

DUMONT
MODEL RA-109A

DUMONT MODEL RA-109-A3 "SHERBROOKE"

TRADE NAME	Dumont, Models RA-109-A1, RA-109-A5 (Winslow), RA-109-A2, RA-109-A6 (Hanover), RA-109-A3, RA-109-A7 (Sherbrooke)
MANUFACTURER	Allen B. Dumont Labs., Inc., 2 Main Ave., Passaic, New Jersey
TYPE SET	TV-Radio-Phono Combination Receiver (Some Versions "TV-FM" Only)
TUBES	Thirty Nine (Sherbrooke Receivers) ~ Thirty Five (Hanover and Winslow Receivers)
POWER SUPPLY	110-120 Volts AC-60 Cycle
RATINGS	2.9 Amp. at 117 Volts AC (TV), 2.2 Amp. at 117 Volts AC (AM)
TUNING RANGE	TV-FM 44-216MC (Continuous Tuning), AM 540-1600KC

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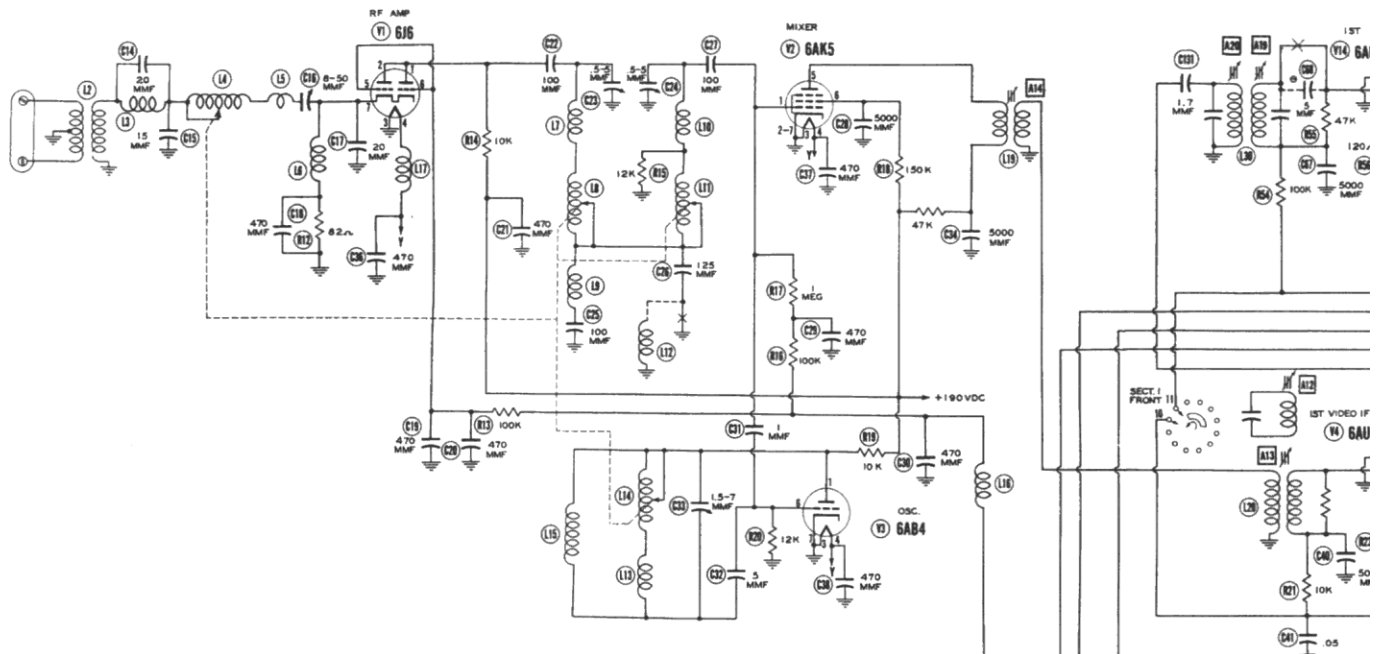
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RECORD CHANGER UNIT-WEBSTER-CHICAGO MODEL 100

HOWARD W. SAMS & CO., INC. • Indianapolis 1, Indiana

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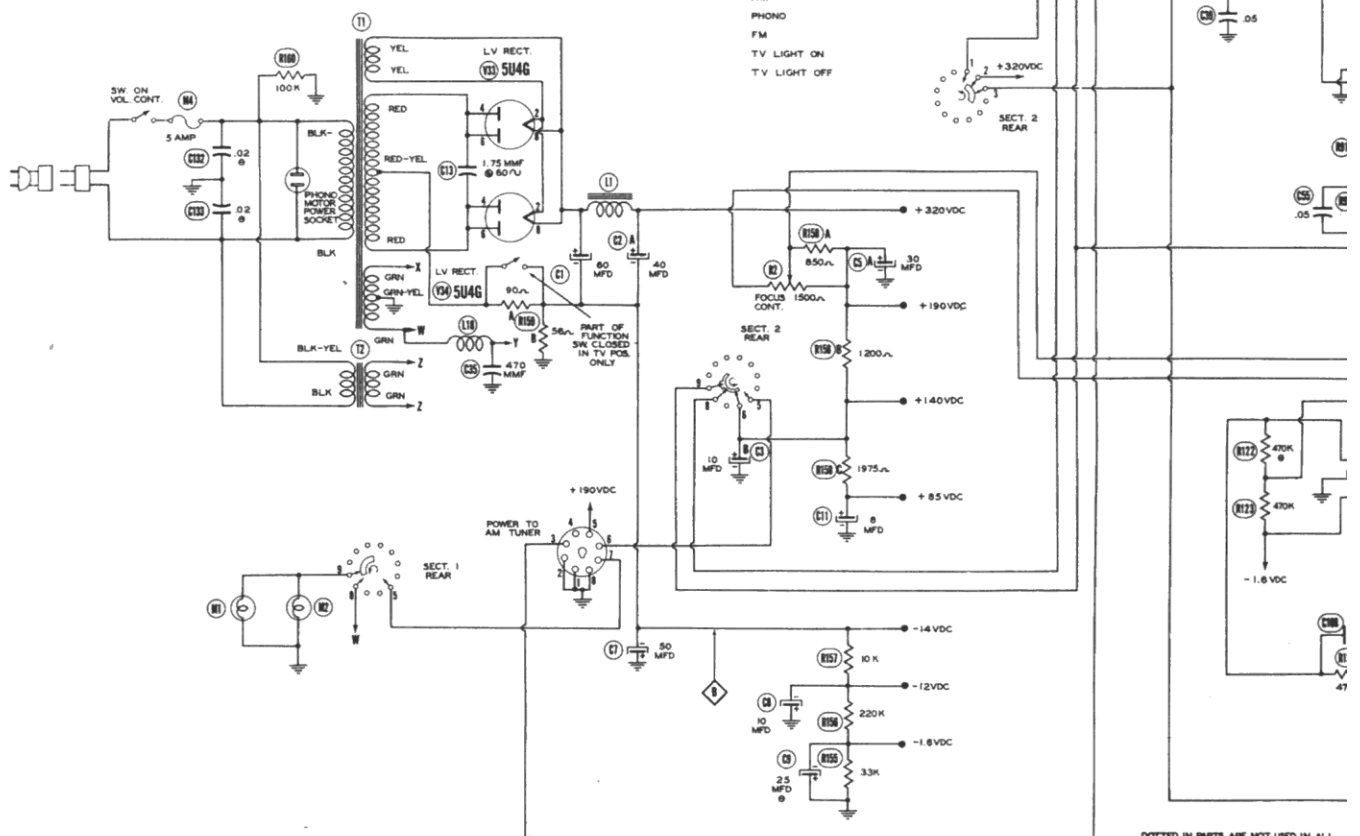
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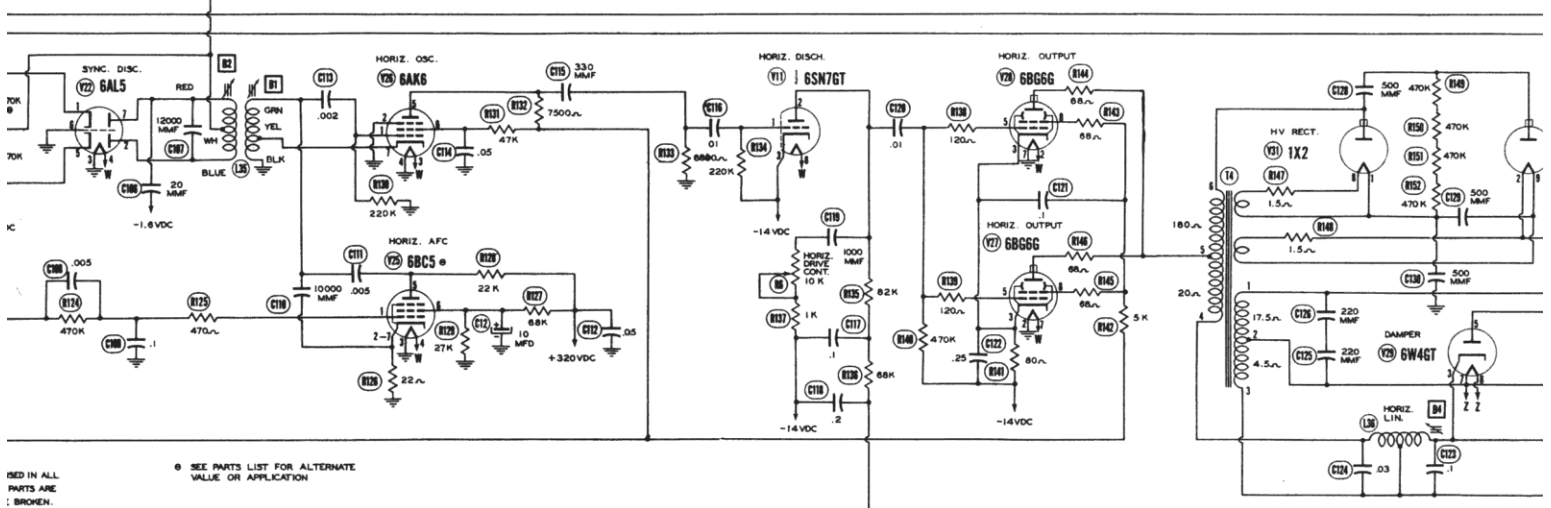
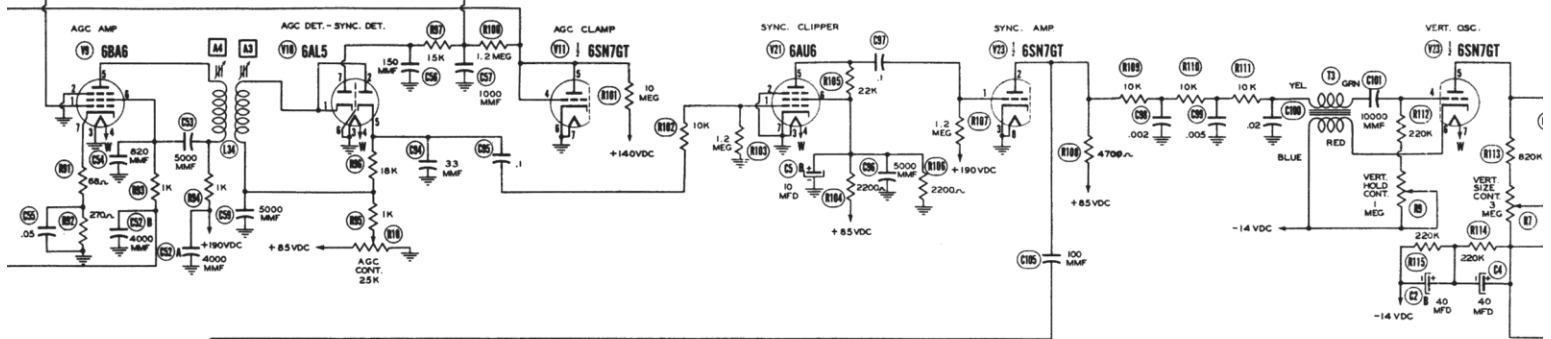
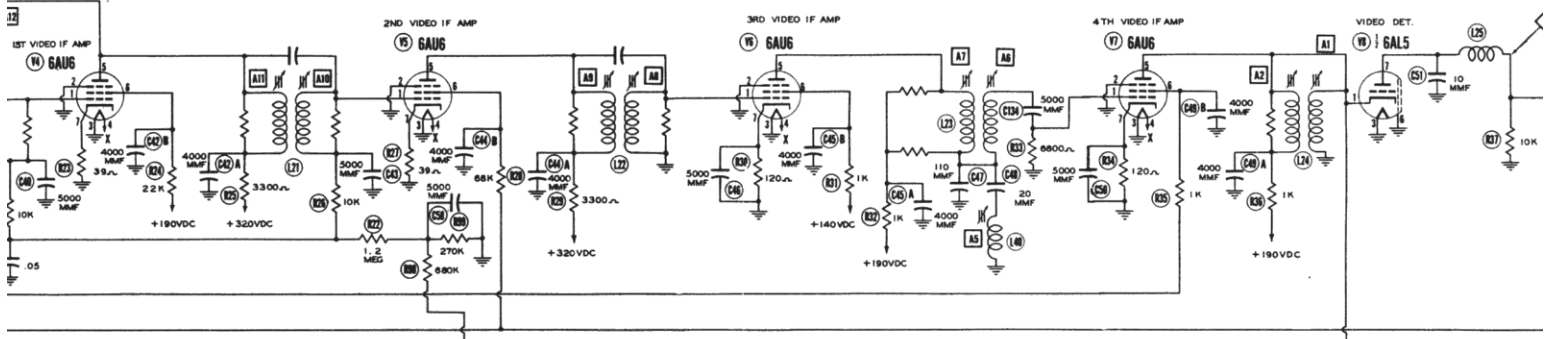
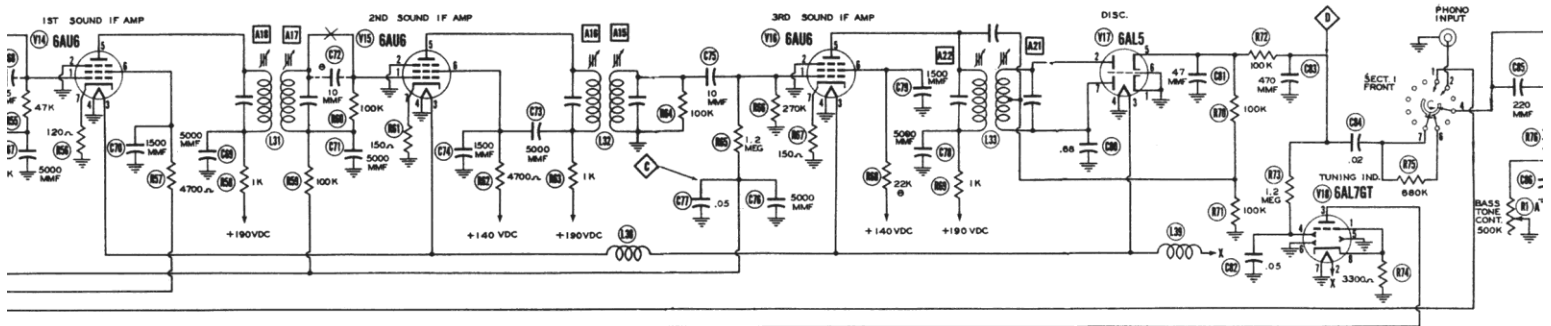
BAND SW. SHOWN IN TV LIGHT OFF POS.

