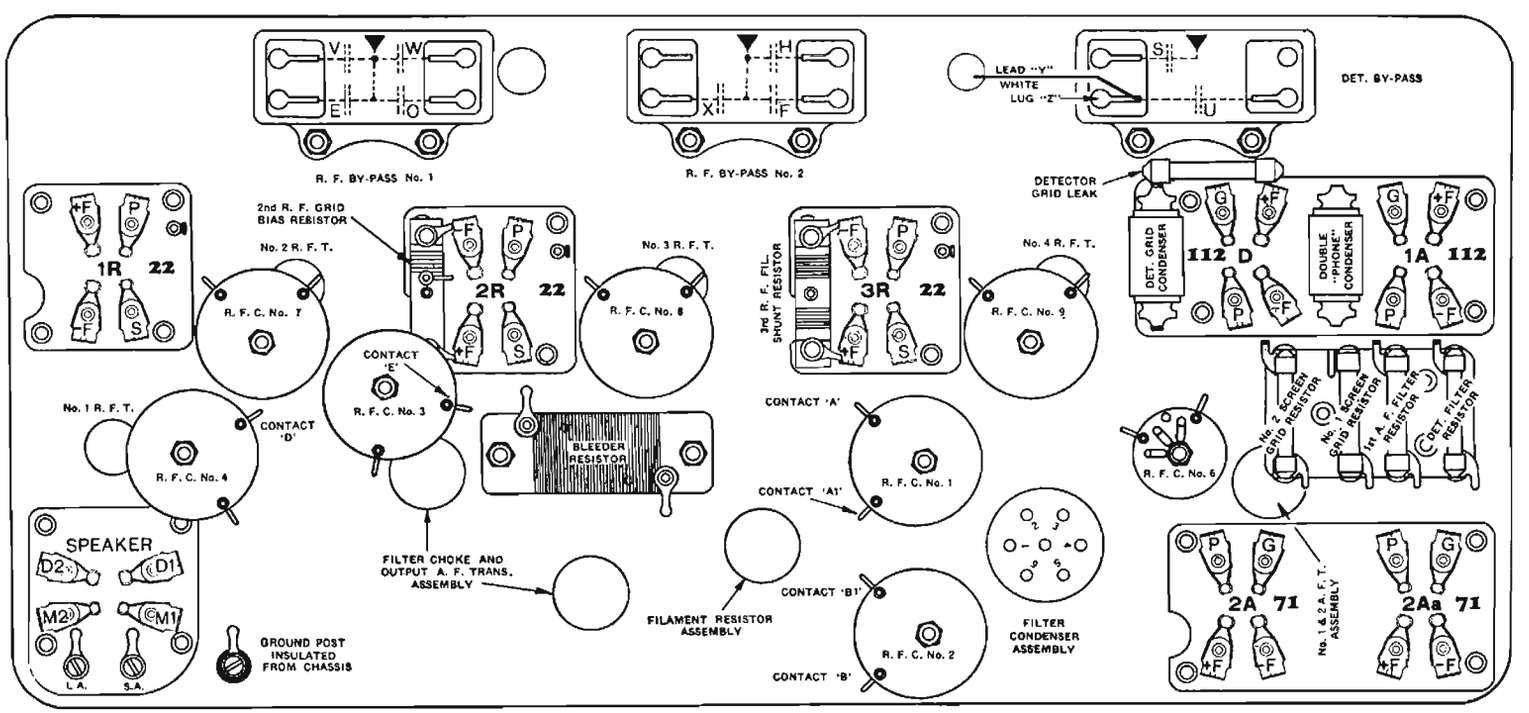


FIG. 139. BOTTOM CHART OF LATER-TYPE MODEL 61 AND 61-C.

