

ANDREA
MODELS BT-VK12, CVK-126, COVK-125,
T-VK12, TVK-127B,M

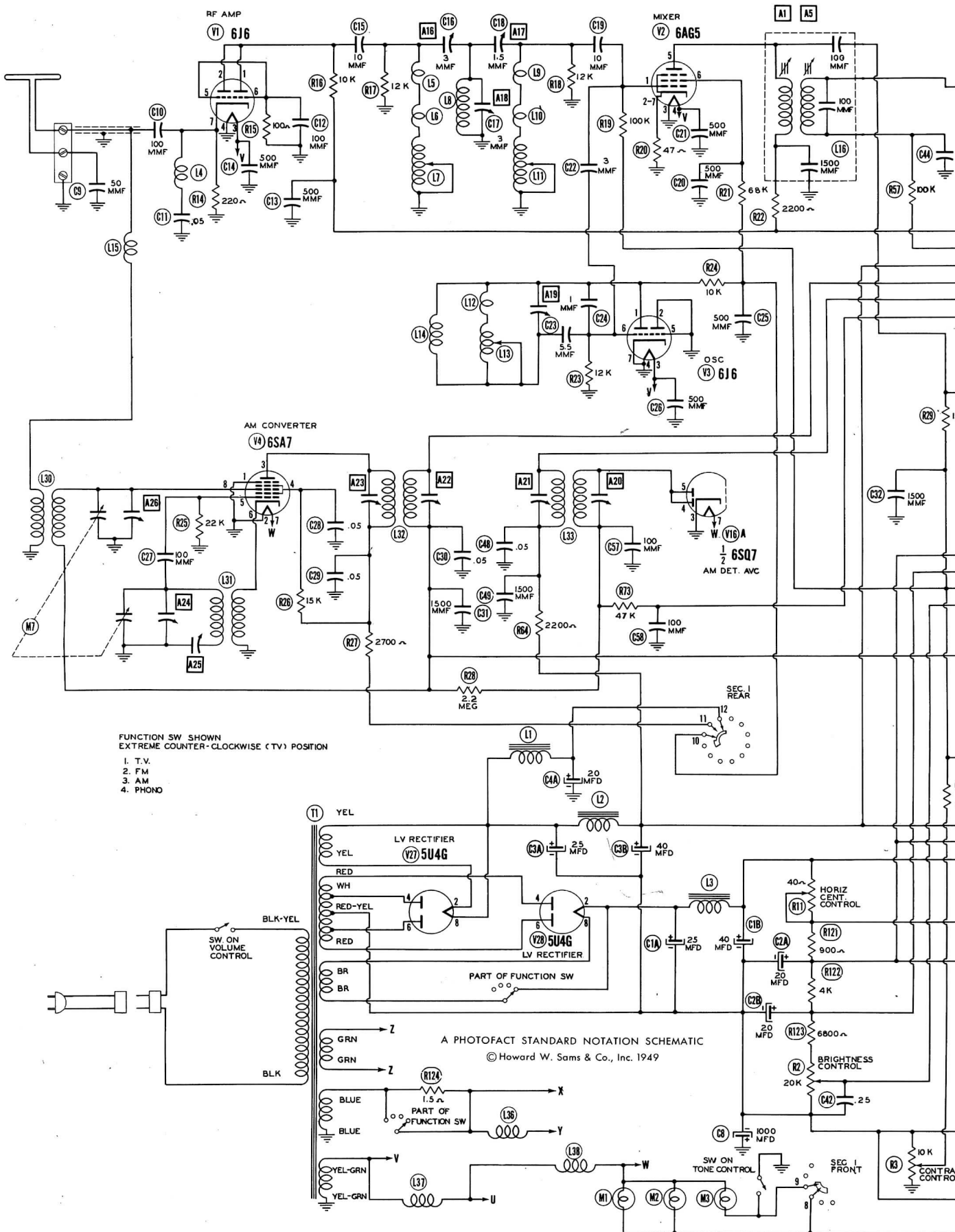
TRADE NAME	Andrea Models BT-VK12 (Sharron), COVK-125 (Ridgeway), CVK-126 (Gramercy), T-VK12 & TVK-127M (Sharron).	
MANUFACTURER	Andrea Radio Corp., 27-01 Bridge Plaza North, Long Island City, New York	
TYPE SET	AM-FM-TV Receiver	
TUBES	Twenty Nine	
POWER SUPPLY	110-120 Volts AC-60 Cycle	
TUNING RANGE	AM 540-1620KC FM-TV 44 thru 216MC (Continuous Tuning)	RATING: 2.4 Amp. @ 117 Volts AC

INDEX	
Alignment Instructions	6,7 Photographs (continued)
Block Diagram	13 Capacitor Identification 11,18
Dial Cord Stringing	20 Chassis-Top View 3,10
Disassembly Instructions	20 Resistor Identification 12,17
Horizontal Oscillator and Linearity Adj.	19 Trans., Inductor and Alignment Identification 4,9
Parts List and Description	14,15,16 Schematic 2
Photographs	Cabinet-Rear View 19 Tube Placement Chart 5
	19 Voltage and Resistance Measurements 8

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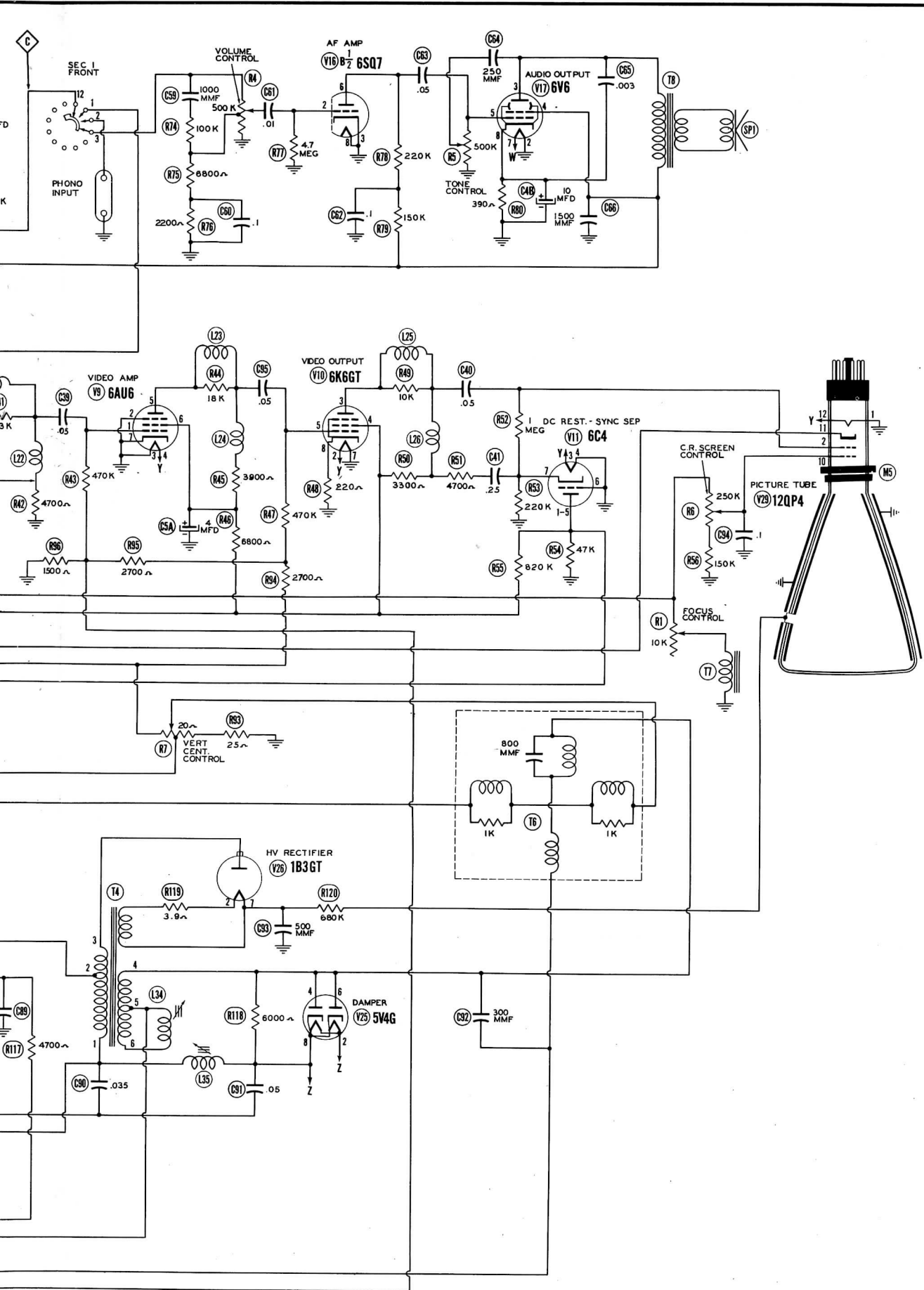
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 DATE 11/49 SET #76 FOLDER #5