- SW. SEQUENCE
 AM
 PHONO
 FM
 TV LIGHT ON
 TV LIGHT OFF

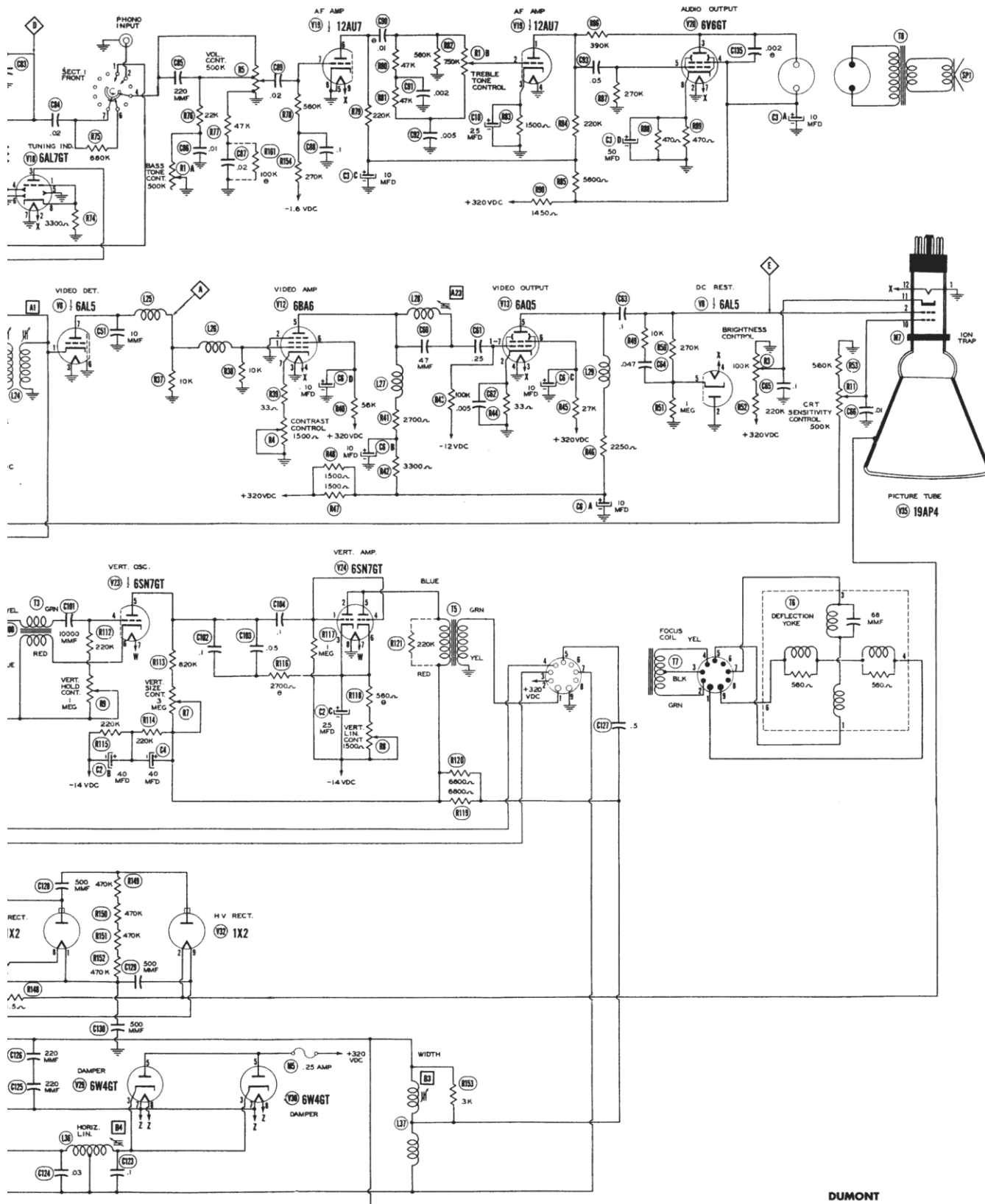


A PHOTOFAC STANDARD NOTATION SCHEMATIC
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DOTTED IN PARTS ARE NOT USED IN ALL MODELS. WHEN DOTTED IN PARTS ARE USED POINTS MARKED X ARE BROKEN.

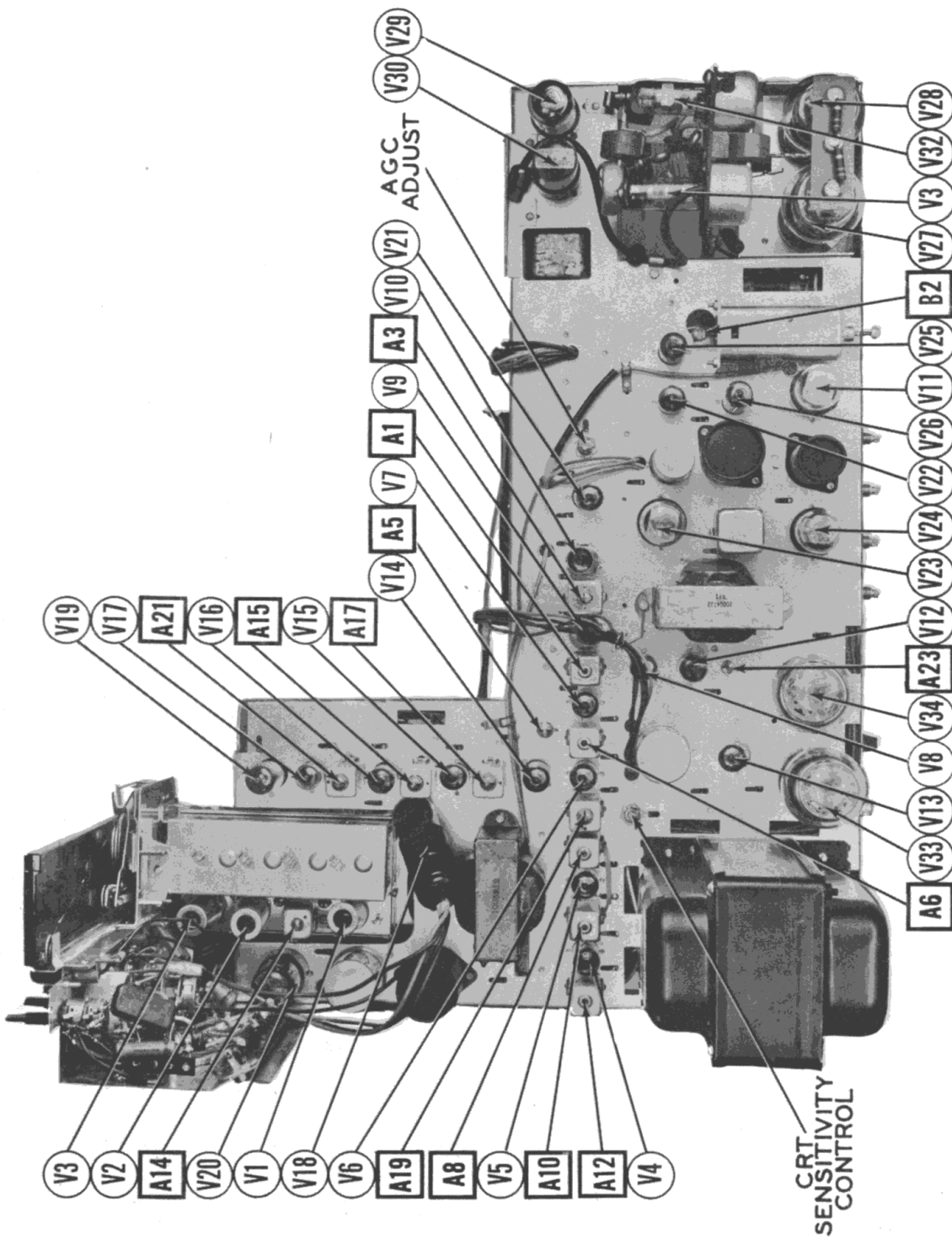


SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
 RES IN ALL PARTS ARE : BROKEN.



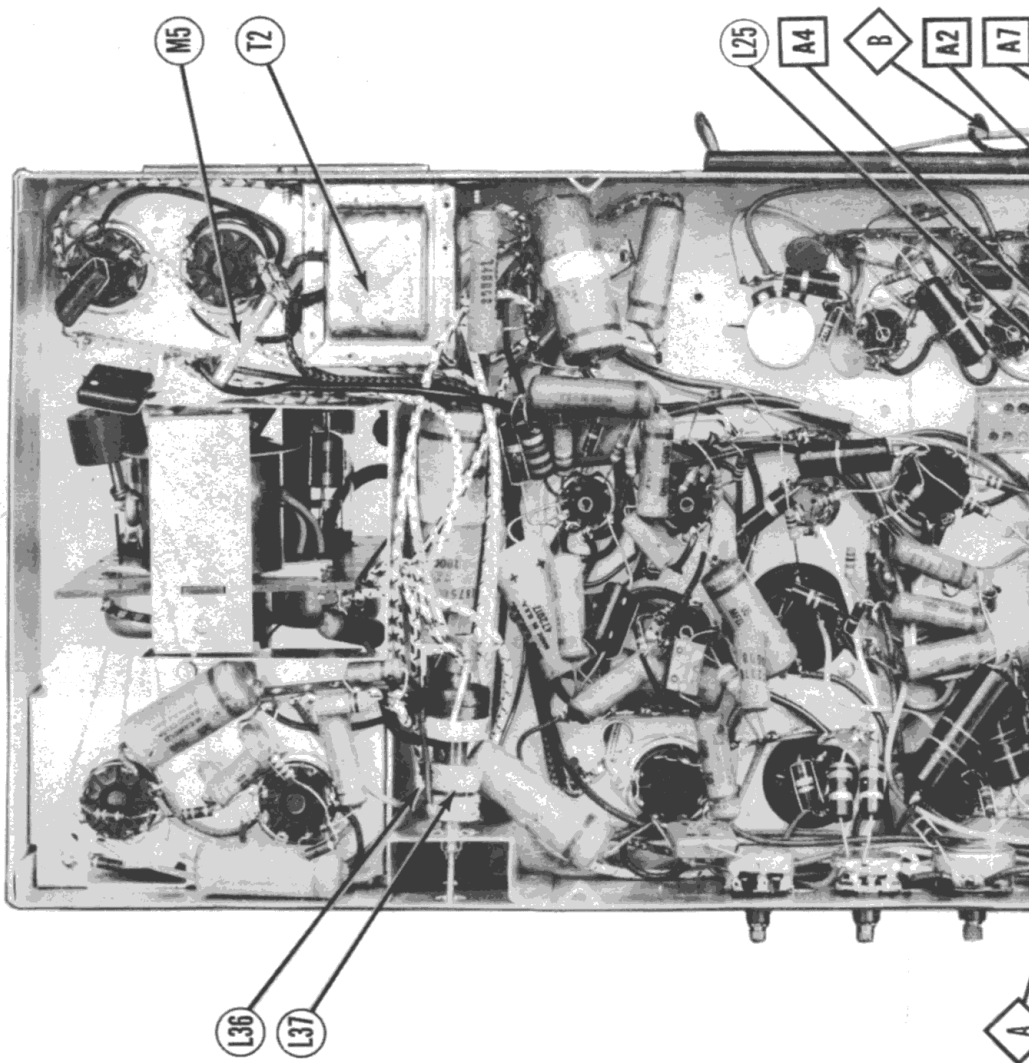
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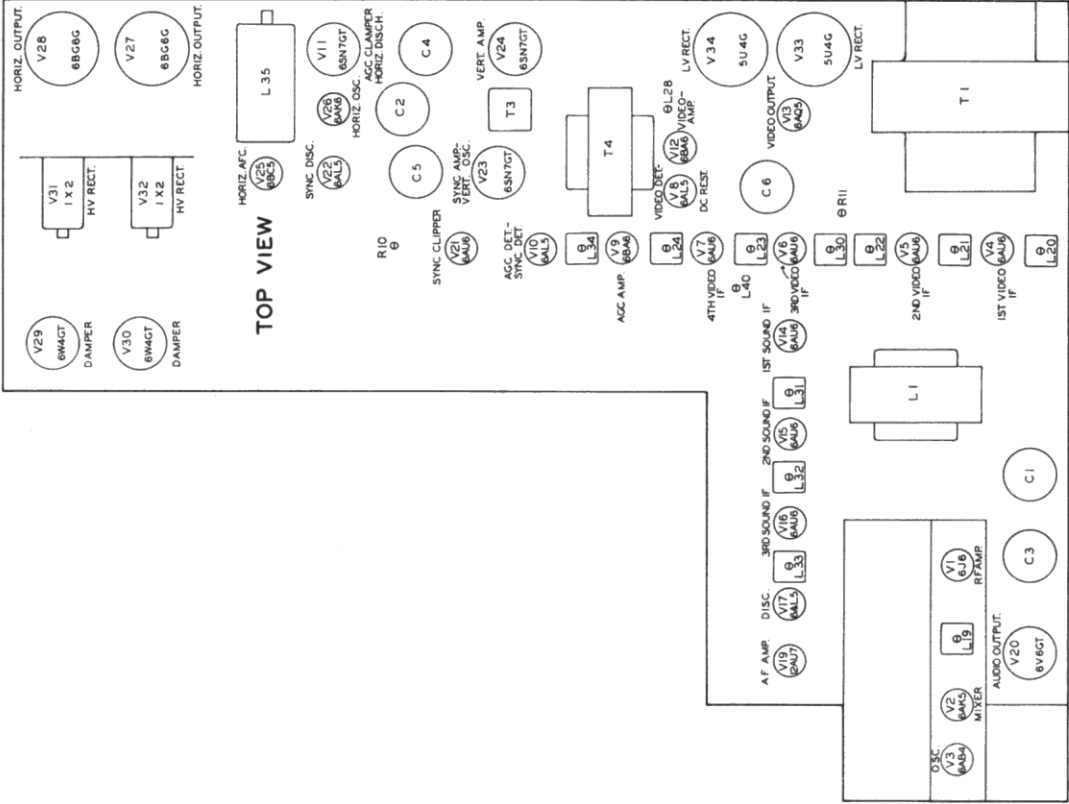
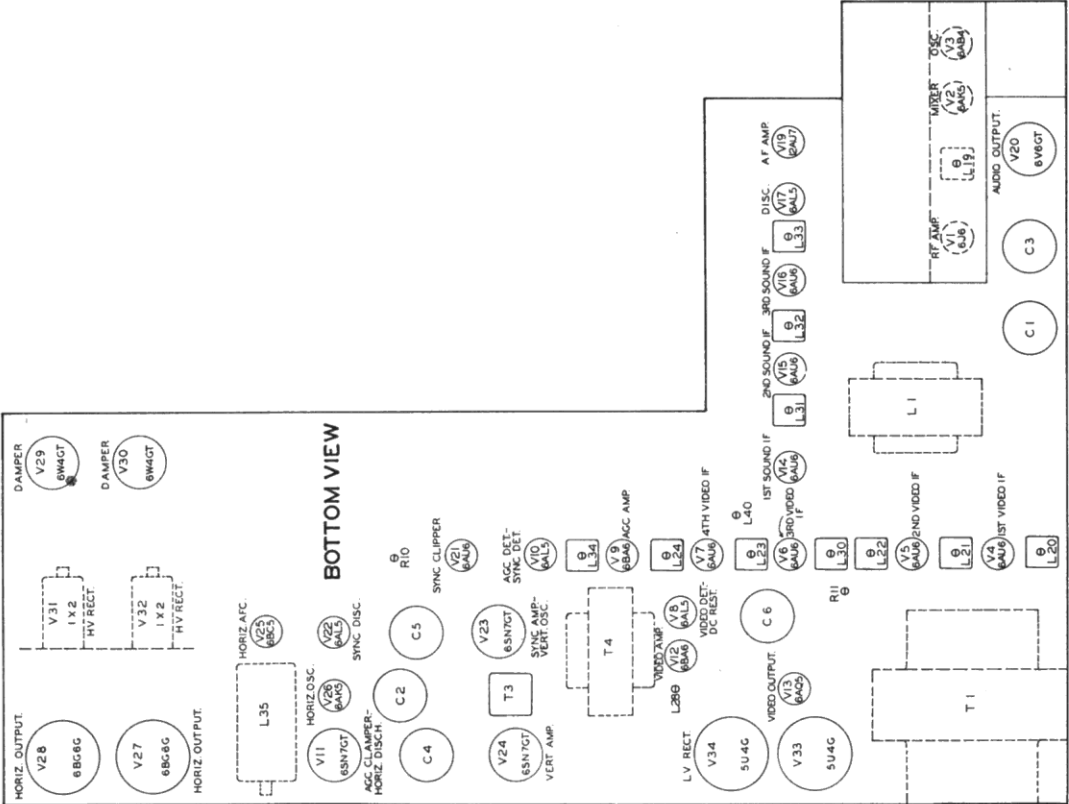
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CHASSIS TOP VIEW