MODEL 61 AND 61-C

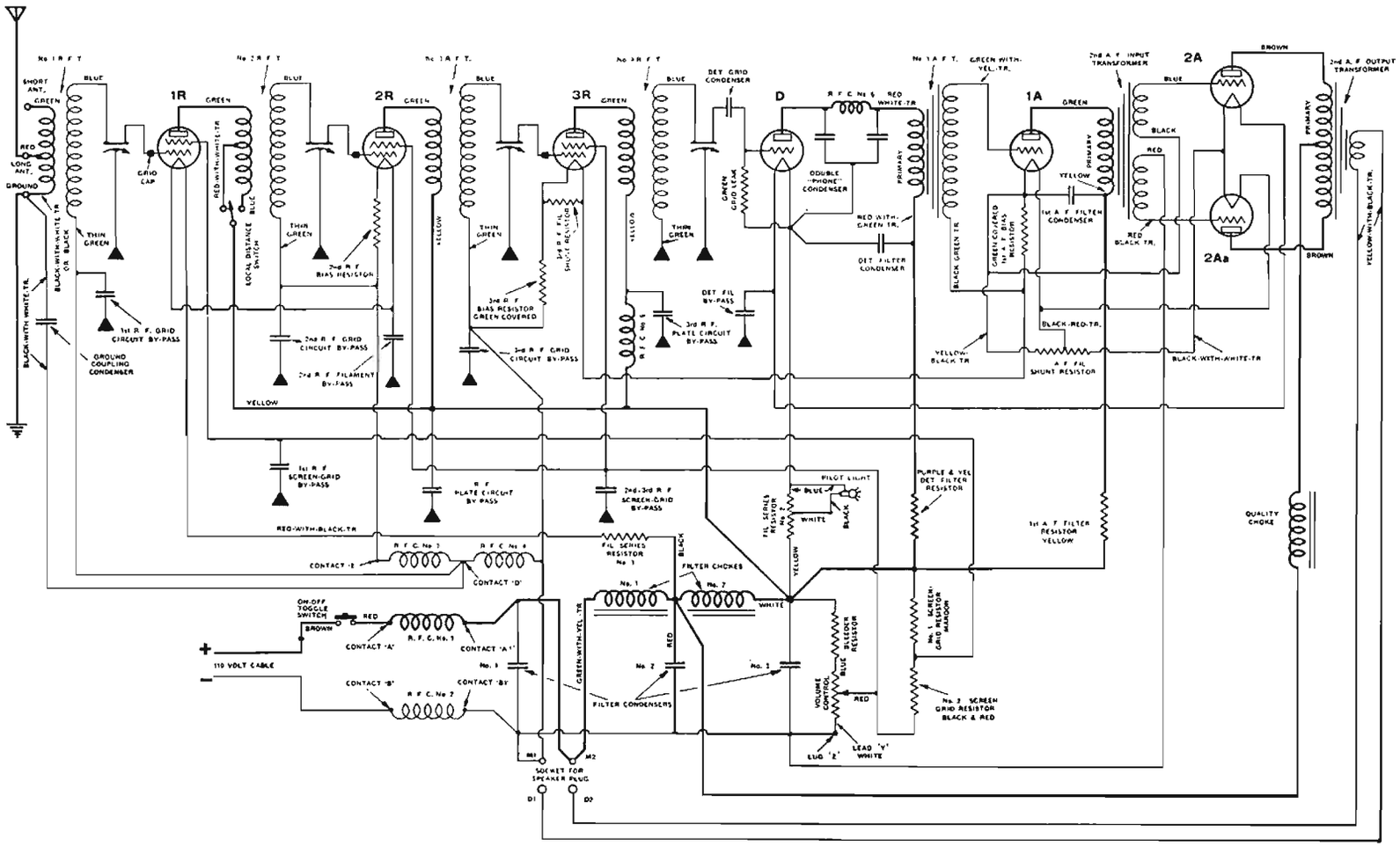


FIG. 140. DIAGRAM OF EARLY MODEL 61 AND 61-C (DIRECT CURRENT).