FUNCTION SW SHOWN
EXTREME COUNTER-CLOCKWISE (TV) POSITION

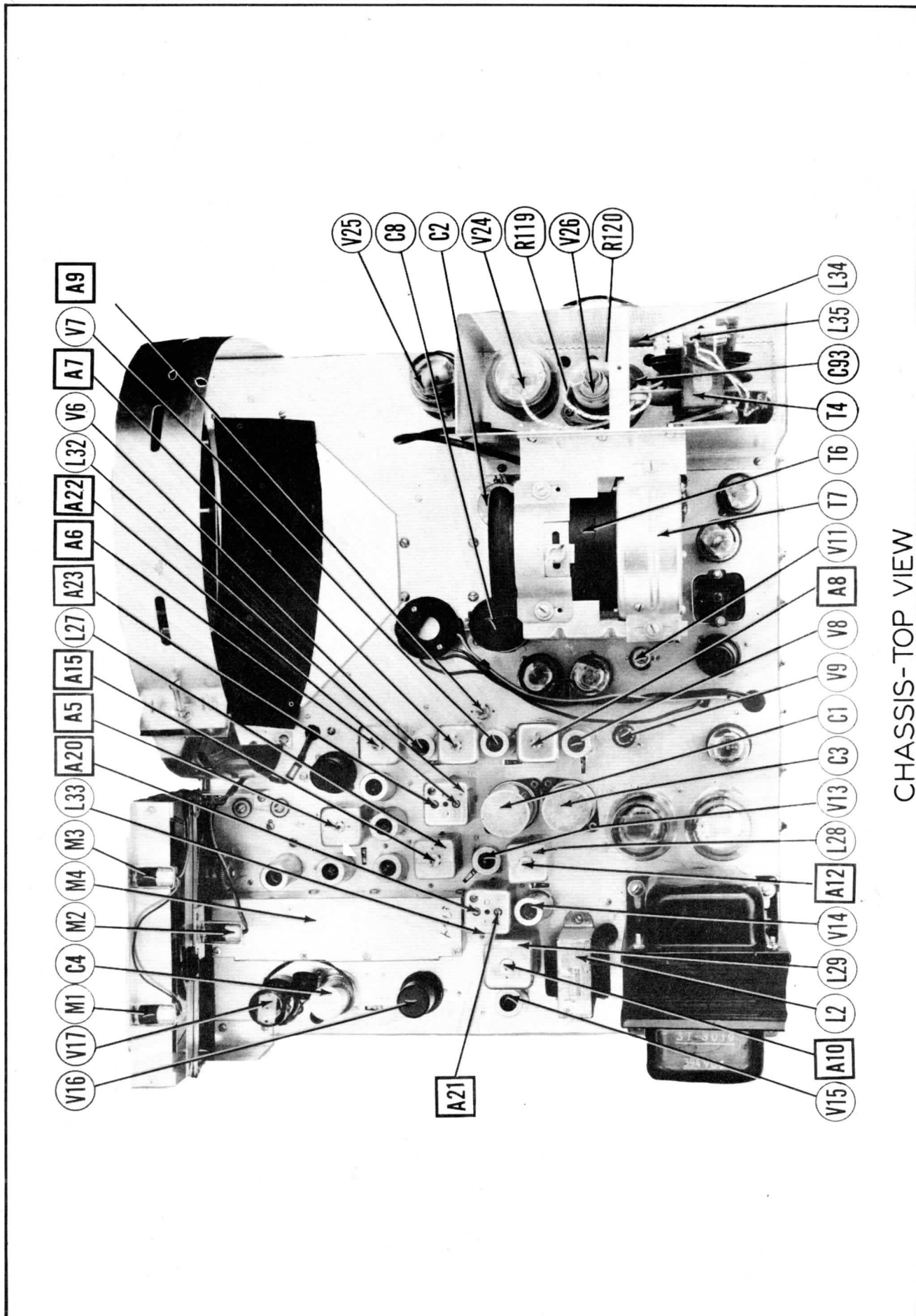
1. T.V.
2. F.M.
3. AM.
4. PHONO

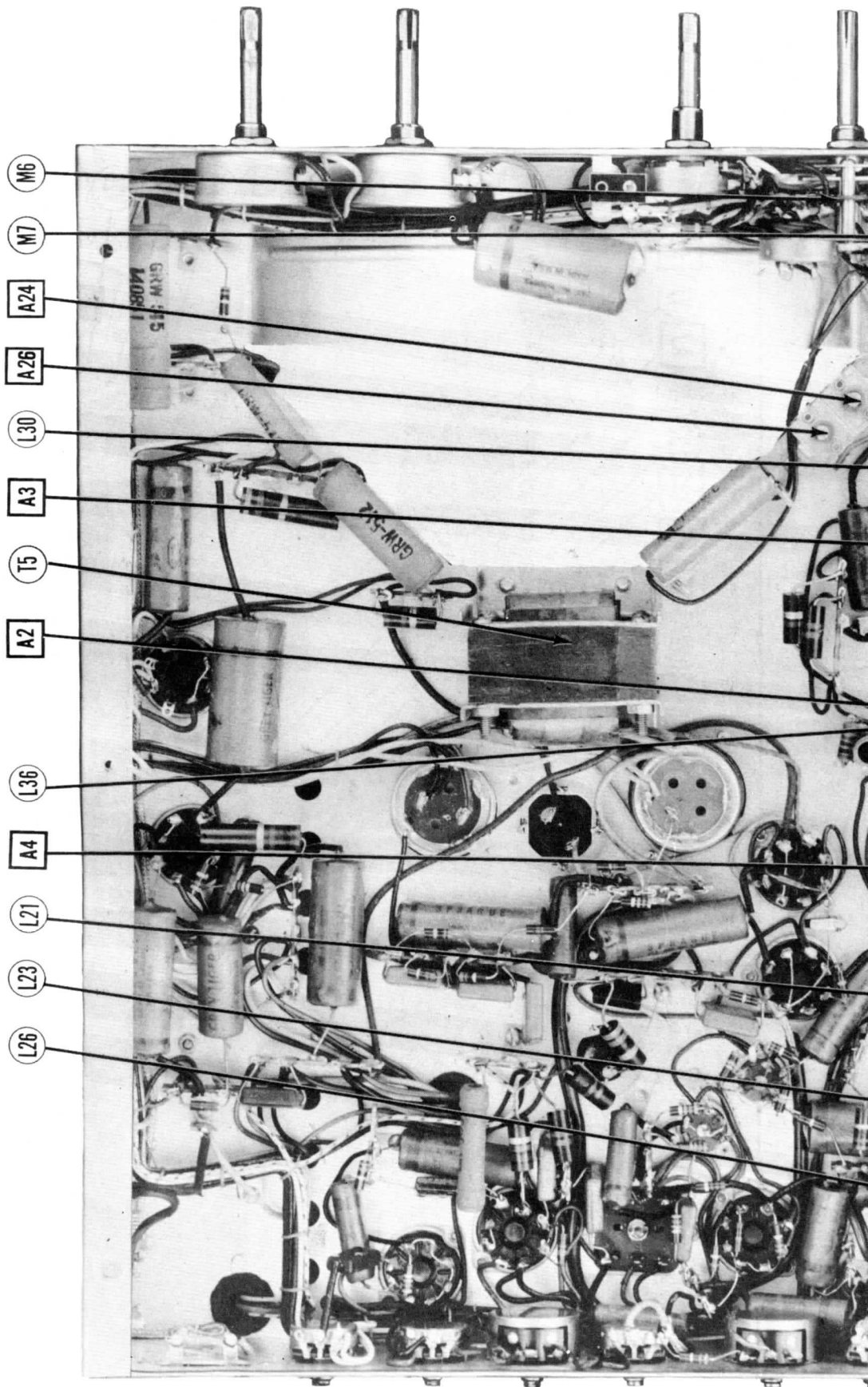
A PHOTOFACT STANDARD NOTATION SCHEMATIC
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