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TUBE PLACEMENT CHART


TV ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To eliminate the high voltage shock hazard remove the damper tubes V29 and V30 from its socket.


VIDEO IF ALIGNMENT

Remove the local oscillator tube (V3) from its socket to prevent erroneous indications.
 Remove the sync amplifier tube (V21) from its socket and replace with a 6AU6 with pin 3 and 4 removed.
 Turn the AGC control fully counter-clockwise.
 Turn the function switch to TV position (fully clockwise).
 The 1st Video IF Stage bandwidth is controlled by the coupling loop in the mixer transformer L19. This is pre-set and should not be touched except when the tuner assembly is replaced. If the tuner is replaced it should be adjusted for the curve known in figure 7 as in step 8.
 Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.


DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. 270MMF	High side to pin 1 (Grid) of 6AU6 (V7). Low side to chassis.	24MC (10MC SWP)	21.75MC 22.25MC 22.75MC 25.5MC 26.25MC	Any	Vert. Amp. to Point  . Low side to chassis.	A1, A2	Adjust for response curve similar to figure 1 with markers as shown.
2. 270MMF	"	24MC (10MC SWP)	25.5MC 26.25MC	"	Vert. Amp. to pin 1 (Grid) of 6AU6 (V21). Low side to chassis.	A3, A4	Adjust for response curve similar to figure 2 with markers as shown.
3. 270MMF	High side to pin 1 (Grid) of 6AU6 (V6). Low side to chassis.	Not used	21.75MC (400 % Mod.)	"	Vert. Amp. thru detector probe as shown in figure 3 to pin 5 (plate) of 6AU6 (V7). Low side to chassis.	A5	Adjust for MINIMUM 400 % indication on scope.
4. 270MMF	"	24MC (10MC SWP)	22.25MC 22.75MC 25.5MC 26.25MC	"	"	A6, A7	Adjust for response curve similar to figure 4 with markers as shown.
5. 270MMF	High side to pin 1 (Grid) of 6AU6 (V5). Low side to chassis.	"	21.75MC 22.25MC 22.75MC 25.5MC 26.25MC	"	Vert. Amp. thru detector probe to pin 5 (plate) of 6AU6 (V6). Low side to chassis.	A8, A9	Adjust for response curve similar to figure 5 with markers as shown.
6. 270MMF	High side to pin 1 (Grid) of 6AU6 (V4). Low side to chassis.	"	21.75MC 22.25MC 22.75MC 25.5MC 26.25MC	"	Vert. Amp. thru detector probe to pin 5 (plate) of 6AU6 (V5). Low side to chassis.	A10, A11	Adjust for response curve similar to figure 6 with markers as shown.
7. Direct	High side to ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	Not used	27.75MC (400 % Mod.)	"	Vert. Amp. thru detector probe to pin 5 (plate) of 6AU6 (V4). Low side to chassis.	A12	Adjust for MINIMUM 400 % indication on scope.
8. Direct	"	24MC (10MC SWP)	21.75MC 22.25MC 22.75MC 25.5MC 26.25MC	"	"	A13, A14	Adjust for response curve similar to figure 7 with markers as shown.

SOUND IF ALIGNMENT

Connect a 100KΩ potentiometer for bias as shown in figure 8. Adjust potentiometer to prevent overload while aligning sound IF.
 Turn the function switch to FM position (3rd position clockwise).

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
9. 270MMF	High side to pin 1 (Grid) of 6AU6 (V15). Low side to chassis.	21.75MC (1MC SWP)	21.65MC 21.75MC 21.85MC	Any	Vert. Amp. thru detector probe to pin 5 (plate) of 6AU6 (V16). Low side to chassis.	A15, A16	Adjust for response curve similar to figure 9 with markers as shown.
10. 270MMF	High side to pin 1 (Grid) of 6AU6 (V14). Low side to chassis.	"	"	"	Vert. Amp. to pin 5 (plate) of 6AU6 (V15). Low side to chassis.	A17, A18	"
11. 270MMF	High side to pin 1 (Grid) of 6AU6 (V4). Low side to chassis.	"	"	"	Vert. Amp. to pin 5 (plate) of 6AU6 (V16). Low side to chassis.	A19, A20	Adjust for response curve similar to figure 10 with markers as shown.
12. 270MMF	"	"	"	"	Vert. Amp. to Point  . Low side to chassis.	A21, A22	Adjust A21 to place 21.75MC at center of diagonal line as per figure 11. Adjust A22 for maximum amplitude and straightness of crossover lines.

4.5MC TRAP ADJUSTMENT

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
13. 270MMF	High side to pin 7 (plate) of 6AL5 (V8). Low side to chassis.	Not used	4.5MC (400 % Mod.)	Any	Vert. Amp. thru detector probe to Point  . Low side to chassis.	A23	Adjust for MINIMUM 400 % indication on scope. After alignment is complete tune in a test pattern and adjust for maximum vertical wedge definition.

THE RF TUNER PORTION OF THIS RECEIVER HAS BEEN PRE-ALIGNED AT THE FACTORY, AND IS VERY STABLE AND SHOULD NOT REQUIRE ADJUSTMENT IN THE FIELD.

TV ALIGNMENT INSTRUCTIONS (CONT.)

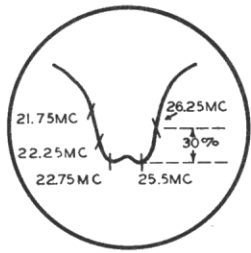


FIG. 1

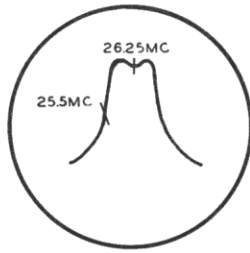


FIG. 2

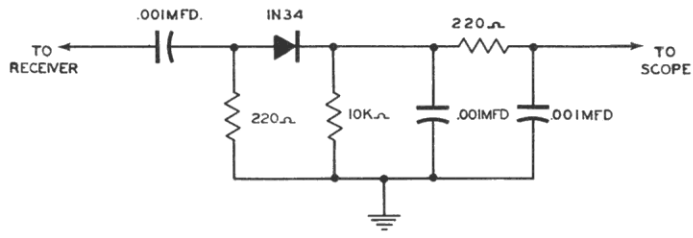


FIG. 3

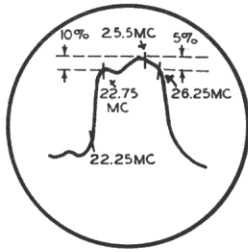


FIG. 4

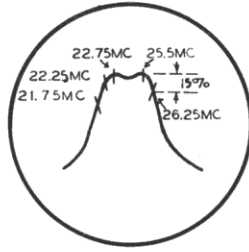


FIG. 5

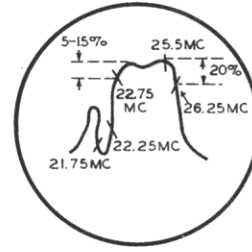


FIG. 6

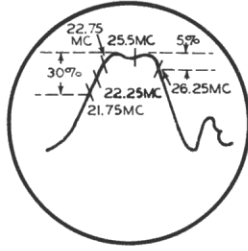


FIG. 7

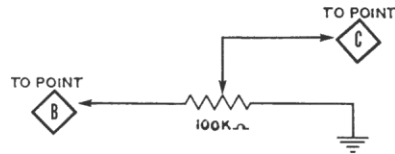


FIG. 8

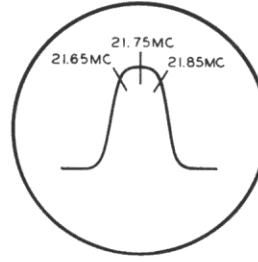


FIG. 9

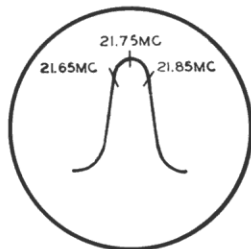


FIG. 10

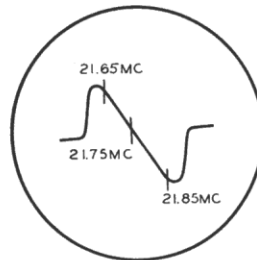


FIG. 11

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AM ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer turn tuning gang fully closed and set pointer 1/16" from top left hand edge of dial backing plate. Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain a reading. Use an insulated alignment screwdriver for adjusting.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
14. .01MFD	High side to pin 7 (Grid) of 6BE6 (V37). Low side to chassis.	455KC (400 ~ Mod.)	AM (fully CCW)	Tuning gang fully open	Across voice coil	A24, A25, A26, A27	Adjust for maximum output.
15. .01MFD	High side to pin 1 (Grid) of 6BA6 (V36). Low side to chassis.	1800KC	"	1600KC	"	A28	"
16. .01MFD	"	600KC	"	600KC	"	A29	Adjust for maximum output. Repeat steps 15 and 16 until no further improvement can be made.
17. Direct	High side to antenna terminal. Low side to chassis.	1400KC	"	Tune for max. output	"	A30, A31	Adjust for maximum output.

VOLTAGE AND RESISTANCE MEASUREMENTS

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6J8	12KΩ	112KΩ	0Ω	.1Ω	1.9 Meg.	82Ω			
V 2	6AK5	2.9 Meg.	150KΩ	0Ω	.1Ω	150KΩ	0Ω			
V 3	6AB4	12KΩ	Inf.	0Ω	.1Ω	12KΩ	0Ω			
V 4	6AU6	1.5 Meg.	0Ω	0Ω	.1Ω	13.3KΩ	123KΩ	39Ω		
V 5	6AU6	1.5 Meg.	0Ω	0Ω	.1Ω	13.3KΩ	168KΩ	39Ω		
V 6	6AU6	.7Ω	0Ω	0Ω	.1Ω	14KΩ	13.3KΩ	120Ω		
V 7	6AU6	6.8KΩ	0Ω	0Ω	.1Ω	12KΩ	13.3KΩ	120Ω		
V 8	6AL5	.5Ω	0Ω	0Ω	.1Ω	1 Meg.	0Ω	5KΩ		
V 9	6BA6	5Ω	0Ω	0Ω	.1Ω	12KΩ	13.3KΩ	340Ω		
V 10	6AL5	100KΩ	100KΩ	0Ω	.1Ω	19KΩ	0Ω	900KΩ		
V 11	6SN7GT	220KΩ	#150KΩ	56Ω	1.8 Meg.	1.8 Meg.	0Ω	0Ω	.1Ω	
V 12	6BA6	5KΩ	0Ω	0Ω	.1Ω	16.7KΩ	156KΩ	1.5KΩ		
V 13	6AQ5	10KΩ	33Ω	.1Ω	0Ω	13KΩ	127KΩ	10KΩ		
V 14	6AU6	1.6 Meg.	0Ω	.1Ω	0Ω	12KΩ	16.9KΩ	120Ω		
V 15	6AU6	1.6 Meg.	0Ω	.1Ω	0Ω	12KΩ	16.9KΩ	150Ω		
V 16	6AU6	270KΩ	0Ω	.1Ω	0Ω	12KΩ	123KΩ	150Ω		
V 17	6AL5	0Ω	100KΩ	.1Ω	0Ω	200KΩ	0Ω	100KΩ		
V 18	6AL7GT	3.3KΩ	.1Ω	146Ω	1.5 Meg.	0Ω	0Ω	0Ω	3.3KΩ	
V 19	12AU7	1150KΩ	600KΩ	1.5KΩ	0Ω	0Ω	1225KΩ	960KΩ	0Ω	.1Ω
V 20	6V6GT	0Ω	0Ω	11.9KΩ	11.5KΩ	270KΩ	Inf.	.1Ω	240Ω	
V 21	6AU6	1.2 Meg.	0Ω	0Ω	.1Ω	127KΩ	15.3KΩ	0Ω		
V 22	6AL5	1 Meg.	500KΩ	0Ω	.1Ω	33KΩ	0Ω	500KΩ		
V 23	6SN7GT	11.2 Meg.	19KΩ	0Ω	1.2 Meg.	#825KΩ	200Ω	.1Ω	0Ω	
V 24	6SN7GT	1 Meg.	44KΩ	610Ω	1 Meg.	44KΩ	610Ω	.1Ω	0Ω	
V 25	6BC5	1.4 Meg.	22Ω	0Ω	.1Ω	122KΩ	125KΩ	22Ω		
V 26	6AK6	220KΩ	0Ω	.1Ω	0Ω	17.5KΩ	147KΩ	20Ω		TOP CAP #1750
V 27	6BG6G	Inf.	0Ω	135Ω	470KΩ	470KΩ	Inf.	.1Ω	15KΩ	TOP CAP #950
V 28	6BG6G	Inf.	.1Ω	135Ω	15KΩ	470KΩ	470KΩ	0Ω	15KΩ	TOP CAP #950
V 29	6W4GT	Inf.	Inf.	150KΩ	Inf.	146Ω	Inf.	#6.8Ω	#7Ω	TOP CAP #1750
V 30	6W4GT	Inf.	Inf.	150KΩ	Inf.	146Ω	Inf.	#6.8Ω	#7Ω	TOP CAP #1750
V 31	1X2	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.
V 32	1X2	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.
V 33	5U4G	Inf.	7KΩ	Inf.	65Ω	Inf.	65Ω	7KΩ	7KΩ	7KΩ
V 34	5U4G	Inf.	7KΩ	Inf.	65Ω	Inf.	65Ω	7KΩ	7KΩ	7KΩ
V 35	10AP4	0Ω	1.3 Meg.	1270KΩ	1270KΩ	1270KΩ	1270KΩ	1270KΩ	1270KΩ	1270KΩ