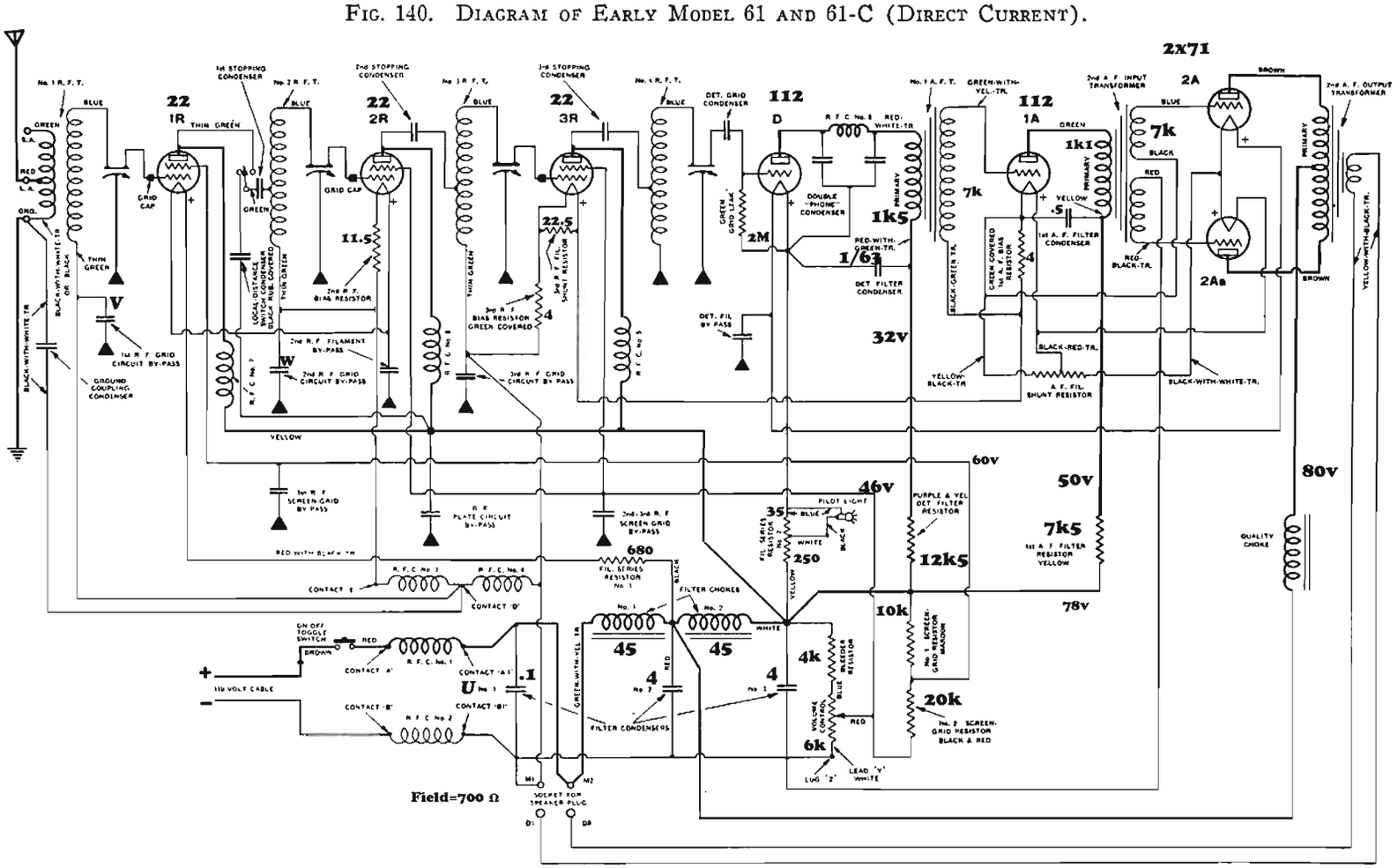


FIG. 141. SCHEMATIC DIAGRAM OF LATER MODEL 61 AND 61-C (DIRECT CURRENT).

Note that R. F. C. No. 5, in diagram of early Model 61 and 61-C above, is omitted from the later Model, and the number (R. F. C. No. 5) is skipped to avoid confusion.

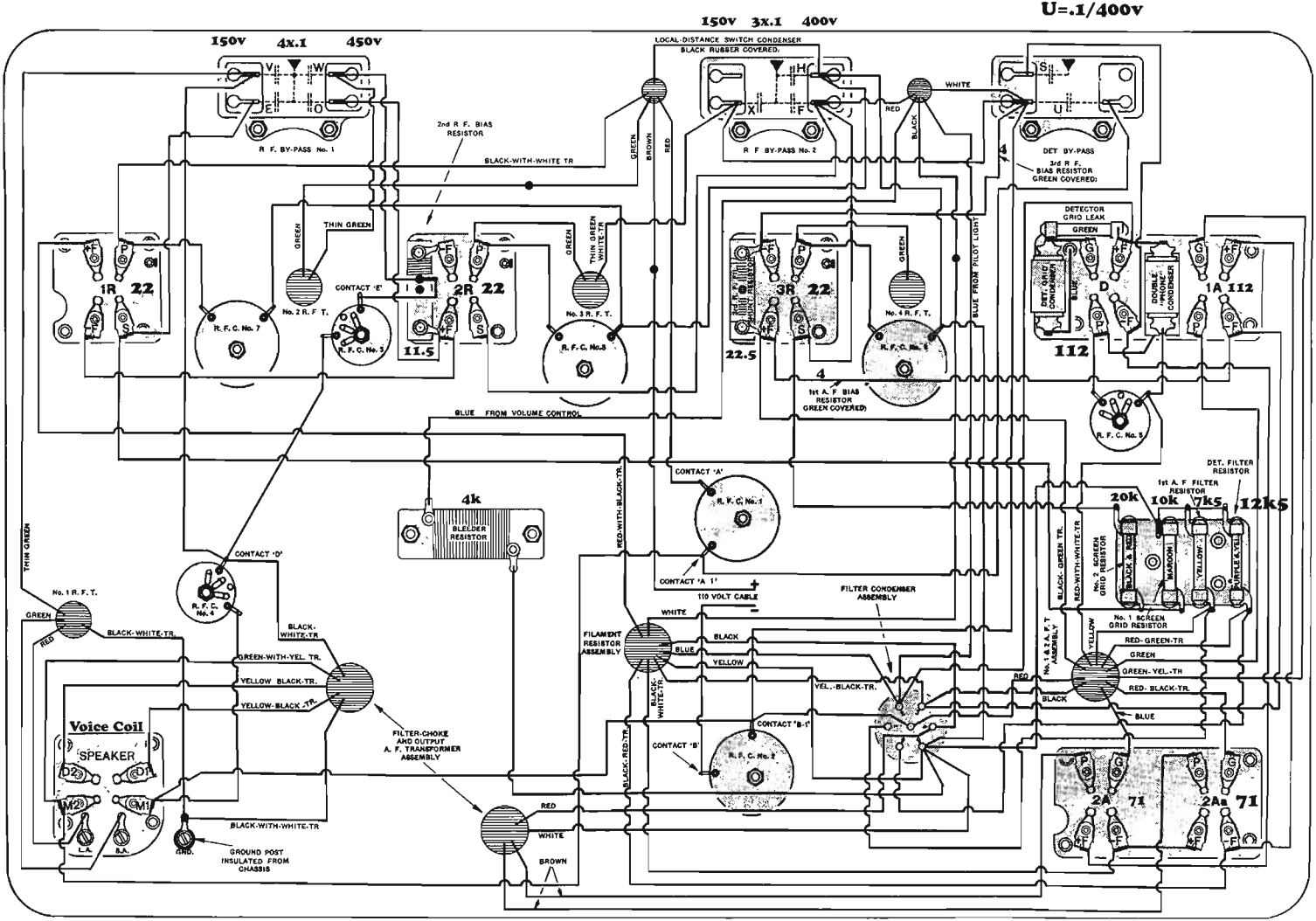


FIG. 145. BOTTOM WIRING OF LATER-TYPE MODEL 61 AND 61-C.