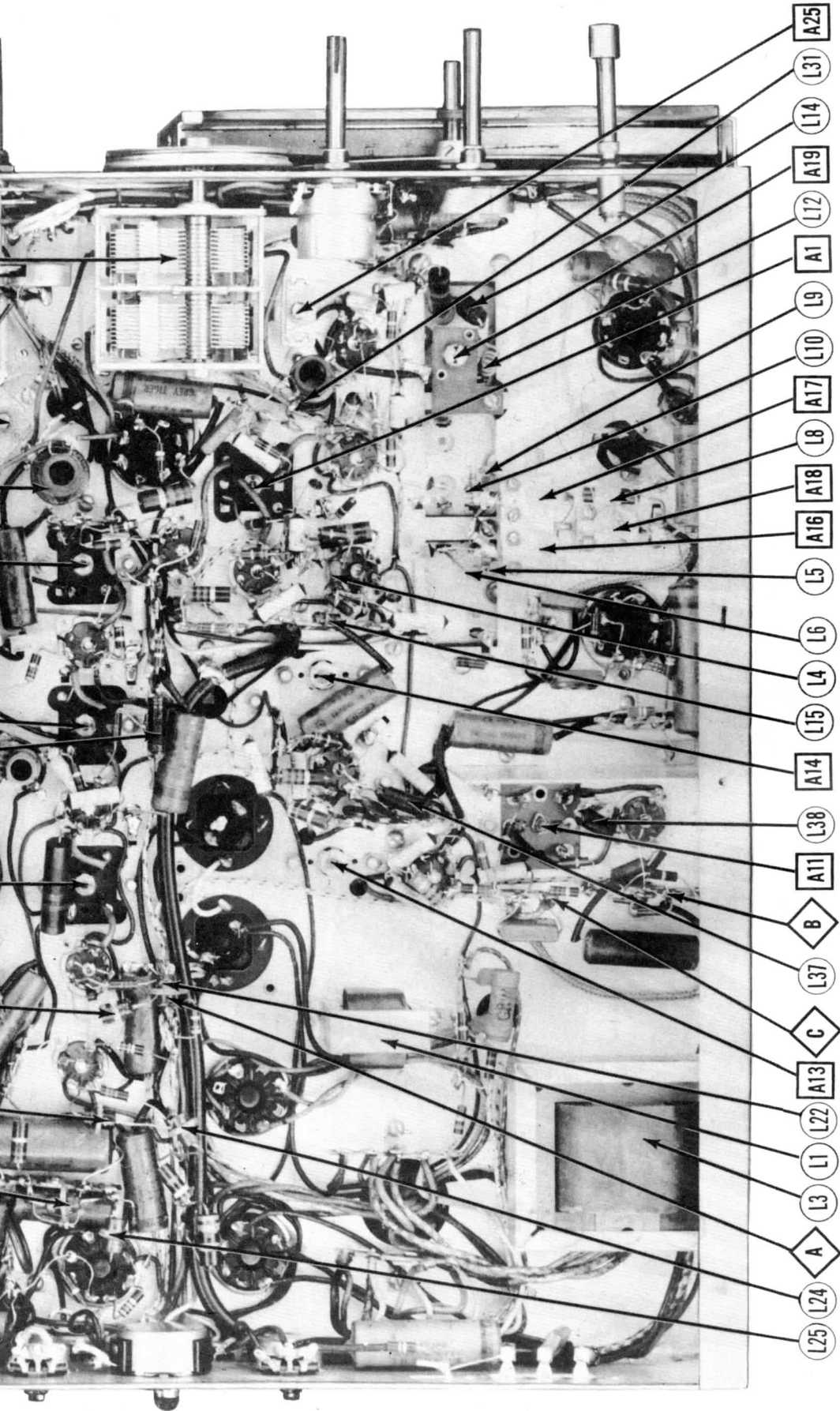


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 CVK-126, COVK-125, T-VK12, TVK-127B,M

MEIN TOP-SISSAHD



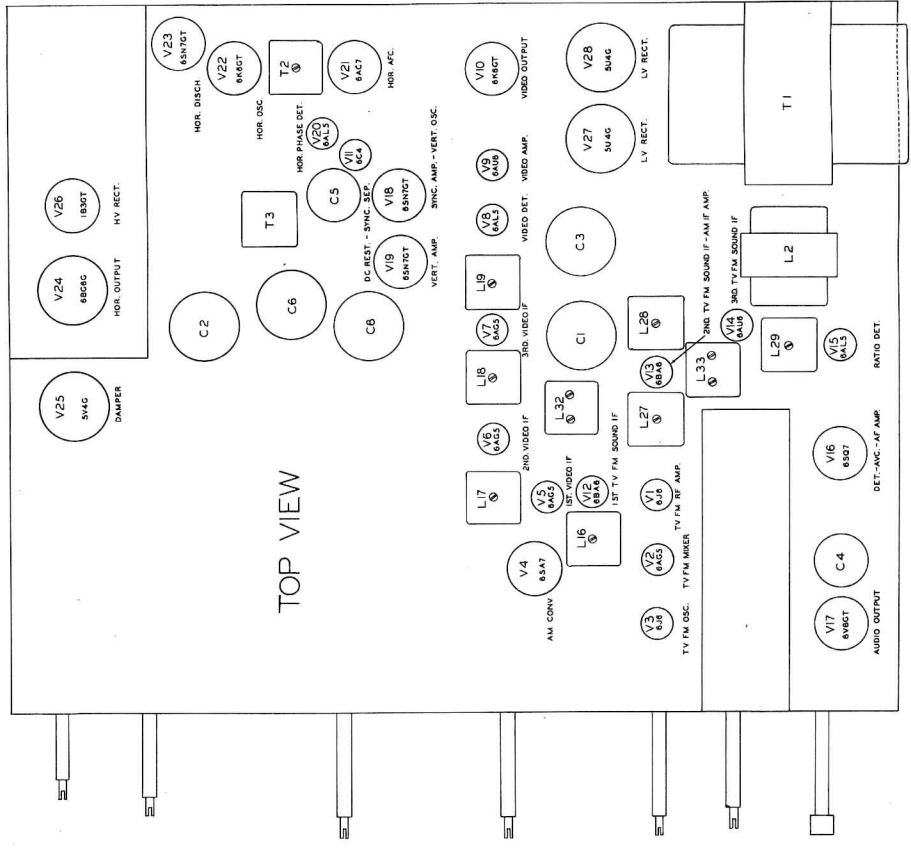
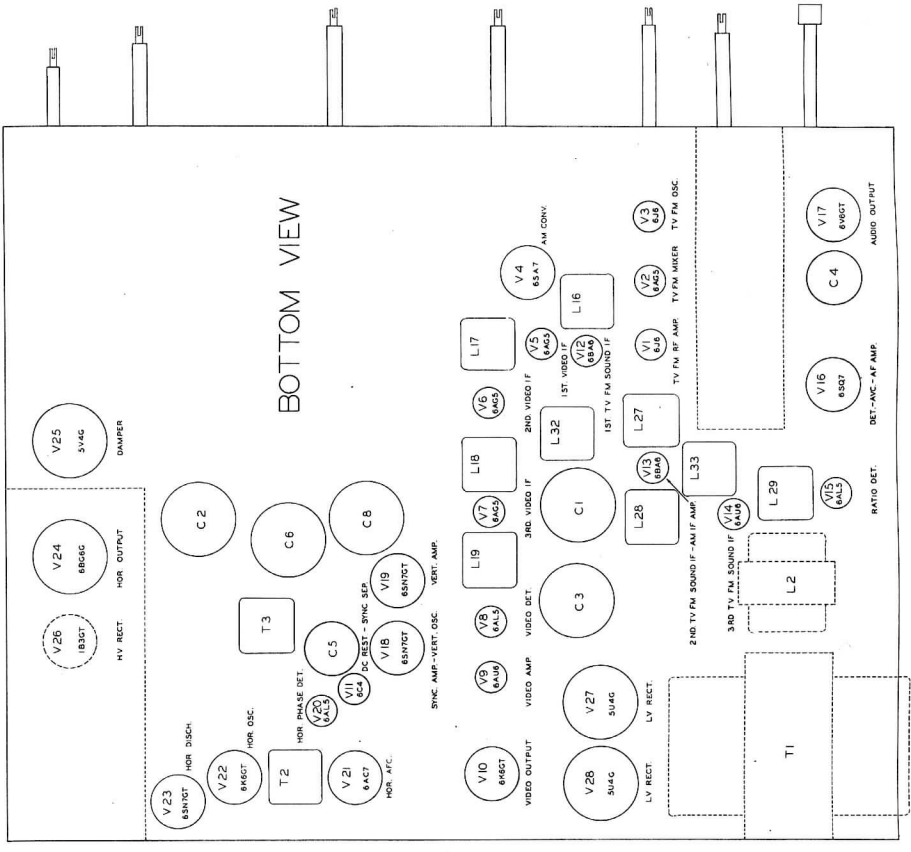