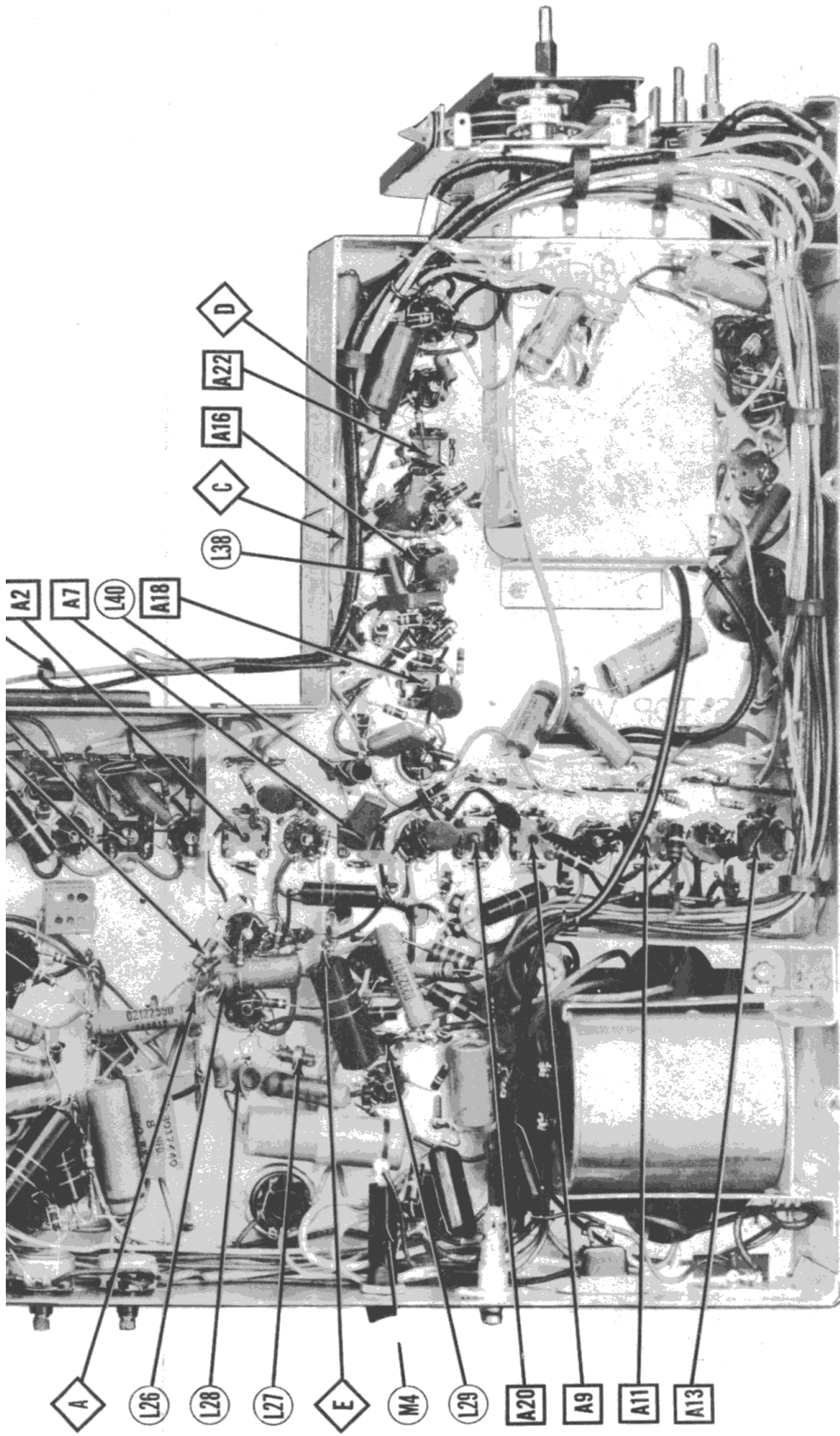
FUNCTION SWITCH IN "TTY-LIGHT OFF" POSITION UNLESS OTHERWISE NOTED.
 * TAKEN WITH VACUUM TUBE VOLTMETER.
 † TAKEN WITH VACUUM TUBE VOLTMETER.
 ‡ MEASURED FROM PIN 2 OF V33.
 § MEASURED FROM PIN #3 OF V300.

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6J8	95VDC	95VDC	0V.	6.3VAC	-4VDC	-4VDC	8VDC		
V 2	6AK5	-1.4VDC	0V.	0V.	6.3VAC	45VDC	50VDC	0V.		
V 3	6AB4	120VDC	0V.	0V.	6.3VAC	0V.	8-5.3VDC	0V.		
V 4	6AU6	-1VDC	0V.	0V.	6.3VAC	300VDC	120VDC	4VDC		
V 5	6AU6	-1VDC	0V.	0V.	6.3VAC	300VDC	120VDC	4VDC		
V 6	6AU6	0V.	0V.	0V.	6.3VAC	175VDC	140VDC	1.2VDC		
V 7	6AU6	0V.	0V.	0V.	6.3VAC	185VDC	140VDC	1.2VDC		
V 8	6AL5	0V.	0V.	0V.	6.3VAC	8VDC	0V.	-4VDC		
V 9	6BA6	0V.	0V.	0V.	6.3VAC	175VDC	140VDC	7.4VDC		
V 10	6AL5	80VDC	80VDC	0V.	6.3VAC	185VDC	140VDC	7.4VDC		
V 11	6SN7GT	-46VDC	195VDC	-14VDC	-6VDC	0V.	0V.	0V.	6.3VAC	
V 12	6BA6	-4VDC	0V.	0V.	6.3VAC	260VDC	215VDC	13VDC		
V 13	6AQ5	-8VDC	1VDC	6.3VAC	0V.	220VDC	250VDC	-9VDC		
V 14	6AU6	0V.	0V.	6.3VAC	0V.	185VDC	130VDC	4VDC		
V 15	6AU6	0V.	0V.	6.3VAC	0V.	185VDC	130VDC	4VDC		
V 16	6AU6	-5VDC	0V.	6.3VAC	0V.	180VDC	100VDC	6VDC		
V 17	6AL5	0V.	-1VDC	6.3VAC	0V.	17VDC	0V.	-1VDC		
V 18	6AL7GT	4.2.4VDC	6.3VAC	4.320VDC	0V.	0V.	0V.	4.2.4VDC		
V 19	12AU7	50VDC	0V.	2VDC	0V.	0V.	40VDC	-5VDC	0V.	6.3VAC
V 20	6V6GT	0V.	0V.	235VDC	250VDC	0V.	0V.	6.3VAC	12VDC	
V 21	6AU6	-1VDC	0V.	0V.	6.3VAC	36VDC	45VDC	0V.		
V 22	6AL5	-1VDC	-8VDC	0V.	6.3VAC	-1.6VDC	0V.	-8VDC		
V 23	6SN7GT	-7VDC	60VDC	0V.	-85VDC	100VDC	3VDC	6.3VAC	0V.	
V 24	6SN7GT	-3VDC	400VDC	-3VDC	0V.	400VDC	-3VDC	6.3VAC	0V.	
V 25	6BC5	-6VDC	0V.	0V.	6.3VAC	300VDC	100VDC	0V.		
V 26	6AK6	-25VDC	0V.	6.3VAC	0V.	240VDC	190VDC	0V.	TOP CAP	
V 27	6BG6G	0V.	0V.	-1.8VDC	-35VDC	-34VDC	0V.	6.3VAC	230VDC	TOP CAP
V 28	6BG6G	0V.	6.3VAC	-1.8VDC	230VDC	-34VDC	-34VDC	0V.	230VDC	TOP CAP
V 29	6W4GT	0V.	0V.	470VDC	0V.	320VDC	0V.	*	*	
V 30	6W4GT	0V.	0V.	470VDC	0V.	320VDC	0V.	*	*	
V 31	1X2									
V 32	1X2									
V 33	5U4G	0V.	320VDC	0V.	385VAC	0V.	365VAC	0V.	350VDC	
V 34	5U4G	0V.	320VDC	0V.	385VAC	0V.	365VAC	0V.	330VDC	
V 35	10AP4	0V.	.8VDC	140VDC	140VDC	140VDC	140VDC	140VDC	140VDC	

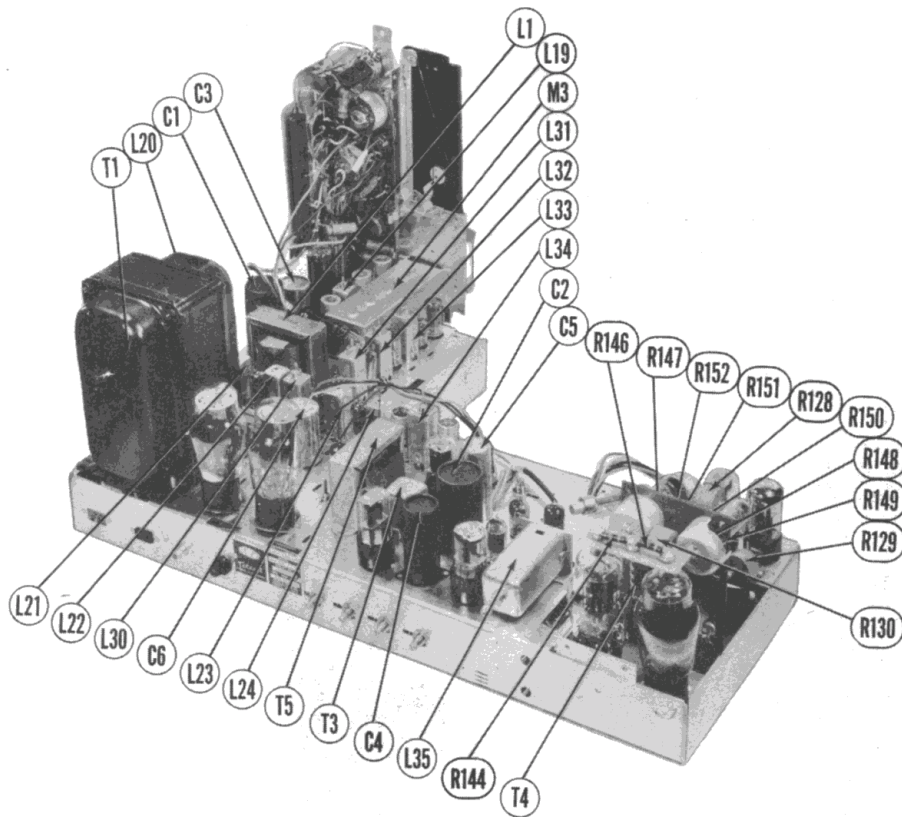
FUNCTION SWITCH IN "TTY-LIGHT OFF" POSITION UNLESS OTHERWISE NOTED.
 * TAKEN WITH VACUUM TUBE VOLTMETER.
 † TAKEN WITH VACUUM TUBE VOLTMETER.
 ‡ MEASURED FROM PIN 2 OF V33.
 § MEASURED FROM PIN #3 OF V300.

- DC Voltage measurements are at 20,000 ohms per volt, AC Voltage measured at 1,000 ohms.
- Pin numbers are counted in a clockwise direction on bottom of socket.
- Measured values are from socket pin to common negative unless otherwise stated.
- Line voltage maintained at 117 volts for voltage readings.
- From panels controls set at minimum.
- Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.