MODEL 61 AND 61-C (Later Type)

Connections of R. F. Coil Group No. 17095

The colors of the leads to the variable condensers are in some cases different from those specified below.

No. 1 R. F. T.

Thin green to by-pass V.
Blue to stator No. 1 V.C.
Thick green to Short-Antenna.
Red to Long-Antenna.
Black-with-white-tr. or plain black, to ground post.

No. 2 R. F. T.

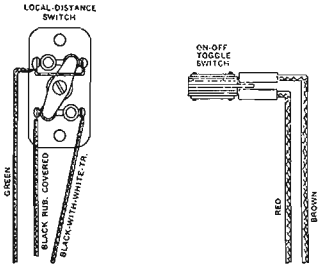
Thin green to by-pass W.
Blue-white-tr. to stator No. 2 V.C.
Thick green to green lead from local-distance switch. (The end of this green lead is stripped of insulation but the strands of wire are NOT soldered.)

No. 3 R. F. T.

Thin green or green-with-white-tr. to by-pass X.
Blue to stator No. 3 V.C.
Thick green to P2R. (The end of this lead is stripped of insulation and the strands of wire are soldered.)

No. 4 R. F. T.

Blue (1″) to chassis.
Blue-white-tr.(5″) (with lug) to stator No. 4 V.C.
Blue (without lug) from stator No. 4 V. C. to detector grid condenser.
Thick green to P3R.



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

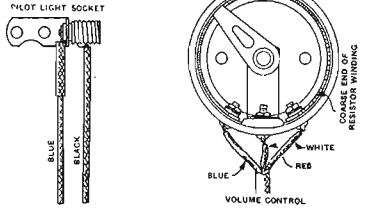
E—1st-R. F. screen by-pass.
O—2nd-R. F. filament by-pass.
V—1st-R. F. grid-circuit by-pass.
W—2nd-R. F. grid-circuit by-pass.

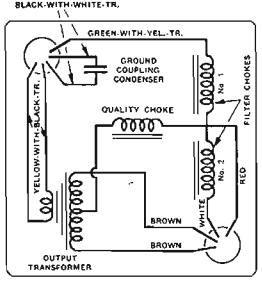
Condensers in R. F. By-Pass No. 2

F—2nd-3rd-R. F. screen by-pass.
H—R. F. plate-circuit by-pass.
X—3rd-R. F. grid-circuit by-pass.

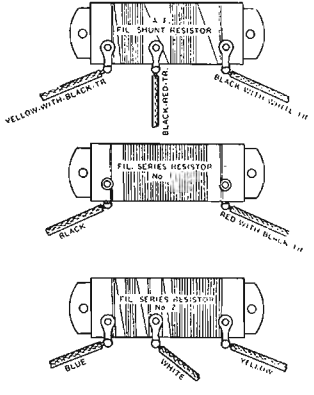
Condensers in Detector By-Pass

S—Detector filament by-pass.
U—Filter condenser No. 1.

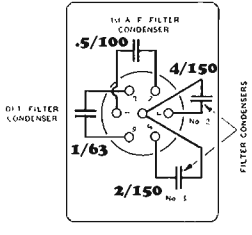




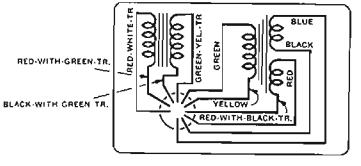
FILTER CHOKES & OUTPUT TRANSFORMER ASSEMBLY



FILAMENT RESISTOR ASSEMBLY



FILTER CONDENSER ASSEMBLY



No. 1 & 2 A. F. T. ASSEMBLY

FIG. 144. CONNECTIONS OF UNITS IN LATER-TYPE MODEL 61 AND 61-C.
On some volume controls for Model 61 and 61-C, a white-with-black-tracer lead is used in place of a white lead.
See Page 106 for simplified power-unit circuit of Model 61 and 61-C.

IDENTIFICATION OF BY-PASS CONDENSERS IN MODELS 55, 55-F, 60, 61, 66 AND 67
(Table and Chassis Types)

PART No.	IDENTIFYING MARKING	USED AS	IN MODELS
15262	B-1, H-1, H-9	R. F. by-pass condenser.	55, 55-C, 55-F, 55-F-C, 60, 60-C, 61, 61-C, 66, 67, 67-C.
15263*	B-2, H-2	Detector by-pass.	Early 55, 55-C, 55-F, 55-F-C, 60, 60-C, 61, 61-C, 66.
15837	B-3 (superseded by No. 16233)	R. F. by-pass condenser.	Early 60, 60-C.
16233	H-4, H-10	R. F. by-pass condenser.	60, 60-C, 66.
16461	H-6, H-12	R. F. by-pass condenser.	66, 67, 67-C.
16462	H-5, H-11	R. F. by-pass condenser.	67, 67-C.
16745	H-7, H-8, H-13	Detector by-pass.	55, 55-C, 55-F, 55-F-C, 60, 60-C, 61, 61-C, 66.
16828	B-5	Line by-pass condenser.	55, 55-C, 55-F, 55-F-C.

* No. 15263 is used in early-type Models 55, 55-F, 60 and 66, which have a separate "phone" condenser (single or double) mounted on the detector-1st-A. F. sockets.