CHASSIS BOTTOM-VIEW-TRANS., INDUCTOR AND ALIGNMENT IDENTIFICATION

ANDREA MODELS DI VK12 / CVK-125 /
 COVK-125, T-VK12, TVK-127B,M

TUBE PLACEMENT CHART



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

It is recommended that the picture tube be removed before alignment.
To remove high voltage shock hazard, remove the wave shaper tube V23.

VIDEO IF ALIGNMENT

- a) Remove the local oscillator tube, V3, to prevent erroneous indications.
- b) Turn the selector switch to "Television". This is the extreme counter-counterwise position.
- c) Set the contrast control to read -4.5 volts between the junction of R97 and C43, and chassis.
- d) The video IF circuits are aligned by adjusting the overall response simultaneously. The low frequency skirt is effected principally by A1 and the high frequency skirt by A2. The flatness of the center region is effected by A3 and A4.
- e) When adjusting the traps A5, A6, A7 A8 and A9, the marker generator output should be set at maximum, and the traps adjusted for minimum indication at the points shown on the response curve (Figure 1).

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Direct	High side to ungrounded tube shield floating over mixer tube V2. Low side to chassis.	24.5MC (10MC Sweep)	22.95MC 26.2MC	Any	Vert. Amp. to Point \diamond Low side to chassis.	A1,A2, A3,A4	Adjust for proper response as per Fig 1 with markers as shown. See note "d" above.
2. Direct	"	"	21.7MC	"	"	A5,A6	Adjust for MINIMUM response at the 21.7MC point shown on response curve (Fig 1). See note "e" above.
3. Direct	"	"	27.7MC	"	"	A7,A8	Adjust for minimum response at the 27.7MC point shown in Fig 1. See note "e" above.
4. Direct	"	"	21.7MC	"	"	A9	Adjust for maximum amplitude of peak just below 21.7MC point on response curve. If necessary retouch A1 thru A9 for optimum response as per Fig 1.

SOUND IF ALIGNMENT

Use frequency modulated signal with 60V modulation and 450KC sweep. Use 120V sawtooth voltage in scope for horizontal deflection.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
5. .01MFD	High side to pin 1 (Grid) of 6AU6 (V14). Low side to chassis.	21.7MC (450KC Sweep)	21.7MC	Any	Vert. Amp. to Point \diamond Low side to chassis.	A10,A11	Disconnect stabilizer capacitor C7. Detune A10 clockwise. Adjust A11 for maximum amplitude and symmetry as per Fig 2.
6. .01MFD	High side to pin 1 (Grid) of 6BA6 (V13). Low side to chassis.	"	"	"	"	A12,A13	Adjust for maximum amplitude and symmetry as per Fig 2.
7. .01MFD	High side to pin 1 (Grid) of 6BA6 (V12). Low side to chassis.	"	"	"	"	A14,A15	"
8. .01MFD	"	"	"	"	Vert. Amp. to Point \diamond Low side to chassis.	A10,A11	Reconnect capacitor C7. Adjust A10 so 21.7MC marker occurs at center of crossover lines as per Fig 3. SLIGHTLY retouch A11 for maximum amplitude and straightness of crossover lines.

RF AND MIXER ALIGNMENT

The RF and mixer lines of this receiver are pre-set at the factory and are normally very stable. Alignment should not be attempted unless they are definitely known to be out of alignment.
A sweep generator with a maximum output of at least .5 volt is necessary to properly align the RF and mixer portion of the receiver.

Remove the local oscillator tube V3.

Unsolder the blue lead from pin 5 of the mixer tube V2. Connect pins 5 and 6 of V2 together with a short piece of wire. Connect the vertical amplifier of the oscilloscope to pin 6 of the mixer tube. Connect the low side to chassis.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
9. Direct	High side to the left hand "A" terminal on antenna terminal strip. Low side to chassis.	57MC (10MC Sweep)	55.25MC 59.75MC	2	See note above	A16,A17, A18	Adjust for response similar to Fig 4 with markers as shown.
10. Direct	"	213MC (10MC Sweep)	211.25MC 215.75MC	13	"	L5,L9	SLIGHTLY expand or compress L5 & L9 for response similar to Fig 6. Repeat steps 9 and 10.
11. Direct	"	63MC (10MC Sweep)	61.25MC 65.75MC	3	"		Check for response similar to Fig 4.
		69MC (10MC Sweep)	67.25MC 71.75MC	4			
		79MC (10MC Sweep)	77.25MC 81.75MC	5			
		85MC (10MC Sweep)	83.25MC 87.75MC	6			
12. Direct	"	177MC (10MC Sweep)	175.25MC 179.75MC	7	"		Check for response similar to Figs 5 and 6.
		183MC (10MC Sweep)	181.25MC 185.75MC	8			
		189MC (10MC Sweep)	187.25MC 191.75MC	9			
		195MC (10MC Sweep)	193.25MC 197.75MC	10			
		201MC (10MC Sweep)	199.25MC 203.75MC	11			
		207MC (10MC Sweep)	205.25MC 209.75MC	12			

ALIGNMENT INSTRUCTIONS (CONT.)

OSCILLATOR ALIGNMENT

Replace the local oscillator tube V3.
Remove the connection between pins 5 and 6 of V2.
Reconnect the blue lead to pin 5 of mixer tube.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
13. Direct	High side to left hand "A" terminal on antenna terminal strip. Low side to chassis.	59.75MC (Unmod.)	2	DC Probe to Point Common to chassis.	A19	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
14. Direct	"	215.75MC (Unmod.)	13	"	L12	SLIGHTLY expand or compress coil turns for zero reading as in step 13. Repeat steps 13 and 14.
15. Direct	"	209.75MC	12	"		Check all other channels to see that zero reading occurs at the proper dial setting as the sound carrier frequency for each channel is fed into the receiver. If necessary, repeat steps 13 and 14 for optimum results on all channels.
		203.75MC	11			
		197.75MC	10			
		191.75MC	9			
		185.75MC	8			
		179.75MC	7			
		87.75MC	6			
		81.75MC	5			
		71.75MC	4			
		69.75MC	3			

RADIO ALIGNMENT

To set pointer turn tuning cap. fully closed and set pointer to last reference mark at low frequency end of dial.
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output 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
16 .01MFD	High side to stator of front section of tuning gang. Low side to chassis.	455KC (400V Mod.)	AM (Third pos. clock-wise)	Tuning gang fully closed	Across voice coil	A20, A21, A22, A23	Adjust for maximum output.
17 .01MFD	"	1600KC (400V Mod.)	"	1600KC	"	A24	"
18 .01MFD	"	600KC (400V Mod.)	"	600KC	"	A25	Adjust for maximum output. Repeat steps 17 and 18 until no further improvement can be made.
19 200MMFD	High side to left hand "A" terminal on antenna terminal strip. Low side to chassis.	1600KC (400V Mod.)	"	1600KC	"	A26	Adjust for maximum output.