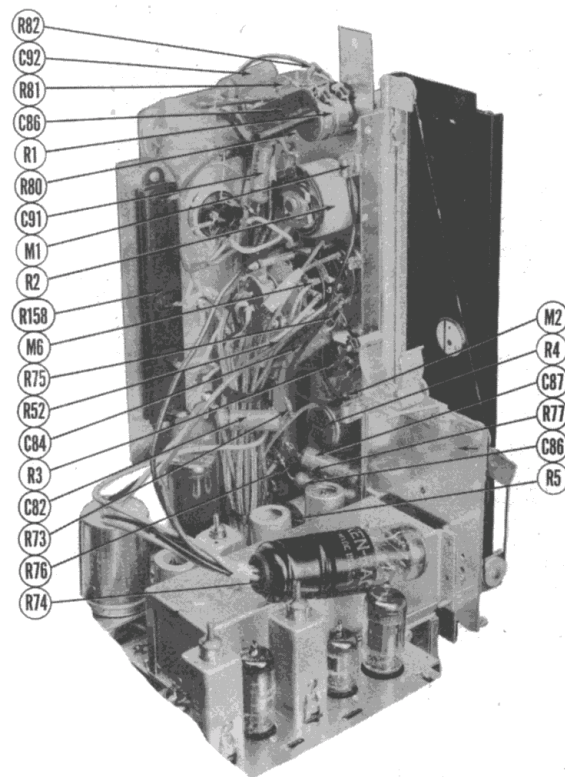


CHASSIS BOTTOM VIEW-TRANS., INDUCTOR AND ALIGNMENT IDENTIFICATION

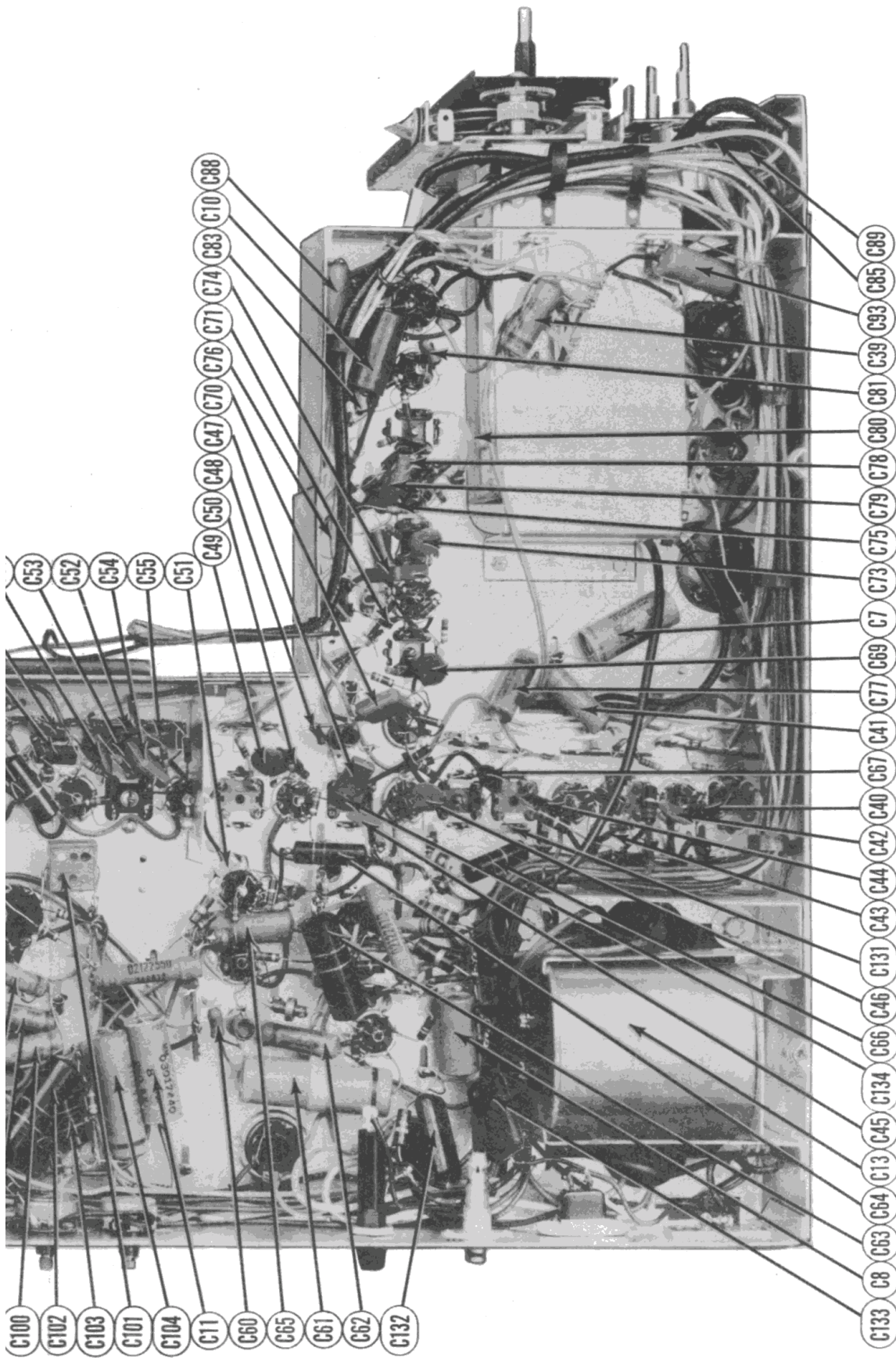
DUMONT
MODEL RA-109A



CHASSIS-TOP VIEW



CHASSIS-PARTIAL TOP VIEW



C100
C102
C103
C101
C104
C11
C60
C65
C61
C62
C132

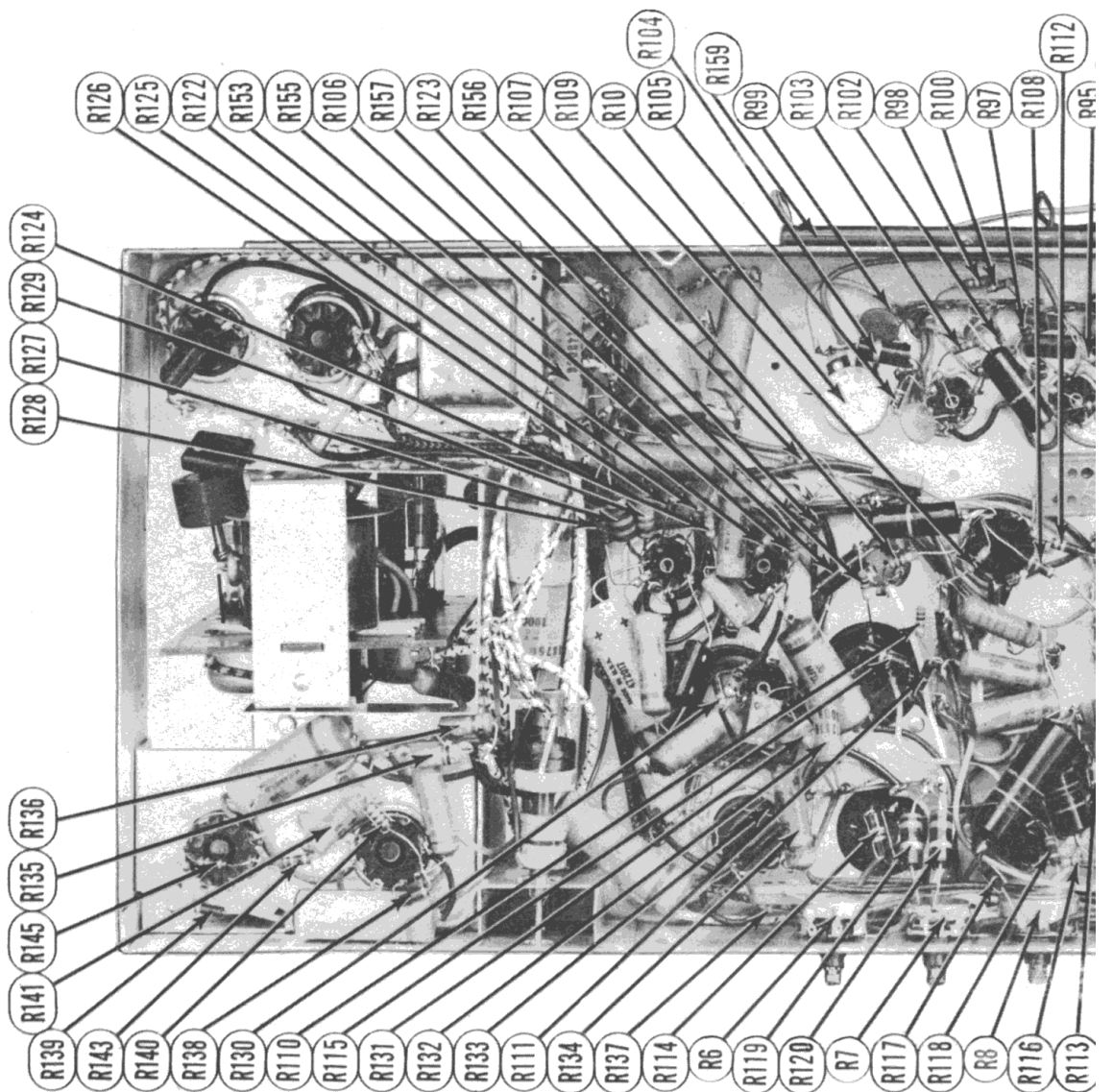
C49
C50
C48
C47
C70
C76
C71
C74
C83
C10
C88

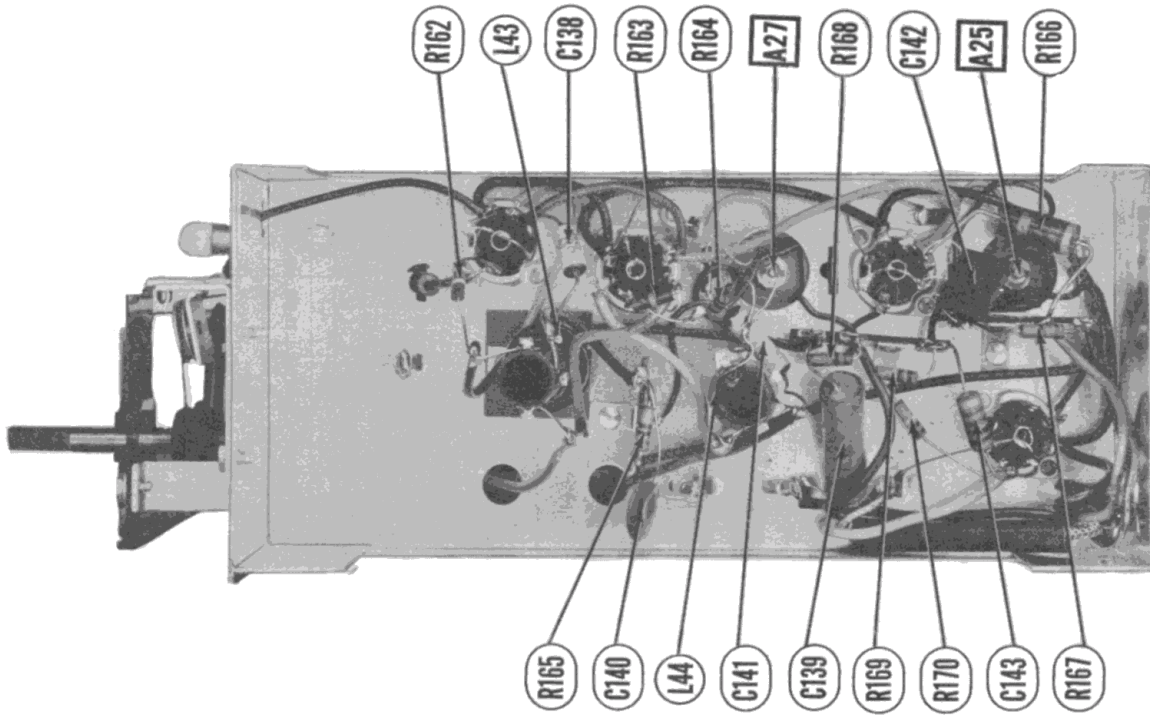
C53
C52
C54
C55
C51

C133
C8
C63
C64
C13
C45
C134
C66
C46
C131
C43
C44
C42
C40
C67
C41
C77
C69
C7
C73
C75
C79
C78
C80
C81
C39
C93
C85
C89

CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

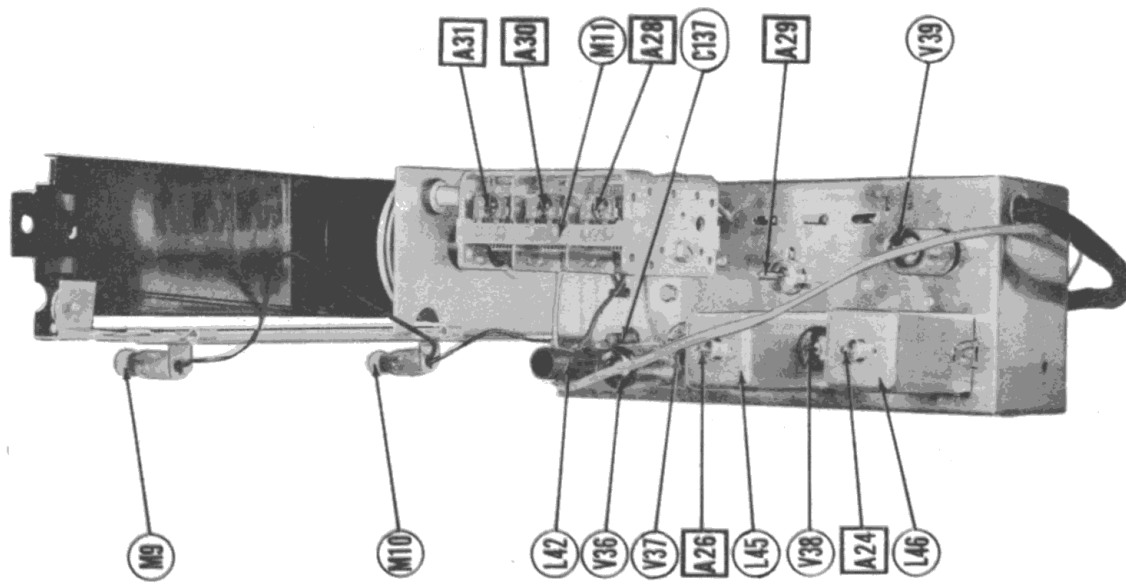
DUMONT
MODEL RA-109A



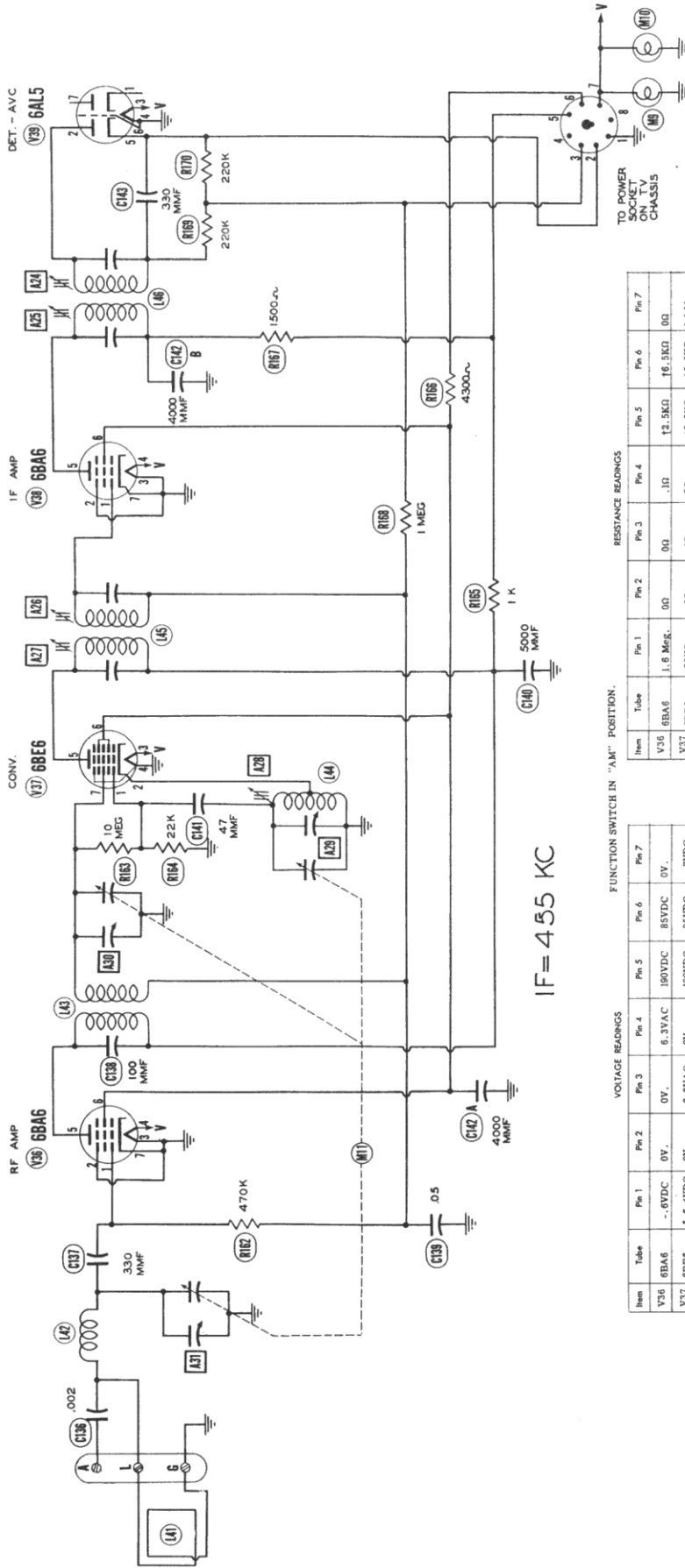


RADIO TUNER-BOTTOM VIEW

DUMONT
MODEL RA-109A



RADIO TUNER - TOP VIEW



FUNCTION SWITCH IN "AM" POSITION.