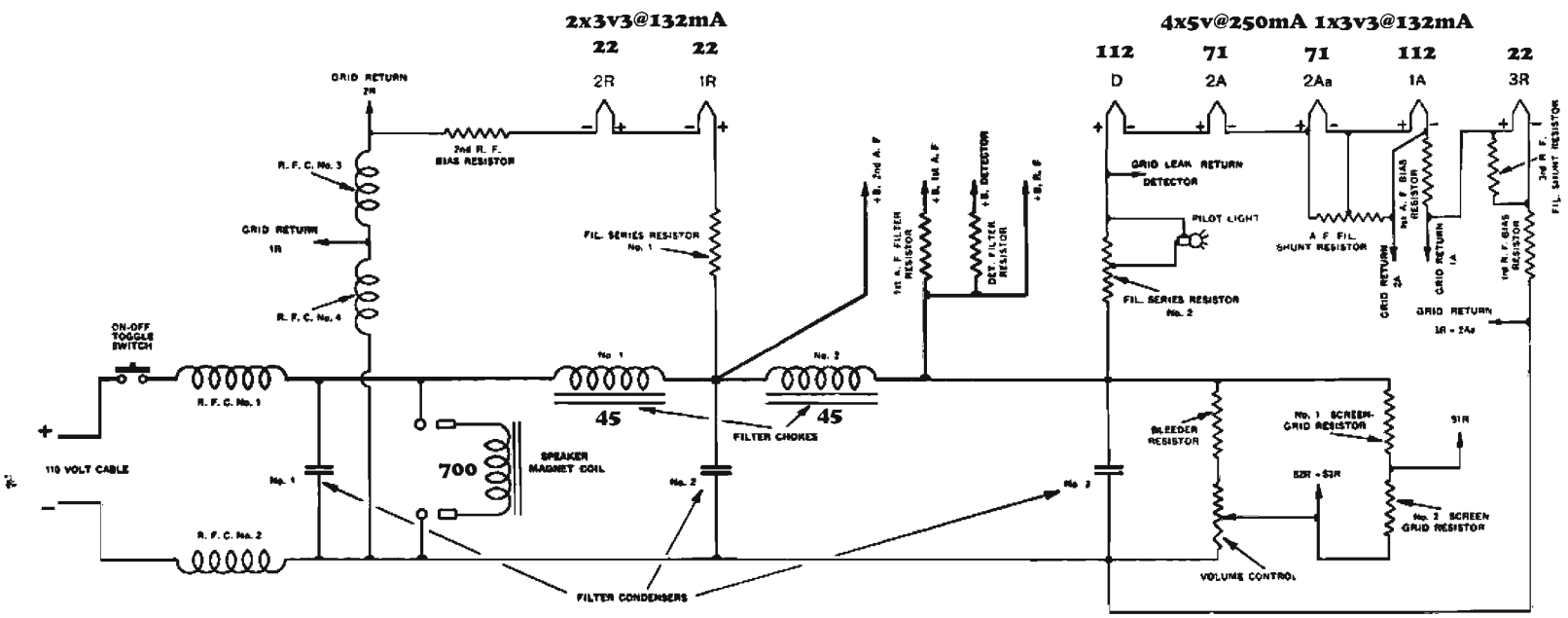


FIG. 158. SIMPLIFIED DIAGRAM OF POWER UNIT AND FILAMENT CIRCUIT IN MODELS 61 AND 61-C.

The grid bias voltage of any one tube is secured by bringing the grid-return lead of the tube to a point in the filament circuit which has the correct negative voltage with respect to the negative filament terminal of the same tube.

Refer to Pages 140 and 141 for information about later-type Models 61 and 61-C.