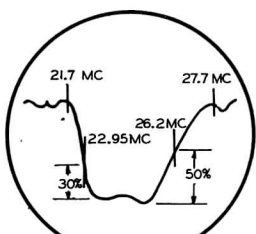


FIG. 1

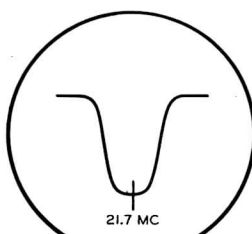


FIG. 2

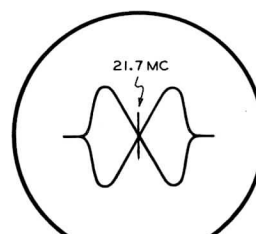


FIG. 3

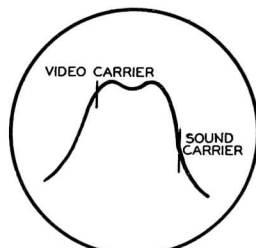


FIG. 4

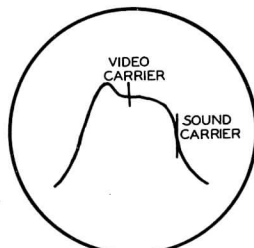


FIG. 5

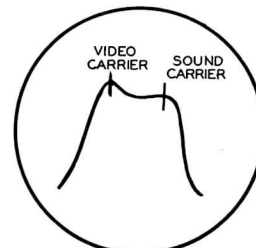


FIG. 6

**ANDREA MODELS BT-VK12,
CVK-126, COVK-125, T-VK12, TVK-127B,M**

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6A16	130VDC	130VDC	6.3VAC	OV	OV	OV	2.6VDC		
V 2	6AG5	-2.3VDC	2VDC	OV	6.3VAC	235VDC	145VDC	.2VDC		
V 3	6A16	145VDC	OV	6.3VAC	OV	OV	OV	OV		
V 4	6SA7	OV	OV	250VDC	115VDC	OV	OV	6.3VAC	.1VDC	
V 5	6AG5	-1.2VDC	2VDC	OV	6.3VAC	182VDC	145VDC	.2VDC		
V 6	6AG5	-1.2VDC	5VDC	OV	6.3VAC	75VDC	180VDC	.5VDC		
V 7	6AG5	OV	1.2VDC	OV	6.3VAC	200VDC	150VDC	1.2VDC		
V 8	6A15	OV	-2.2VDC	OV	6.3VAC	OV	OV	OV		
V 9	6AU6	-4VDC	OV	OV	6.3VAC	147VDC	130VDC	OV		
V 10	6K6GT	OV	6.3VAC	90VDC	150VDC	-1.8VDC	-6.9VDC	OV		
V 11	6C4	7VDC	150VDC	6.3VAC	OV	7VDC	OV	1.5VDC		
V 12	6BA6	-6.9VDC	OV	OV	6.3VAC	215VDC	100VDC	1VDC		
V 13	6BA6	OV	OV	OV	6.3VAC	225VDC	110VDC	1VDC		
V 14	6AU6	OV	OV	OV	6.3VAC	235VDC	155VDC	1.3VDC		
V 15	6A15	.1VDC	-1VDC	OV	6.3VAC	OV	OV	.1VDC		
V 16	6B27	OV	-2.2VDC	OV	-4VDC	-4VDC	90VDC	6.3VAC	OV	
V 17	6Y6GT	OV	OV	240VDC	250VDC	OV	OV	6.3VAC	13VDC	
V 18	6SN7GT	-4VDC	87VDC	OV	-3.6VDC	-11VDC	OV	6.3VAC	OV	
V 19	6SN7GT	OV	225VDC	17VDC	7.5VDC	7.5VDC	7.5VDC	6.3VAC	OV	
V 20	6A15	-5VDC	-4.3VDC	OV	6.3VAC	-2.3VDC	OV	-6.7VDC		
V 21	6AC7	OV	OV	OV	-7VDC	OV	82VDC	6.3VAC	240VDC	
V 22	6K6GT	OV	OV	175VDC	185VDC	-22VDC	-18.5VDC	6.3VAC	.2VDC	
V 23	6SN7GT	-38.5VDC	22VDC	OV	OV	OV	OV	6.3VAC	OV	
V 24	6BQ6G	OV	OV	OV	6.6VDC	OV	OV	6.3VAC	TOP CAP	
V 25	5Y4G	OV	470VDC	OV	OV	OV	400VDC	OV	470VDC	
V 26	1B3GT									
V 27	5U4G	OV	280VDC	OV	200VAC	OV	200VAC	OV	280VDC	
V 28	5U4G	420VDC	420VDC	OV	350VAC	OV	350VAC	OV	420VDC	
V 29	12Q4P4	OV	.3VDC	100VDC	290VDC	110VDC	6.3VAC	OV		

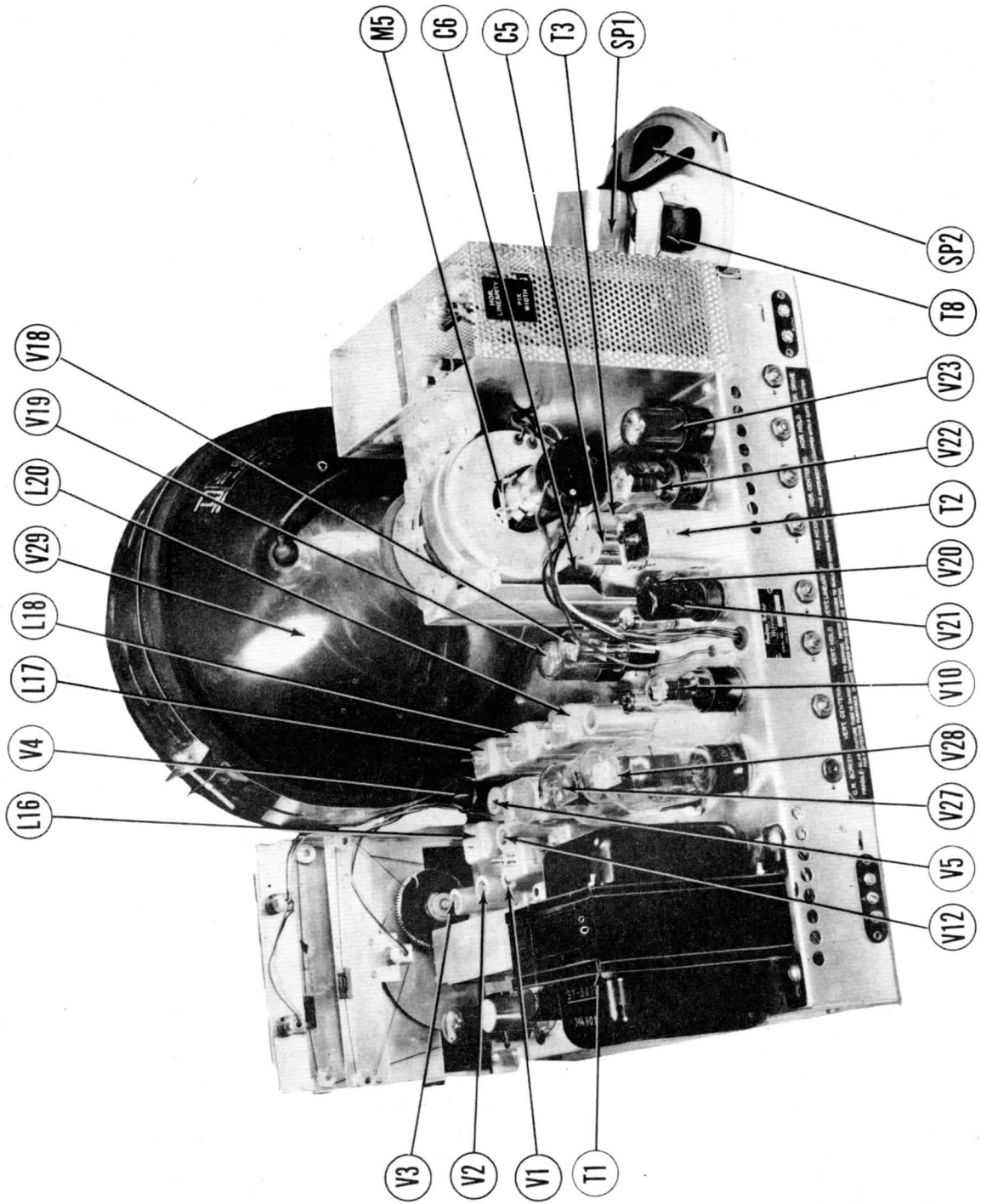
* DO NOT MEASURE
 ‡ Do not measure.
 § Taken with vacuum tube voltmeter.
 † Measured from center-tap of T1.
 ‡ Measured in AM position.
 # Measured from pin 2 of V28.
 • Measured from center-tap of T1.
 Note: Contrast control set at maximum for these readings.