Item	VOLTAGE READINGS							RESISTANCE READINGS						
	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V36 6BA6	0V	0V	6.3VAC	190VDC	190VDC	85VDC	0V	1.6 MEG.	00	00	.10	12.5KΩ	16.5KΩ	00
V37 6BE6	8-6.4VDC	0V	6.3VAC	190VDC	190VDC	85VDC	-.7VDC	22KΩ	.60	.10	00	12.5KΩ	16.5KΩ	1.1 MEG.
V38 6BA6	-.7VDC	0V	6.3VAC	190VDC	190VDC	85VDC	0V	1.1 MEG.	00	00	.10	13KΩ	16.5KΩ	00
V39 6AL5	0V	-.5VDC	6.3VAC	0V	0V	0V	0V	Inf.	370KΩ	.10	00	00	00	Inf.

‡ TAKEN WITH VACUUM TUBE VOLTMETER.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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RADIO TUNER SCHEMATIC

TV PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA			RMA BASE TYPE	NOTES
		DUMONT PART No.	STANDARD REPLACEMENT			
V1	RF Amp.	25000190	6J6		7BF	
V2	Mixer	25000180	6AK5		7BD	
V3	Oscillator	25001760	6AB4		5CE	
V4	1st Video IF	25000050	6AU6		7BK	
V5	2nd Video IF	25000050	6AU6		7BK	
V6	3rd Video IF	25000050	6AU6		7BK	
V7	4th Video IF	25000050	6AU6		7BK	
V8	Video Det. -DC Rest.	25000020	6AL5		6BT	
V9	AGC Amp.	25000240	6BA6		7BK	
V10	AGC Det. -Sync. Det.	25000020	6AL5		6BT	
V11	AGC Clamp. -Hor. Disch.	25000110	6SN7GT		8BD	
V12	1st Video Amp.	25000240	6BA6		7BK	
V13	2nd Video Amp.	25000340	6AQ5		7BZ	
V14	1st Sound IF	25000050	6AU6		7BK	
V15	2nd Sound IF	25000050	6AU6		7BK	
V16	3rd Sound IF	25000050	6AU6		7BK	
V17	Sound Discr.	25000020	6AL5		6BT	
V18	Tuning Indicator	25000200	6AL7GT		8CH	
V19	AF Amp.	25000130	12AU7		9A	
V20	Audio Output	25000090	6V6GT/G		7AC	
V21	Sync. Clipper	25000050	6AU6		7BK	
V22	Sync. Discr.	25000020	6AL5		6BT	
V23	Sync. Amp. -Vert. Osc.	25000110	6SN7GT		8BD	
V24	Vert. Amp.	25000110	6SN7GT		8BD	
V25A	Hor. Reactance	25000010	6BC5		7BD	Installed in set Used as alternate
B	Hor. Reactance	25000010	6AG5		7BD	
V26	Hor. Osc.	25000350	6AK6		7BK	
V27	Hor. Output	25000140	6BG6G		5BT	
V28	Hor. Output	25000140	6BG6G		5BT	
V29	Damper	25000830	6W4GT		4CG	
V30	Damper	25000830	6W4GT		4CG	
V31	HV Rect.	25001810	1X2		7CB	
V32	HV Rect.	25001810	1X2		7CB	
V33	LV Rect.	25000060	5U4G		5T	
V34	LV Rect.	25000060	5U4G		5T	
V35	Picture Tube	25000870	19AP4		12D	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA					IDENTIFICATION CODES AND INSTALLATION NOTES	
	CAP.	VOLT	DUMONT PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.		SPRAGUE PART No.
C1	60	450	03017880	AF66J		UP3345		TVL-1727	Filter
C2A	40	450	03018670	AF886J		UPT450-440V2		TVL-3813	Filter
B	40	350							Decoupling
C	25	50							Vert. Output Cath.
C3A	10	450	03018610	AF222J5A		UPT11145 C10		TVL-4723	Output Decoupling
B	10	450						TVA-1205	Decoupling
C	10	300							Decoupling
D	50	25							Output Cath. Byp.
C4	40	350	03018680	AF8J		UP4035		TVL-1621	Decoupling
C5A	30	450	03019330	UP33J2G		UP3145			Filter
B	10	150							Sync. Clipper Dec.
C6A	10	450	03019150	AF2222J		UPT111145		TVL-4760	Decoupling
B	10	450							Low Pass Filter
C	10	450							2nd V. Amp. Screen
D	10	450							1st V. Amp. Screen
C7	50	25	03000020	PRS25/50		BR502A		TVA-1206	Filter
C8	10	25	03016730	PRS25/10		BR102A		TVA-1204	Bias Filter
C9	25	25	03015310	PRS25/25		BR252A		TVA-1205	Bias Filter ↑
C10	25	25	03015310	PRS25/25		BR252A		TVA-1205	2nd AF Amp. Cath.
C11	8	250		PRS3250/8		BR825		TVA-1503	Decoupling
C12	10	300	03019320	PRS350/10		BR1235A		TVA-1604	Hor. React. Screen
C13	1.75 @ 60	850							Power Trans. Shunt
C14	20		03015790	SI20NPO	TCZ-20		NPOK-20		Fixed Trimmer
C15	15		03012050		TCZ-15		NPOK-15		Fixed Trimmer
C16	8-50		03017500				557-N750-8-50		Variable Trimmer
C17	20.		03012050	SI20NPO	TCZ-20		NPOK-20		Fixed Trimmer
C18	470		03016470	SI470	D6-471		GP2K-470	19C15	RF Cath. Bypass
C19	470		03016470	SI470	D6-471		GP2K-470	19C15	AGC Filter
C20	470		03016470	SI470	D6-471		GP2K-470	19C15	AGC Filter
C21	470		03016470	SI470	D6-471		GP2K-470	19C15	RF Bypass
C22	100		03016700	SI100	D6-101		GPIK-100	19C11	RF Coupling
C23	.5-5		03018650				532-08-.5-5		Variable Trimmer
C24	.5-5		03018650				532-08-.5-5		Variable Trimmer
C25	100		03016700	SI100	D6-101		GPIK-100	19C11	Fixed Trimmer
C26	125		03018020						Fixed Trimmer
C27	100		03016700	SI100	D6-101		GPIK-100	19C11	RF Coupling
C28	5000		03015610	BPD-005	DD-502		811-005	29C1	Mixer Screen Byp.
C29	470		03016470	SI470	D6-471		GP2K-470	19C15	AGC Filter
C30	470		03016470	SI470	D6-471		GP2K-470	19C15	AGC Filter
C31	1		03012150		TCZ-1				Osc. Coupling
C32	5		03014730	SI5NPO	TCZ-4.7		NPOK-5		Osc. Grid Cap.
C33	1.5-7		03016870				TS2A-N300-1.5-7		Variable Trimmer
C34	5000		03015610	BPD-005	DD-502		811-005	29C1	RF Bypass
C35	470		03016470	SI470	D6-471		GP2K-470	19C15	Filament Bypass
C36	470		03016470	SI470	D6-471		GP2K-470	19C15	Filament Bypass
C37	470		03016470	SI470	D6-471		GP2K-470	19C15	Mixer Fil. Bypass
C38	470		03016470	SI470	D6-471		GP2K-470	19C15	Osc. Fil. Bypass
C39	.05	200	03000950	P288-05	DF-503	PTE4S5			AGC Filter
C40	5000		03015610	BPD-005	DD-502	1D5D5	811-005	29C1	AGC Filter
C41	.05	200	03000950	P288-05	DF-503	PTE4S5			AGC Filter

DUMONT
MODEL RA-109A

CAPACITORS (CONT.)

Table with columns: ITEM No., RATING (CAP., VOLT), REPLACEMENT DATA (DUMONT PART No., AEROVOX PART No., CENTRALAB PART No., CORNELL-DUBILIER PART No., ERIE PART No., SPRAGUE PART No.), IDENTIFICATION CODES AND INSTALLATION NOTES.

Table with columns: ITEM No., RATING (RESISTANCE, WATTS), REPLACEMENT DATA (DUMONT PART No., IRC PART No., CLAROSTAT PART No.), ALL.

† Additional parts to be used with "Concentrikrit". * File slot in shaft to duplicate original.

RESISTO

Table with columns: ITEM No., RATING (RESISTANCE, WATTS), REPLACEMENT DATA (DUMONT PART No., IRC PART No.), ALL.

* Not used in all models. † Some models use .1MFD in this application. Mgr's Part No. 03013910. ‡ Some models use .05MFD in this application. Mgr's Part No. 03016500. § Some models use .02MFD in this application. Mgr's Part No. 03018570.

DESCRIPTIONS (Continued)

CONTROLS

TA	CLAROSTAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
RTV-151			Bass tone control-front
			Treble tone control-rear
RTV-177			Attach per instr. in "Concentrikitt"
AM-49-S	B-40		Focus control-Wire Wound
FS-3	Not Req.		Brightness control
RTV-178	V-130		Attach to R3A per instructions
AT-92			Contrast control
FS-3			Volume control tapped at 250KΩ & 150KΩ
SW-A			Attach to R5A per instructions
AG-27-S	AN-14		Attach to R6A per instructions
FKS-1/4	AK-1		Horiz. Drive control
RTV-22	VK-130		Attach to R7A per instructions
AG-61-S	AN-69		Vert. linearity control
FKS-1/4	AK-1		Vert. hold control
AG-40-S	B-26 *		Attach to R9A per instructions
FSK-1/4	Not Req.		AGC control
AG-58-S	B-59 *		Attach to R10A per instructions
FKS-1/4	Not Req.		CRT sensitivity control
			Attach to R11A per instructions

RESISTORS

IRA	IRC	RT No.	IDENTIFICATION CODES
			ALL RESISTORS ARE ± 10% UNLESS OTHERWISE STATED.
82			RF Amp. Cathode
			AGC Network
			RF Amp. Plate Load
			Conv. Coil Shunt
			AGC Network
			Conv. Grid
			Conv. Screen
			Osc. Plate Load
			Osc. Grid
10K			AGC Network
1.2 Meg.			1st Video IF Amp. Cathode
			1st Video IF Amp. Screen
-3300			1st Video IF Amp. Plate Decoupling
10K			AGC Network
			2nd Video IF Amp. Cathode
			2nd Video IF Amp. Screen
-3300			2nd Video IF Amp. Plate Decoupling
120			3rd Video IF Amp. Cathode
1000			3rd Video IF Amp. Screen
1000			3rd Video IF Amp. Plate Decoupling
			4th Video IF Amp. Grid
120			4th Video IF Amp. Cathode
1000			4th Video IF Amp. Screen
1000			4th Video IF Amp. Plate Decoupling
10K-5%			Video Det. Diode Load
10K-5%			1st Video Amp. Grid
-33			1st Video Amp. Cathode
56K			1st Video Amp. Screen
2700-5%			1st Video Amp. Plate Load
3300			1st Video Amp. Plate Decoupling
100K			2nd Video Amp. Grid
-33			2nd Video Amp. Cathode
27K			2nd Video Amp. Screen
A-2250			2nd Video Amp. Plate Load-Wire Wound
1500			Decoupling
1500			Decoupling
10K			Isolation
270K			Picture Tube Grid
1 Meg.			DC Restorer Load
220K			Voltage Divider
560K			Voltage Divider
100K			AVC Network
47K			1st Sound IF Transformer Shunt
120			1st Sound IF Cathode
4700			1st Sound IF Screen
1000			1st Sound IF Plate Decoupling
100K			AVC Network
100K			2nd Sound IF Transformer Shunt
150			2nd Sound IF Cathode
4700			2nd Sound IF Screen
1000			2nd Sound IF Plate Decoupling
100K			3rd Sound IF Transformer Shunt
1.2 Meg.			AVC Network
270K			3rd Sound IF Grid
150			3rd Sound IF Cathode
22K-5%			3rd Sound IF Screen-See Note 1
1000			3rd Sound IF Plate Decoupling
100K			Disc. Diode Load
100K			Disc. Diode Load
100K			De-emphasis
1.2 Meg.			Tuning Eye Filter
3300			Tuning Eye Cathode
680K			Tone Compensation
22K			Tone Compensation
47K			Tone Compensation
560K			1st AF Amp. Grid
220K			1st AF Amp. Plate Load
47K			Tone Compensation
47K			Tone Compensation
560K			Tone Compensation
1500			2nd AF Amp. Cathode
220K			2nd AF Amp. Plate Load
5600			Decoupling
390K			Feedback

RESISTORS (CONT.)