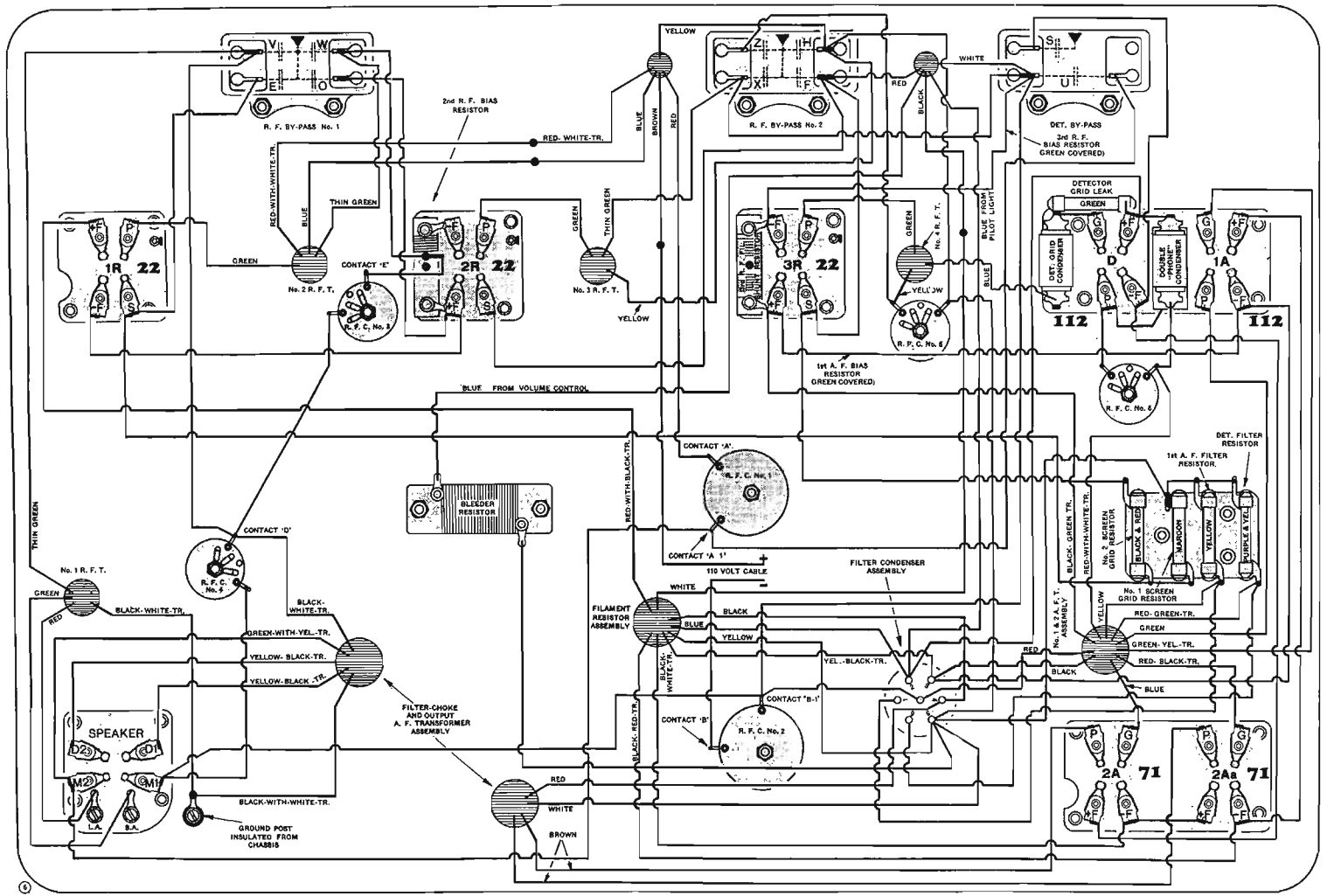


FIG. 143. BOTTOM WIRING OF EARLY-TYPE MODEL 61 AND 61-C.

MODEL 61 AND 61-C (Early Type)
Connections of R. F. Coil Group No. 16469

No. 1 R. F. T.
Thin green to by-pass V.
Blue to stator No. 1 V. C.
Thick green to Short-Antenna.
Red to Long-Antenna.
Black-white to ground post.

No. 2 R. F. T.
Thin green to by-pass W.
Blue (with lug) to stator No. 2 V. C.
Thick green to P1R.
Thick blue and red-white to leads of corresponding color from local-distance switch.

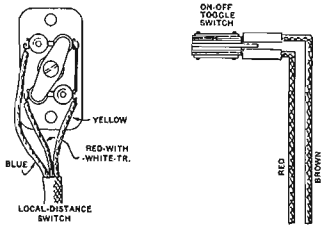
No. 3 R. F. T.
Thin green to by-pass X.
Thick green to P2R.
Blue to stator No. 3 V. C.
Yellow to by-pass H.

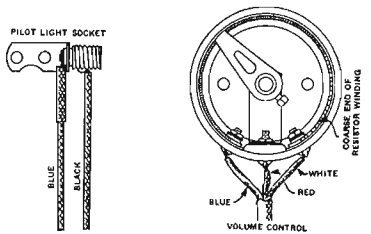
No. 4 R. F. T.
Thin green to chassis.
Thick green to P3R.
Blue (with lug) to stator No. 4 V. C.
Blue to detector grid condenser.
Yellow to R. F. C No. 5.

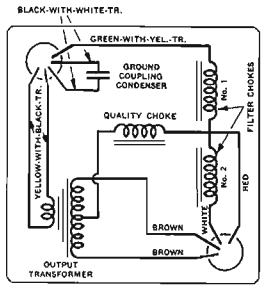
Condensers in R. F. By-Pass No. 1
E—1st-R. F. screen by-pass.
O—2nd-R. F. filament by-pass.
V—1st-R. F. grid-circuit by-pass.
W—2nd-R. F. grid-circuit by-pass.

Condensers in R. F. By-Pass No. 2
F—2nd-3rd-R. F. screen by-pass.
H—1st-2nd-R. F. plate-circuit by-pass.
X—3rd-R. F. grid-circuit by-pass.
Z—3rd-R. F. plate-circuit by-pass.

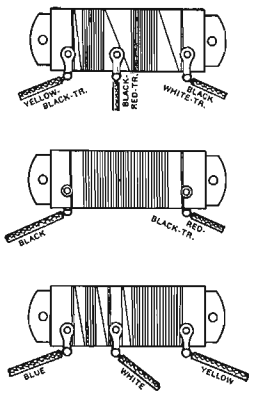
Condensers in Detector By-Pass
S—Detector filament by-pass.
U—Filter condenser No. 1.