RESISTANCE READINGS

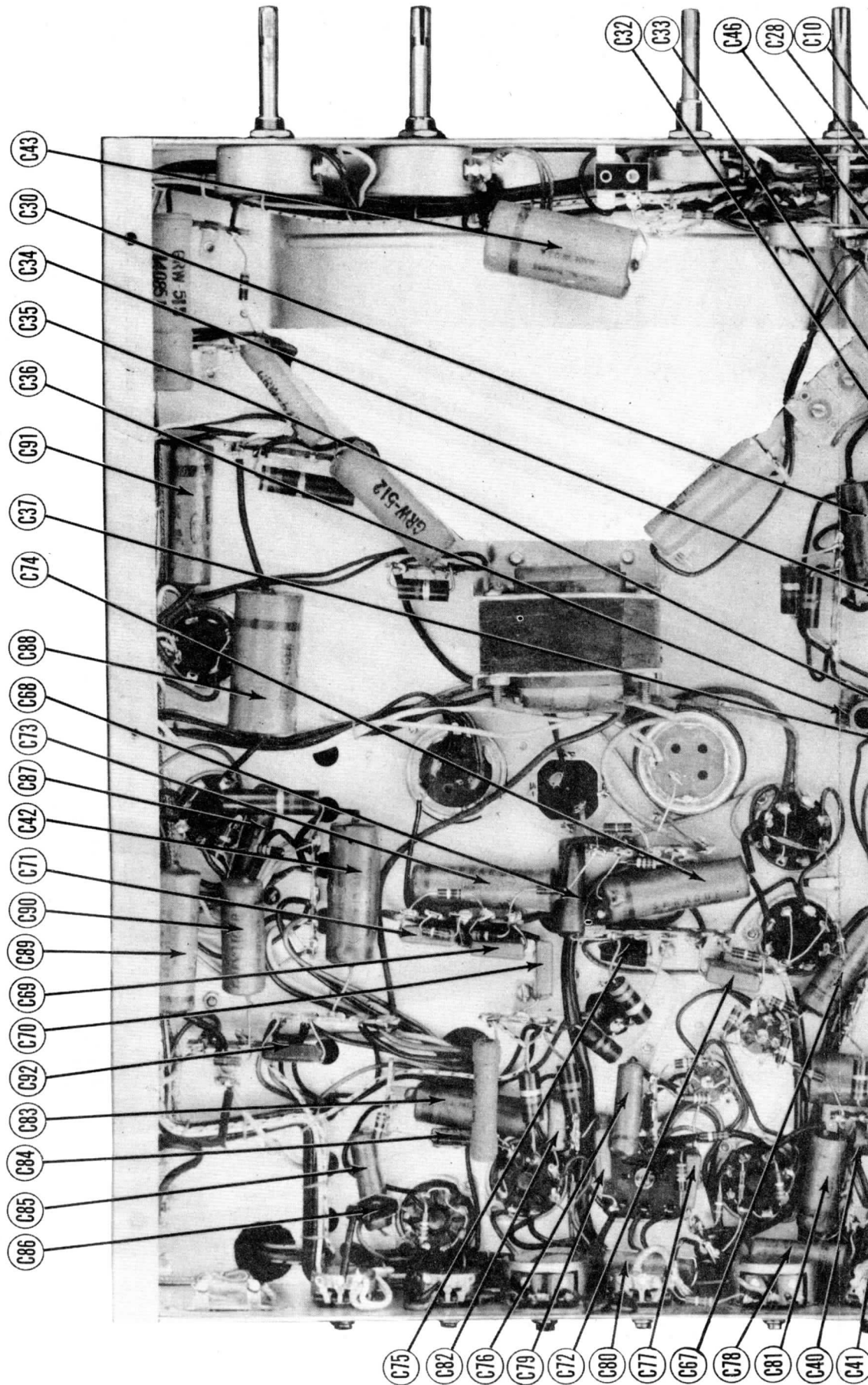
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6J6	111KΩ	111KΩ	.1Ω	OV	10CΩ	100Ω	220Ω		
V 2	6AG5	200KΩ	47Ω	OV	.1Ω	13KΩ	168KΩ	47Ω		
V 3	6J6	111KΩ	OV	.1Ω	OV	OV	12KΩ	OV		
V 4	6SA7	OV	OV	13KΩ	118KΩ	22KΩ	.5Ω	.1Ω		
V 5	6AG5	100KΩ	47Ω	OV	.1Ω	23KΩ	35KΩ	47Ω		
V 6	6AG5	100KΩ	47Ω	OV	.1Ω	23KΩ	50KΩ	47Ω		
V 7	6AG5	15KΩ	100Ω	OV	.1Ω	12KΩ	5KΩ	100Ω		
V 8	6A15	OV	4.7KΩ	OV	.1Ω	.5Ω	OV	OV		
V 9	6AU6	470KΩ	OV	OV	.1Ω	16KΩ	12KΩ	OV		
V 10	6K6GT	OV	.1Ω	8KΩ	5KΩ	470KΩ	2.8KΩ	OV	220Ω	
V 11	6C4	60KΩ	5KΩ	.1Ω	OV	60KΩ	OV	220KΩ		
V 12	6BA6	200KΩ	OV	OV	.1Ω	13KΩ	134KΩ	68Ω		
V 13	6BA6	19Ω	OV	OV	.1Ω	12.5KΩ	133KΩ	68Ω		
V 14	6AU6	.2Ω	OV	OV	.1Ω	12.5KΩ	133KΩ	120Ω		
V 15	6A15	15KΩ	15KΩ	OV	.1Ω	500KΩ	OV	500KΩ		
V 16	6B27	OV	4.7 Meg.	OV	470KΩ	470KΩ	1370KΩ	.1Ω	OV	
V 17	6Y6GT	OV	OV	1650Ω	1230Ω	500KΩ	Inf.	.1Ω	390Ω	
V 18	6SN7GT	1 Meg.	30KΩ	OV	3 Meg.	1 Meg.	2.5KΩ	.1Ω	OV	
V 19	6SN7GT	2.2 Meg.	111KΩ	500Ω	2.2 Meg.	111KΩ	500KΩ	.1Ω	OV	
V 20	6A15	1 Meg.	1.5 Meg.	OV	.1Ω	1000Ω	OV	1.5 Meg.		
V 21	6AC7	OV	OV	OV	1.5 Meg.	10Ω	27KΩ	.1Ω	23KΩ	
V 22	6K6GT	OV	OV	16KΩ	17KΩ	30KΩ	15Ω	.1Ω	10Ω	
V 23	6SN7GT	470KΩ	1 Meg.	OV	OV	OV	OV	OV	.1Ω	
V 24	6BQ6G	OV	OV	100Ω	1 Meg.	470KΩ	470KΩ	.1Ω	6KΩ	TOP CAP #6.5KΩ
V 25	5Y4F	Inf.	6.5KΩ	Inf.	120Ω	Inf.	120Ω	Inf.	6.5KΩ	TOP CAP #6.5KΩ
V 26	1B3GT	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	
V 27	5U4G	Inf.	90KΩ	Inf.	60Ω	Inf.	62Ω	Inf.	90KΩ	
V 28	5U4G	7KΩ	7KΩ	Inf.	70Ω	Inf.	70Ω	Inf.	7KΩ	
V 29	12Q4P4	OV	1.2 Meg.	110KΩ	1KΩ	10KΩ	1Ω	1Ω		