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	DUMONT PART No.	IRC PART No.	
R87	270KΩ	1	02032060	BTS-270K	Output Grid
R88	470K	1	02034730	BTA-470	Output Cathode
R89	470K	1	02034730	BTA-470	Output Cathode
R90	1450Ω	7	02121300	1 3/4A-1450	Decoupling-Wire Wound
R91	68Ω	1	02031630		AGC Amp. Cathode
R92	270Ω	1	02031700	BTS-270	AGC Amp. Cathode
R93	1000Ω	1	02031770	BTS-1000	AGC Amp. Screen
R94	1000Ω	1	02031770	BTS-1000	AGC Amp. Plate Decoupling
R95	1000Ω	1	02031770	BTS-1000	Voltage Divider
R96	18KΩ	1	02031920	BTS-18K	Voltage Divider
R97	15KΩ	1	02031910	BTS-15K	AGC Network
R98	560KΩ	1	02042110	BTS-680K	AGC Network
R99	270KΩ	1	02032060	BTS-270K	AGC Network
R100	1.2 Meg.	1	02032140	BTS-1.2 Meg.	AGC Network
R101	10 Meg.	1	02032250	BTS-10 Meg.	Voltage Divider
R102	10KΩ	1	02031890	BTS-10K	Isolation
R103	1.2 Meg.	1	02032140	BTS-1.2 Meg.	Sync. Clipper Grid
R104	2200Ω	2	02037810	BTS-2200	Sync. Clipper Screen
R105	22KΩ	1	02031930	BTS-22K	Sync. Clipper Plate Load
R106	2200Ω	2	02037810	BTS-2200	Voltage Divider
R107	1.2 Meg.	1	02032140	BTS-1.2 Meg.	Sync. Amp. Grid
R108	4700Ω	1	02031850	BTS-4700	Sync. Amp. Plate Load
R109	10KΩ	1	02031890	BTS-10K	Integrator Network
R110	10KΩ	1	02031890	BTS-10K	Integrator Network
R111	10KΩ	1	02031890	BTS-10K	Integrator Network
R112	220KΩ	1	02032050	BTS-220K	Vert. Osc. Grid
R113	820KΩ	1	02031180	BTS-820K	Vert. Osc. Plate Load
R114	220KΩ	1	02035050	BTA-220K	Bleeder
R115	220KΩ	1	02035050	BTA-220K	Bleeder
R116	2700Ω 5%	1	02030580	BTS-2700-5%	Vert. Peaking-See Note 2
R117	1 Meg.	1	02032130	BTS-1 Meg.	Vert. Output Grid
R118	560Ω	1	02031740	BTS-560	Vert. Output Cathode-See Note 1
R119	6800Ω	2	02037870	BTB-6800	Vert. Output Decoupling
R120	6800Ω	2	02037870	BTB-6800	Vert. Output Decoupling
R121	220KΩ	1	02032050	BTS-220K	Vert. Output Transformer Shunt-See Note 3
R122	470KΩ	1	02032090	BTS-470K	Sync. Disc. Diode Load
R123	470KΩ	1	02032090	BTS-470K	Sync. Disc. Diode Load
R124	470KΩ	1	02032090	BTS-470K	Horiz. AFC Filter
R125	470Ω	1	02031730	BTS-470	Horiz. AFC Grid
R126	22Ω	1	02031570	BW-1/2-22	Horiz. AFC Cathode
R127	68KΩ	2	02037990	BTB-68K	Horiz. AFC Screen
R128	22KΩ	2	02037930	BTB-22K	Horiz. AFC Plate Load
R129	27KΩ	1	02034940	BTA-27K	Voltage Divider
R130	220KΩ	1	02032050	BTS-220K	Horiz. Osc. Grid
R131	47KΩ	1	02034970	BTA-47K	Horiz. Osc. Screen
R132	7500Ω	5	02112370	1 3/4A-7500	Hor. Osc. Plate Load-Wire Wound
R133	6800Ω	1	02030680	BTS-6800	Differentiator
R134	220KΩ	1	02032050	BTS-220K	Hor. Discharge Grid
R135	82KΩ	1	02035000	BTA-82K	Hor. Discharge Plate Load
R136	68KΩ	1	02034990	BTA-68K	Hor. Discharge Plate Load
R137	1000Ω	1	02031770	BTS-1000	Hor. Peaking
R138	120Ω	1	02031660		Parasitic Suppressor
R139	120Ω	1	02031660		Parasitic Suppressor
R140	470KΩ	1	02032090	BTS-470K	Hor. Output Grid
R141	80Ω	5	02112530		Hor. Output Cathode-Wire Wound
R142	5000Ω	10	02122550	1 3/4A-5000	Hor. Output Screen-Wire Wound
R143	68Ω	1	02031630		Parasitic Suppressor
R144	68Ω	1	02034630		Parasitic Suppressor
R145	68Ω	1	02031630		Parasitic Suppressor
R146	68Ω	1	02034630		Parasitic Suppressor
R147	1.5Ω	1	02100690		HV Rect. Filament
R148	1.5Ω	1	02100690		HV Rect. Filament
R149	470KΩ	2	02038090		HV Rect. Load
R150	470KΩ	2	02038090		HV Rect. Load
R151	470KΩ	2	02038090		HV Rect. Load
R152	470KΩ	2	02038090		HV Rect. Load
R153	3000Ω	10	02113030	1 3/4A-3000	Width Coil Shunt-Wire Wound
R154	270KΩ	1	02032060	BTS-270K	Bias Network
R155	33KΩ	1	02031950	BTS-33K	Bias Network
R156	220KΩ 5%	1	02031040	BTS-220K-5%	Bias Network
R157	10KΩ	1	02031890	BTS-10K	Bias Network
R158A	850Ω	1			Focus Coil Shunt-Wire Wound
B	1200Ω	1	02121400		Voltage Divider-Wire Wound
C	1975Ω	1	02121400		Voltage Divider-Wire Wound
R159A	90Ω	11	02121500		Bias Network-Wire Wound
B	56Ω	3			Bias Network-Wire Wound
R160	100KΩ	1	02035540	BTA-100K	Line Isolation
R161	100KΩ	1	02032010	BTS-100K	Tone Compensation-See Note 3

Note 1. Some models use 1000Ω resistor in this application. Mfr's Part No. 02031770.
 Note 2. Some models use 4300Ω resistor in this application. Mfr's Part No. 02030630.
 Note 3. Not used in all models.

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	DUMONT PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC Ⓢ 2.7A	740VCT Ⓢ .390ADC	5VAC Ⓢ 6A	12.6VCT Ⓢ 5.7A	20004961			

TRANSFORMER (FILAMENT)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	DUMONT PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T2	117VAC Ⓢ .2A	6.3VAC Ⓢ 2.4A			20004811			

DUMONT
MODEL RA-109A

TV PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	DC RESISTANCE		DUMONT PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.					
T3	170Ω	950Ω	20004722 20004941	A-8122	A-4000 ①	TBO-2	Vert. Block Osc. Trans. Hor. Output Trans.
T4	200Ω	22Ω					
	Tap @ 20Ω	Tap @ 4.5Ω					
		SEC. 2 0Ω					
		SEC. 3 0Ω					
T5	590Ω	7Ω	20004732	A-8112 ①	A-3035 ①	TSO-5 ①	Vert. Output Trans. Hor. Deflection Coil Vert. Deflection Coil Focus Coil
T6A	14Ω		21005541	DY-7	MD-70F		
B	65Ω						
T7	1300Ω		21005451				
	Tap @ 770Ω						

① Drill one new mounting hole.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		DUMONT PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T8	6500Ω	4.2Ω	400Ω	.5Ω	Part of SP1	A-3824	A-3020 ①	RO-201 ①	① Drill one new mounting hole.

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	DUMONT PART No.	JENSEN PART No.	QUAM PART No.	
SP1	PM	4.2Ω	18002791		10A4A ②	② Remount output transformer.
SP2	9 1/2"	1"				

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 μ)	DUMONT PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.390ADC	46Ω	2.5 Henries	21005212				

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	DUMONT PART No.	MEISSNER PART No.	
L2	Ant. Trans.	0Ω	0Ω	20004592		
L3	Bandpass					
L4	Coupling	0Ω		21004671		
L5	Ant. Coil	0Ω				Part of tuner, #89003002.
L6	Ant. End					
L7	Inductor	0Ω		21005721		
L8	Ant. Coil	0Ω		21005741		
L9	RF End					
L10	Inductor	0Ω		21005722		Part of tuner #89003002.
L11	RF Coil	0Ω				
L12	Band Pass	0Ω		21005731		
L13	Mixer Grid					
L14	End Inductor	0Ω		21005722		
L15	Mixer Grid	0Ω				Part of tuner #89003002.
L16	Band Pass	0Ω		21005521		Not used in all models.
L17	Osc. End					
L18	Inductor	0Ω		21005111		
L19	Osc. Coil	0Ω				Part of tuner #89003002.
L20	Osc. Shunt	0Ω		21005131		
L21	RF Choke	0Ω		21005421		
L22	Fil. Choke	0Ω		21005421		
L23	Fil. Choke	0Ω		21005421		
L24	Conv. Trans.	47K	.1Ω	20004951		
L25	1st Video IF	.1Ω	.5Ω	20004701		
L26	2nd Video IF	.7Ω	.7Ω	20004711		
L27	3rd Video IF	.7Ω	.7Ω	20004741		
L28	4th Video IF	.4Ω	.4Ω	20004751		
L29	5th Video IF	.7Ω	.5Ω	20004761		
L30	Peaking	1.6Ω		21004465		Orange dot
L31	Peaking	6Ω		21004463		White dot
L32	Peaking	5.5Ω		21004653		Red-Gray dots
L33	4.5MC Trap	2.5Ω		21004831		
L34	Peaking	4Ω		21004654		Red-Black dots
L35	1st Sound IF	.2Ω	.2Ω	20004511		
L36	2nd Sound IF	.2Ω	.2Ω	20004511		
L37	3rd Sound IF	.2Ω	.2Ω	20004511		
L38	Disc. Trans.	.2Ω	.3Ω	20004441		
L39	Sync. Det.	.1Ω	.1Ω	20004671		
L40	Trans. Disc.	.1Ω	.1Ω	20003923		
	Trans.	64Ω	68Ω	21005491		Tap at 3.2Ω
L36	Horiz. Lin.	7.5Ω		21005491		
L37	Horiz. Size	17Ω		21004341		
L38	Fil. Choke	0Ω		21005601		
L39	Fil. Choke	0Ω		21005601		Not used in all models.
L40	Sound Trap	.2Ω		21004801		Red-White dots

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					DUMONT PART No.	CHICAGO PART No.	
M1	Bayonet	6-8	.15	Brown	12001310		Type #47
M2	Bayonet	6-8	.15	Brown	12001310		Type #47

TV PARTS LIST AND DESCRIPTIONS (Continued)

MISCELLANEOUS

ITEM No.	PART NAME	DUMONT PART No.	NOTES
M3	RF Tuner	89003002	
M4	Fuse	11000810	5A 250V Type MTH
M5	Fuse	11001100	.25A 250V Type 3AG
M6	Switch	05003891	Function
M7	Ion Trap	21004473	
	Safety Glass	45001461	
	Dial Plate	45001381	Winslow, Hanover, Mahogany
	Dial Plate	45001382	Winslow, Hanover, Blonde
	Dial Plate	45001701	Sherbrooke, Mahogany
	Dial Plate	45001702	Sherbrooke, Blonde
	Dial	45001941	Sherbrooke AM
	Knob	45001371	Dial Venier, Mahogany
	Knob	45001372	Dial Venier, Blonde
	Knob	45001551	Tuning, Mahogany
	Knob	45001552	Tuning, Blonde
	Knob	45001931	Tone, Mahogany
	Knob	45001932	Tone, Blonde
	Knob	45002241	Sherbrooke, Mahogany, AM Tuning
	Knob	45002242	Sherbrooke, Blonde, AM Tuning
	Knob	45001872	Control, Sherbrooke, Mahogany
	Knob	45001875	Control, Sherbrooke, Blonde
	Knob	45001877	Control, Winslow, Hanover Mahogany
	Knob	45001878	Control, Winslow, Hanover Blonde

RADIO PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA			RMA BASE TYPE	NOTES
		DUMONT PART No.	STANDARD REPLACEMENT			
V36	RF Amp.	25000240	6BA6	7BK		
V37	Converter	25000250	6BE6	7CH		
V38	IF Amp.	25000240	6BA6	7BK		
V39	DET. -AVC-AF	25000020	6AL5	6BT		

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	DUMONT PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C136	.002	600	03014670	P688-002	D6-202	PTE6D2	GP2M-002	TM-22	Ant. Coupling
C137	330		03014390	SI330	D6-331	5W5T3	GP2K-330	1FM-335	RF Coupling
C138	100		03014380	SI100	D6-101	5W5T1	GPIK-100	1FM-31	Fixed Trimmer
C139	.05	200	03000950	P288-05	DF-503	PTE4S5		TM-15-2	AVC Filter
C140	5000		03015610	BPD-005	DD-502	1D5D5	811-005	29C1	Decoupling
C141	47		03012730	SI47	D6-470	5W5Q5	GPIK-47	1FM-45	Osc. Grid Cap.
C142A	4000		03017790	BPD-2 x 004	DD-2-502	1D5D4		882-2 x 004	Decoupling
B	4000					1D5D4		36C2	IF Plate Decoup.
C143	330		03014390	SI330	D6-331	5W5T3	GP2K-330	1FM-335	Diode RF Filter

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA			IDENTIFICATION CODES
	RESISTANCE	WATTS	DUMONT PART No.	IRC PART No.		
R162	470KΩ		02032580	BTS-470K	RF Grid	
R163	10 Meg.		02032660	BTS-10 Meg.	Conv. Grid	
R164	22KΩ		02032500	BTS-22K	Osc. Grid	
R165	1000Ω		02032420	BTS-1000	Decoupling	
R166	4300Ω		02036630		Screen Dropping	
R167	1500Ω		02032430	BTS-1500	IF Plate Decoupling	
R168	1 Meg.		02032600	BTS-1 Meg.	AVC Network	
R169	220KΩ		02032560	BTS-220K	Diode Filter	
R170	220KΩ		02032560	BTS-220K	Diode Load	

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	DUMONT	MEISSNER	
				PART No.	PART No.	
L41	Loop Ant.	.2Ω				
L42	Ant. Coil	9.5Ω		21004321		
L43	RF Coil	40Ω	11Ω	21004331		
L44	Osc. Coil	6.2Ω		21004311		Tap at .6Ω
L45	1st IF	16Ω	16Ω	20004044		
L46	2nd IF	16Ω	16Ω	20004044		

PHONO CARTRIDGE and NEEDLE

ITEM No.	REPLACEMENT DATA				REMARKS	
	DUMONT PART No.	ASTATIC PART No.		SHURE PART No.		
		CARTRIDGE	NEEDLE	CARTRIDGE		NEEDLE
M8	ACD-2J	A-1	A-3			

ASTATIC AND SHURE NEEDLE LISTINGS SHOWN ABOVE ARE SPECIFIED FOR THE RESPECTIVE REPLACEMENT CARTRIDGES LISTED.