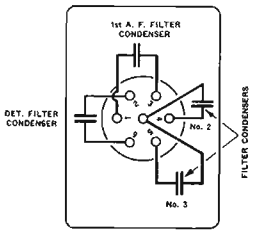




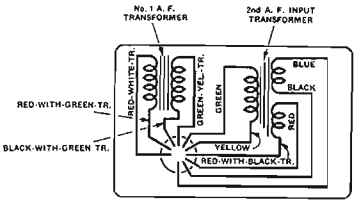
FILTER CHOKES & OUTPUT TRANSFORMER ASSEMBLY



FILAMENT RESISTOR ASSEMBLY



FILTER CONDENSER ASSEMBLY



No. 1 & 2 A. F. T. ASSEMBLY

FIG. 142. CONNECTIONS OF UNITS IN EARLY-TYPE MODEL 61 AND 61-C.

TUBULAR FIXED CONDENSERS
(By Part Numbers)

Part No.	Value	Type†	Voltage	Superseded by	Code No. printed on late type condensers
24509	.01 & .01	IND.	200	31190	.
26550	.5	NI	200	....	219
26660	.1	NI	200		213
26820	.05	NI	200		208
27234	.5	NI	200	26550	.
27434	.006, .03	IND.	450	....	417
27619	.008, .02	IND.	450	....	418
27630	.01	IND.	200	....	203
28040	.005	IND.	200	....	201
28130	.0005	IND.	450	....	402
29030	.02	NI	450	....	410
29530	.03	NI	200	....	206
29890	.005	IND.	450	....	408
29910	.015	NI	450	....	414
30240*	250 MMF	IND.	450	31620	.
30250	.025	NI	450		411
30670	250 MMF	IND.	450	31620	.
31140	250 MMF Double	IND.	450	31630	.
31150	.3	NI	100	....	104
31160	.05	NI	100	....	101
31190	.01 & .01	IND.	200	....	220
31330	250 MMF Double	IND.	450	31630	.
31510	.5	NI	100	....	105
31520	.2	NI	100	....	103
31530	.1	NI	100	....	102
31540	.001	IND.	450	31640	.
31890	.05, .05, .5	IND.	100	31920	.
31910	.1, .1, .2	IND.	100	31930	.
31920	.05, .05, .5	IND.	100	....	110
31930	.1, .1, .2	IND.	100	....	111
32350	.05, .05, .2	IND.	200	32390	.
32360	.05, .05, .05	IND.	200	32410	.
32370	.0022	IND.	450	31660	.
32390	.05, .05, .2	IND.	200	....	222
32410	.05, .05, .05	IND.	100	....	107
32420	.0022	IND.	450	31660	.
32750	.2, .1	IND.	100	....	106
32760	.2, .1	IND.	100	32750	.
32810	.01	NI	450	....	409
33620	250 MMF	IND.	450	....	401
33630	250 MMF Double	IND.	450	....	413
33640	.001	IND.	450	....	403
33660	.0022	IND.	450	....	405
34020	.05 & 250 MMF	IND.	200	....	221
35420	.08	NI	200	....	212
35760	.003	IND.	450	....	407
35780	.2, .1, .05, .05, .05, .3	IND.	100	35790	.
35790	.2, .1, .05, .05, .05, .03	IND	100	....	108
35930	.25	NI	200	....	215
36420	.02	IND.	200	....	205
36440	.1, .1, .05	IND.	100	....	109
36450	.05, .05, .005, .005	IND.	200	....	223
36490	.05	NI	450	....	412
36650	.0015	IND.	450	....	404
36660	.0025	IND.	450	....	406
36670	.007	IND.	200	....	202
36680	.015	IND.	200	....	204
36690	.04	NI	200	....	207
36710	.055	NI	200	....	209
36720	.065	NI	200	....	210
36730	.07	NI	200	....	211
36740	.2	NI	200	....	214
36750	.27	NI	200	....	216
36760	.3	NI	200	....	217
36770	.4	NI	200	....	218
38160	.03, .015, .008	IND.	450	....	415
38260	.001, .004, .008	IND.	450	....	416
39650	.004, .001	IND.	450	....	419

† Condensers designated as inductive (IND.) are constructed in such a way that the current must travel through one or more turns of the tin-foil plates in order to reach the ends of the plates. Such condensers have a slight inductive effect and are primarily used as low-frequency bypasses where the effect of this slight inductance is negligible.

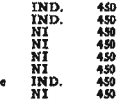
Condensers designated as non-inductive (NI) are constructed in such a way that the current reaches the entire area of the plates without having to pass through any turns of the plates. Non-inductive condensers are used as high-frequency bypasses.

TUBULAR FIXED CONDENSERS
(By Code Numbers)