▲ Measured in AM position.
 † Measured from pin 8 of V27.
 ‡ Measured from pin 2 of V28.
 # Measured from center-tap of T1.
 • Measured from center-tap of T1.

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



CHASSIS TOP VIEW



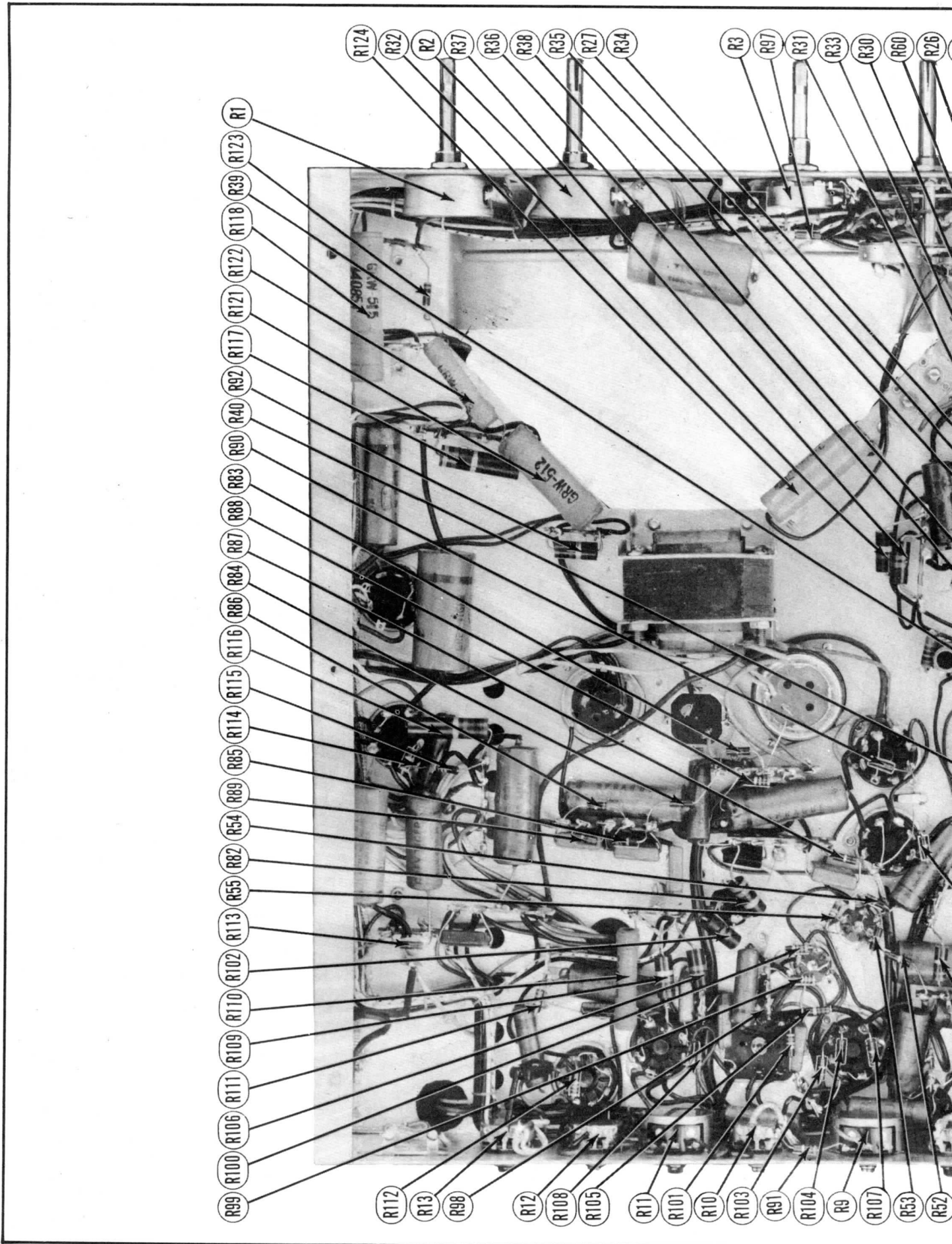
- C43
- C30
- C34
- C35
- C36
- C91
- C37
- C74
- C88
- C68
- C73
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- C71
- C90
- C89
- C69
- C70
- C92
- C83
- C84
- C85
- C86