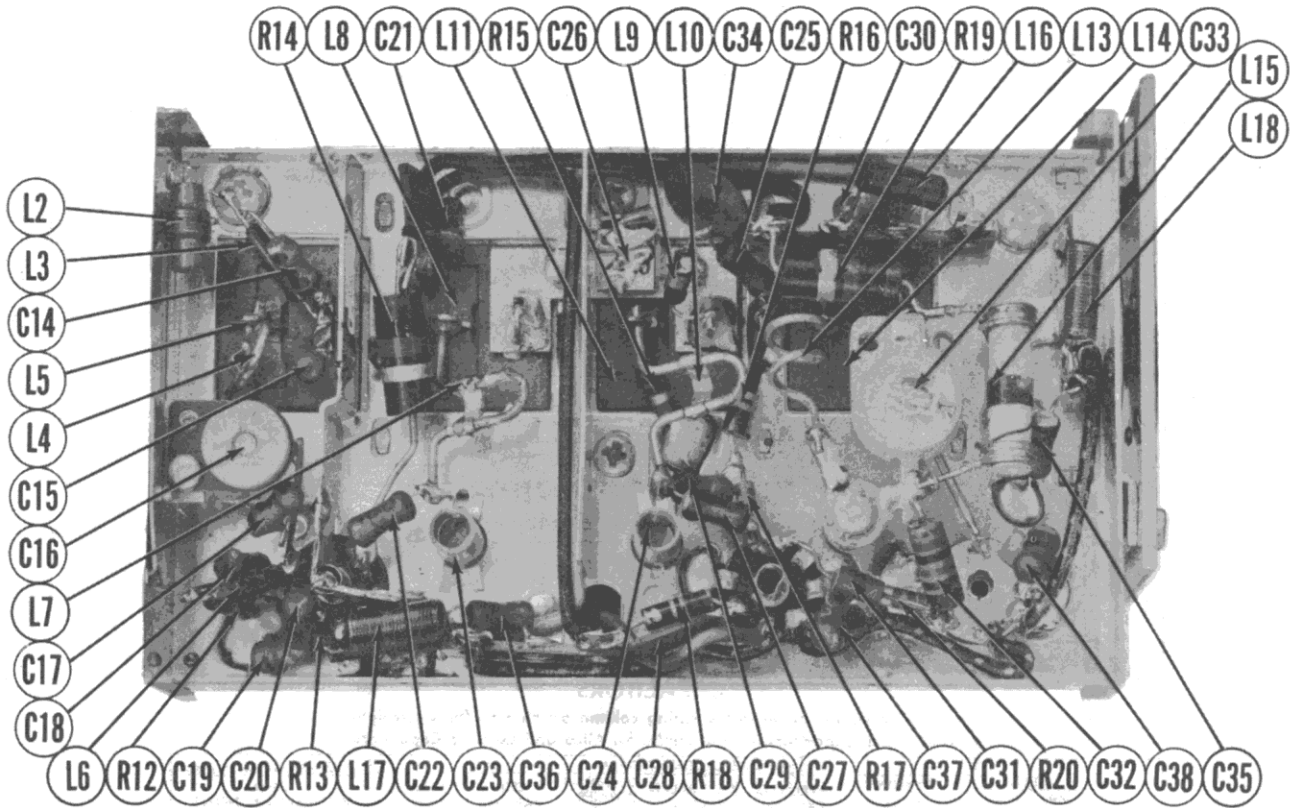
DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					DUMONT PART No.		
M9	Bayonet	6-8	.2	White	12001370		Type #51
M10	Bayonet	6-8	.2	White	12001370		Type #51

MISCELLANEOUS

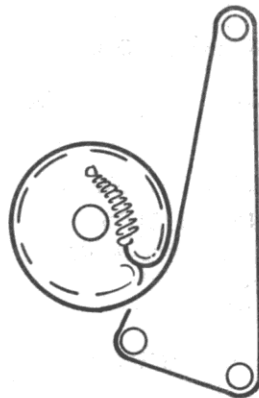
ITEM No.	PART NAME	DUMONT PART No.	NOTES
M11A	Tuning Cap.	03016112	AM Tuning (17-392MMF, 23-399MMF, 31-217MMF)
B	Tuning Cap.	03016123	AM Tuning

DUMONT
MODEL RA-109A

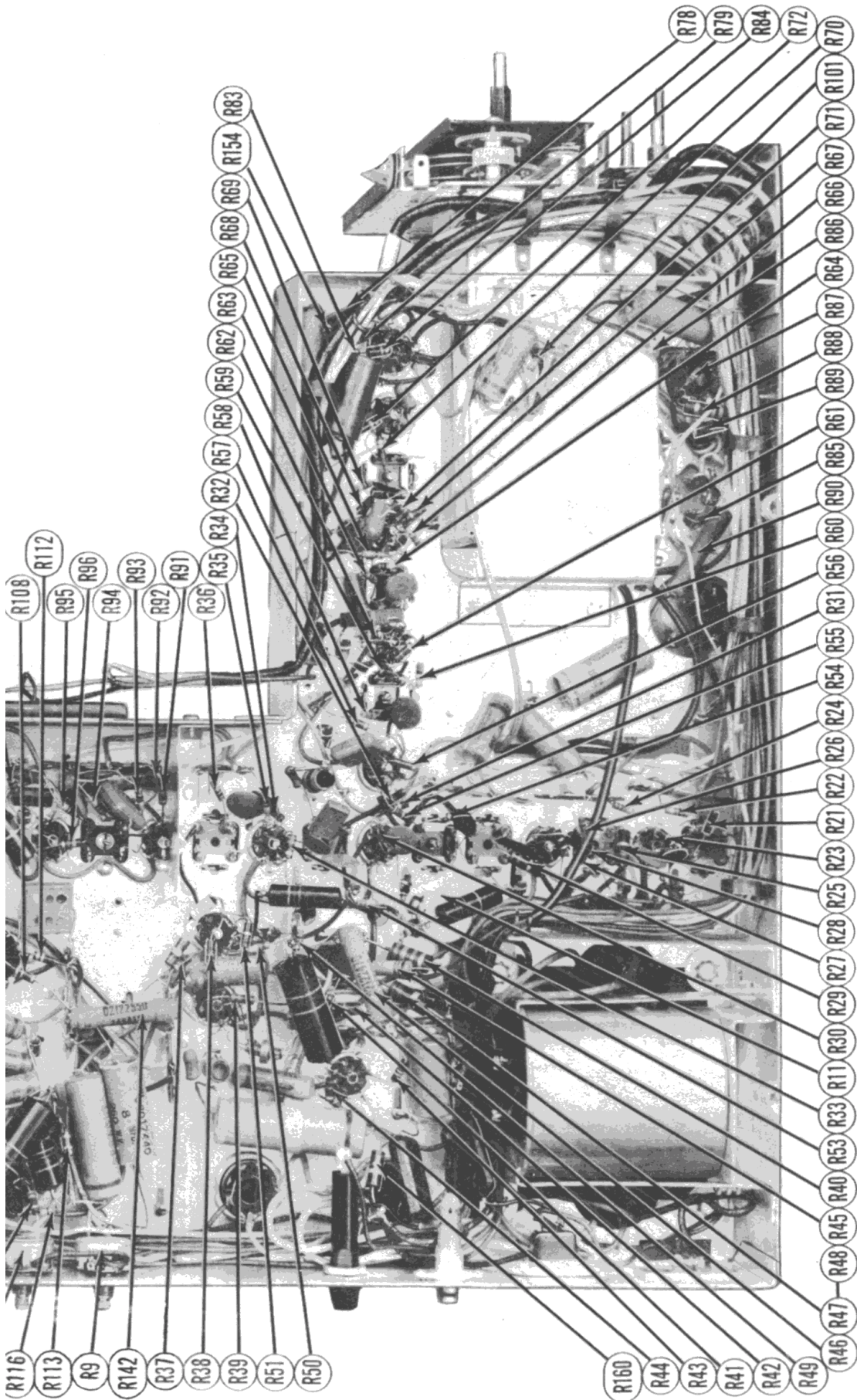


TV RF TUNER-BOTTOM VIEW
DISASSEMBLY INSTRUCTIONS

1. Remove nine push-on type control knobs.
2. Remove six wood screws from rear cover.
3. Remove rear cover from hinge.
4. Disconnect built-in antenna.
5. Remove antenna terminal strip.
6. Disconnect yoke leads.
7. Disconnect speaker leads.
8. Disconnect input power cable from phono to TV chassis.
9. Disconnect phono input to radio.
10. Remove five 7/16" hex head screws from bottom of FM and TV chassis.
11. Remove two 1/4" hex head screws from rear of AM radio chassis.
12. Remove phillips head screws from control panel of AM chassis. Remove chassis.

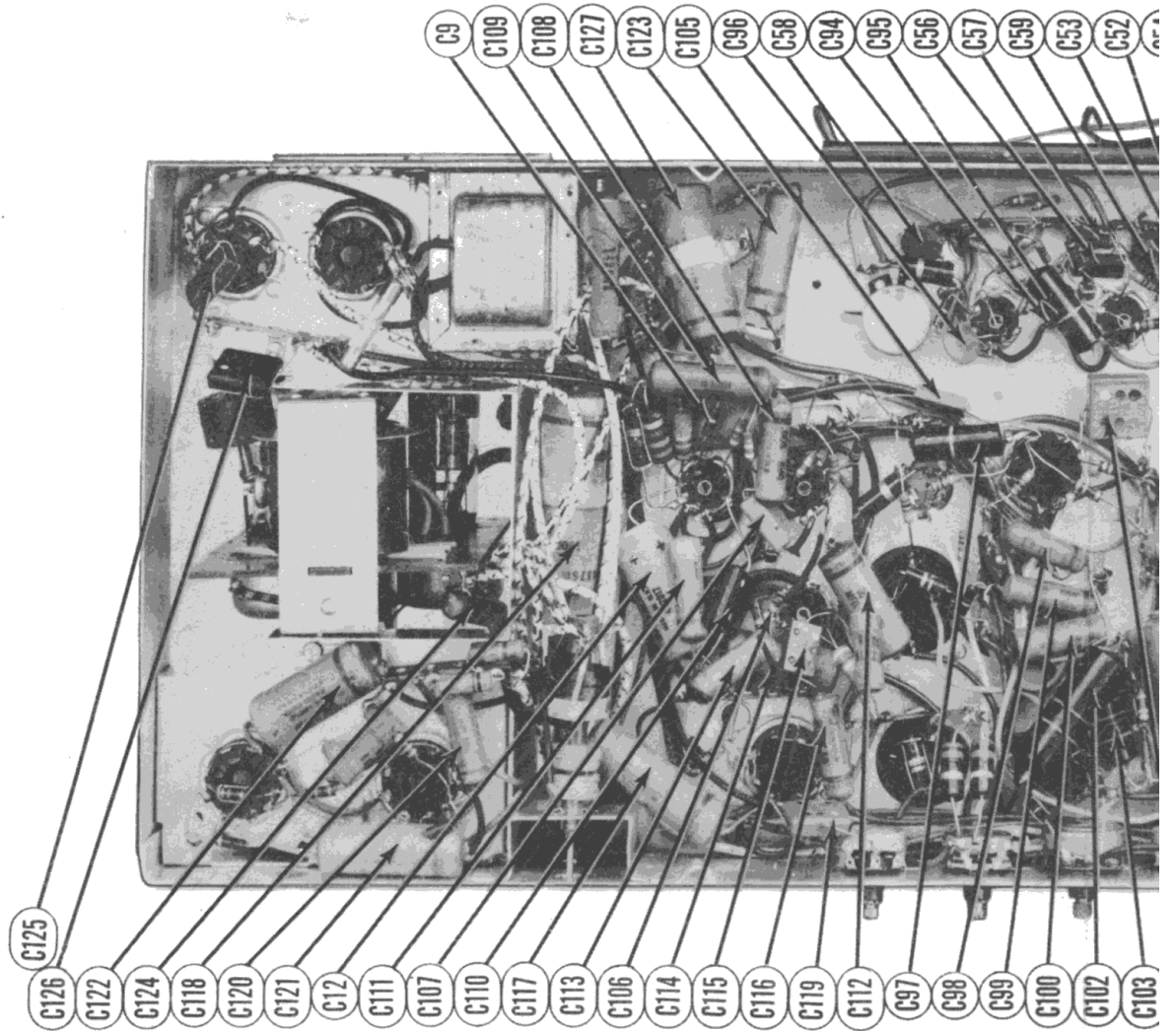


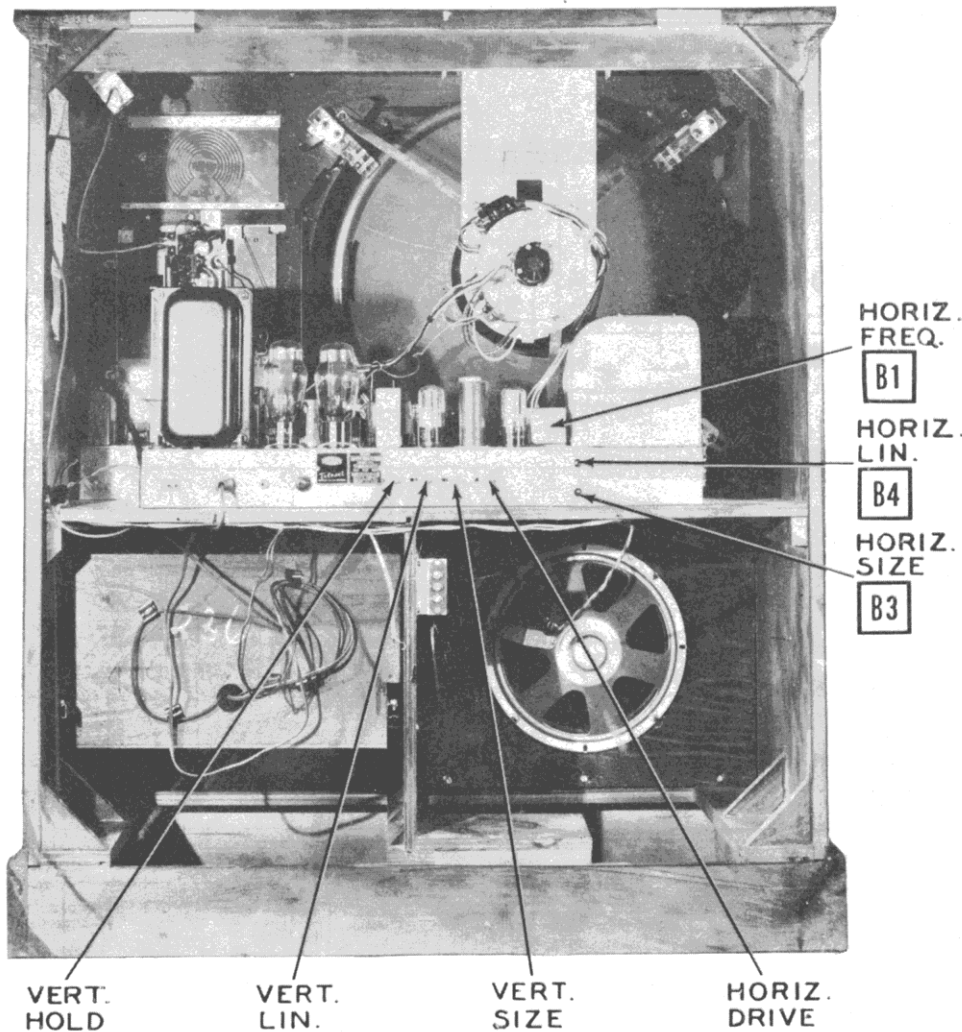
AM DIAL CORD STRINGING



CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

DUMONT
MODEL RA-109A





CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

HORIZONTAL OSCILLATOR ADJUSTMENT

Turn the set on and tune in a TV station preferably a test pattern.

Adjust the horizontal frequency slug (B1) to the mid-position between the two points where the picture falls into synchronization, not out of synchronization. Reduce the horizontal size until both edges of the picture are visible.

Turn up the brightness, and reduce the contrast until the normally blanked borders of the raster is visible. If the blanked borders on both sides of the raster is not equal in width, the horizontal phasing slug (B2) is not properly adjusted. B2 should be adjusted until the normally blanked border is equal in width on both side.

HORIZONTAL LINEARITY ADJUSTMENTS

Turn the horizontal drive control clockwise as far as possible without crowding the right side of the picture.

Adjust the horizontal size slug (B3) until the picture fills the mask horizontally.

Adjust the horizontal linearity slug (B4) until the picture is symmetrical from left to right. A slight readjustment of the horizontal drive control may be necessary for optimum results.

AGC ADJUSTMENT

Remove the AGC detector tube (V10) from its socket. Connect a VTVM to pin 2 of V10 and adjust the AGC control until the VTVM reads 16 volts with no signal.