Code No. printed on late type condensers	Part No.	Value	Type†	Voltage
101	31160	.05	NI	100
102	31530	.1	NI	100
103	31520	.2	NI	100
104	31150	.3	NI	100
105	31510	.5	NI	100
106	32750	.2, .1	IND.	100
107	32410	.05, .05, .05	IND.	100
108	35790	.2, .1, .05, .05, .05, .03	IND.	100
109	36440	.1, .1, .05	IND.	100
110	31920	.05, .05, .5	IND.	100
111	31930	.1, .1, .2	IND.	100
201	28040	.005	IND.	200
202	36670	.007	IND.	200
203	27630	.01	IND.	200
204	36680	.015	IND.	200
205	36420	.02	IND.	200
206	29530	.03	NI	200
207	36690	.04	NI	200
208	26820	.05	NI	200
209	36710	.055	NI	200
210	36720	.065	NI	200
211	36730	.07	NI	200
212	35420	.08	NI	200
213	26660	.1	NI	200
214	36740	.2	NI	200
215	35930	.25	NI	200
216	36750	.27	NI	200
217	36760	.3	NI	200
218	36770	.4	NI	200
219	26550	.5	NI	200
220	31190	.01, .01	IND.	200
221	34020	.05, 250 MMF	IND.	200
222	32390	.05, .05, .2	IND.	200
223	36450	.05, .05, .005, .005	IND.	200
224	27234	.5	NI	200
401	33620	250 MMF	IND.	450
402	28130	.0005	IND.	450
403	33640	.001	IND.	450
404	36650	.0015	IND.	450
405	33660	.0022	IND.	450
406	36660	.0025	IND.	450
407	35760	.003	IND.	450
408	29890	.005	IND.	450
409	32810	.01	NI	450
410	29030	.02	NI	450
411	30250	.025	NI	450
412	36490	.05	NI	450
413	33630	250 MMF Double	IND.	450
414	29910	.015	NI	450
415	38160	.03, .015, .008	IND.	450
416	38260	.001, .004, .008	IND.	450
417	27434	.008, .03	IND.	450
418	27619	.008, .02	IND.	450
419	39650	.004, .001	IND.	450

* In models where No. 30240 is used as a diode coupling condenser and mounted inside an I. F. transformer assembly, use No. 33670 (small mica type) for replacement. The No. 33620 condenser, which normally supersedes No. 30240, is too large for mounting inside the I. F. transformer shield.

SMALL BUTTERFLY CONDENSERS
(500 Volts)
(Illustration is full size)



Part No.	Color	Angle Between Lugs	Rated Capacity
25661	Green	180°	8 MMF
34460	Blk.	77°	10 MMF
34470	Red	123°	14 MMF
36220	Blue	123°	7 MMF
36230	Blue	123°	7 MMF
38280	Gray	123°	4 MMF

1/3, 1/2, 1, and 2 WATT TUBULAR RESISTORS
(When replacing a tubular resistor, use a resistor of the same value and size)

These four illustrations are full size.

Resistance in Ohms	Identifying Color	1/3 Watt Size	1/2 Watt Size	1 Watt Size	2 Watt Size
155	Blue, Gray and Yellow	41330	——	——	——
200	Blue, Yellow and Red	——	37690	——	——
300	Maroon and Blue	——	37530	——	31490
425	Blue, Yellow and Green	——	37540	——	——
500	Blue, Red and Green	39790	——	32010	——
1,100	Black, Red and Blue	31480	——	——	——
1,500	Black and Green	37710	——	——	——
2,000	Blue	33250	——	——	——
2,500	Gray, Red and Green	39130	——	——	——
3,300	Green and Red	30380	26410	19346	——
4,000	Green and Blue	——	——	18049	——
5,000	Blue and Yellow	36430	28050	——	——
6,000	Purple	——	——	20151	28770
7,500	Yellow	——	——	15544	——
10,000	Maroon	30320	20950	15345	27210
12,500	Purple and Yellow	——	——	15941	——
15,000	Gray and Yellow / Gray and Green	——	20950	22211 / 21784	27220
20,000	Black and Red	30390	23120	15891	28030
30,000	Gray	31840	20970	15285	29710
40,000	White	——	26160	16724	28750
50,000	Black, Yellow and Red	30330	——	22407	34340
65,000	Black	31980	21040	15592	——
100,000	Red and Blue	30340	20980	16282	28760
150,000	Black and Yellow	——	——	28864	——
250,000	Red and Yellow	31970	20920	19381	——
500,000	Black and Purple	30350	20930	19449	——
800,000	Red and Gray	——	23130	20223	——
900,000	Green and Yellow	——	23170	——	——
1,000,000	Blue and Gray	30360	21050	——	——
2,000,000	Green	30370	20940	15892	——

PARTS NUMBERS OF KNOBS

Model No.	Vol. Control knob	Station Selector, dial or tuning knob	Tone control knob	Frequency range switch knob	Silencing switch knob
112	27728§	27728§	27494§	27358§	26571‡
145	27496§	24278* / 27498†	27495§	26569§	
206	27496§	24278* / 27498†	27495§	26569§	..
318	27728§	27728§	27494§	27358§	26571‡
325	27496§	24278* / 27498†	27495§	26569§	....
447	27728§	27728§	27494§	27358§	26571‡
511	26569§	26569§	27495§	26571‡	27495§
559	27728§	27728§	27494§	27358§	26571‡
825	27493‡	27493‡	26571‡	26571‡	.....
944	27493‡	27493‡	.....	..	.....

CABINET PARTS FOR CONSOLE SETS

25925	Wing nut
21142	Washer
27704	Clamp (small)
25742	Clamp (large)
25746	Clamp bolt

COMPACT CABINET AND SCREEN NUMBERS

Model Number	Cabinet Less Screen	Cabinet With Screen	Screen
135 Z	.....	28831	27908
145	28839	....	27906
206	28834	.....	27908
206-D	28834	.....	27908
447	28026	.....	27904
465-Q	....	28832	27907
768-Q	....	28629	27904
825	.....	28796	27902
944	28773	...	27892

* No. 24278-single knob (front). † No. 27498 single knob (back). ‡ No. 28114 knob spring, .012 thk. § No. 28115 knob spring, .015 thk.