- C32
- C33
- C46
- C28
- C10

- C75
- C82
- C76
- C79
- C72
- C80
- C77
- C67
- C78
- C81
- C40
- C41

CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

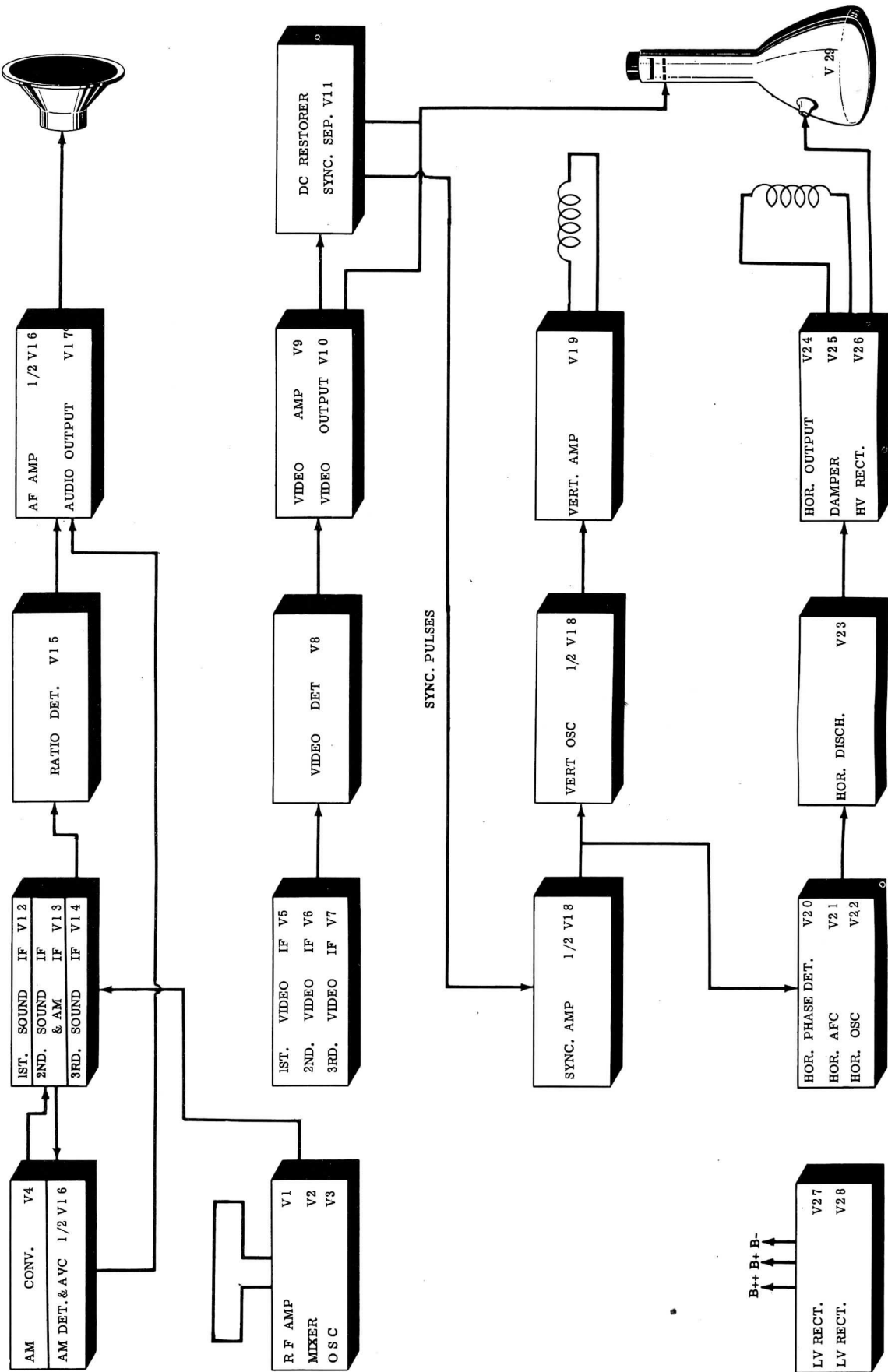






CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

ANDREA MODELS BI-VK12, CVK-120,
 COVK-125, T-VK12, TVK-127B.M



BLOCK DIAGRAM

ANDREA MODELS BT-VK12, CVK-126,
COVK-125, T-VK12, TVK-127B,M

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		ANDREA PART No.	STANDARD REPLACEMENT		
V1	TV-FM RF	6J6	6J6	7BF	
V2	TV-FM Mixer	6AG5	6AG5	7BD	
V3	TV-FM Osc.	6J6	6J6	7BF	
V4	AM Converter	6SA7	6SA7	8R	
V5	1st Video IF	6AG5	6AG5	7BD	
V6	2nd Video IF	6AG5	6AG5	7BD	
V7	3rd Video IF	6AG5	6AG5	7BD	
V8	Video Det.	6AL5	6AL5	6BT	
V9	Video Amp.	6AU6	6AU6	7BK	
V10	Video Output	6K6GT	6K6GT	7S	
V11	DC Restorer-Sync. Sep.	6C4	6C4	6BG	
V12	1st FM-TV Sound IF	6BA6	6BA6	7BK	
V13	2nd FM-TV Sound IF-AM IF	6BA6	6BA6	7BK	
V14	3rd FM-TV Sound IF	6AU6	6AU6	7BK	
V15	Ratio Det.	6AL5	6AL5	6BT	
V16	DET.-AVC-AF	6SQ7	6SQ7	8Q	
V17	Audio Output	6V6GT	6V6GT	7AC	
V18	Sync. Amp.-Vert. Osc.	6SN7GT	6SN7GT	8BD	
V19	Vert. Amp.	6SN7GT	6SN7GT	8BD	
V20	Hor. Phase Det.	6AL5	6AL5	6BT	
V21	Hor. AFC	6AC7	6AC7	8N	
V22	Hor. Osc.	6K6GT	6K6GT	7S	
V23	Hor. Disch.	6SN7GT	6SN7GT	8BD	
V24	Hor. Output	6BG6G	6BG6G	5BT	
V25	Damper	5V4G	5V4G	5L	
V26	HV Rectifier	1B3GT	1B3GT	3C	
V27	LV Rectifier	5U4G	5U4G	5T	
V28	LV Rectifier	5U4G	5U4G	5T	
V29A	Picture Tube	12QF4	12LP4	12D	
B	Picture Tube	12LP4	12LP4	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	ANDREA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	25	500	HCE-1321	AFH58K	UP11BJ			▲ Filter
B	40	500			976			▲ Filter
C2A	20	450	HCE-1320	AF44J	UP2250		EL-220	▲ Filter
B	20	450						▲ Filter
C3A	25	350	HCE-1322	AF88J	UP9BJ975			▲ Filter
B	40	350						▲ Filter
C4A	20	350	HCE-1323	AF64H	UP2045C		UT-203	▲ Filter
B	10	25					TVA-14	▲ Output Cath. Bypass
C5A	4	450	HCE-1313	AF22J	UP4BJ241		EL-210	▲ 1st V. Amp. Dec.
B	4	450						▲ Vert. Output Plate Dec.
C6A	20	450	HCE-1319	AF4J20C	UP7BJ304			■ Decoupling
B	100	100						▲ Vert. Output Cath. Byp.
C7	2	25	HCE-1302	PR8150/4	BR215		TVA-12	Stabilizing Cap.
C8	1000	25	HCE-1312	AF200A	UP1M-25		EL-122	Bias Filter
C9	50	500	HCM-1614A	1468-00005	5W5Q5	GP1K-50	LFM-45	Isolation
C10	100	400	HCC-1910	1468-0001	5W5T1	GP1K-100	LFM-31	Ant. Coupling
C11	.05	400	HCT-1003	P488-05	GT485		TM-15	RF Bypass
C12	100	400	HCC-1922	1468-0001	5W5T1	GP1K-100	LFM-31	RF Grid Filter
C13	500	400	HCC-1912	1468-0005	5W5T5	GP2K-500	LFM-35	RF Bypass
C14	500	400	HCC-1912	1468-0005	5W5T5	GP2K-500	LFM-35	RF Fil. Bypass
C15	10	400	HCC-1923		N750K-10			RF Coupling
C16	3-13		HCV-2115		TS2A-N300-3-13			Fixed Padder
C17	3-13		HCV-2115		TS2A-N300-3-13			Fixed Trimmer
C18	1.5-7		HCV-2116		TS2A-NP0-1.5-7			Fixed Padder
C19	10		HCC-1923		N750K-10			RF Coupling
C20	500		HCC-1912	1468-0005	5W5T5	GP2K-500	LFM-35	Mixer Screen Bypass
C21	500		HCC-1912	1468-0005	5W5T5	GP2K-500	LFM-35	Mixer Fil. Bypass
C22	3		HCC-1921		NPOK-3			Osc. Coupling
C23	5.5		HCC-1925		N750K-5			Osc. Grid Cap.
C24	1-8		HCV-2117		532-1-8			Fixed Trimmer
C25	500		HCC-1912	1468-0005	5W5T5	GP2K-500	LFM-35	RF Bypass
C26	500		HCC-1912	1468-0005	5W5T5	GP2K-500	LFM-35	Osc. Fil. Bypass
C27	100	500	HCM-1601A	1468-0001	5W5T1	GP1K-100	LFM-31	Osc. Grid Cap.
C28	.05	400	HCT-1003	P488-05	GT485		TM-15	Osc. Anode Bypass
C29	.05	400	HCT-1003	P488-05	GT485		TM-15	AM Conv. Plate Dec.
C30	.05	400	HCT-1003	P488-05	GT485		TM-15	AVC Filter
C31	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	AVC Filter
C32	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	Bias Filter
C33	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	1st V. IF Screen Byp.
C34	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	2nd V. IF Screen Byp.
C35	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	3rd V. IF Cath. Byp.
C36	50		HCC-1914	1469-00005	5R5Q5	N750L-47	MS-45	Fixed Trimmer
C37	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	RF Bypass
C38	4.7		SK-GA-6	1468-000005	5W5V5		MS-55	V. Diode Filter
C39	.05	400	HCT-1003	P488-05	GT485		TM-15	Video Coupling
C40	.05	400	HCT-1003	P488-05	GT485		TM-15	Video Coupling
C41	.25	400	HCT-1015	P488-25	GT4P25		TC-2	Video Coupling
C42	.25	400	HCT-1015	P488-25	GT4P25		TC-2	Brightness Cont. Bypass
C43	1.0	100	HCT-1027	484-1.0	GT2W1		TC-10	Bias Filter
C44	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	AVC Filter
C45	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	1st S. IF Screen Bypass
C46	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	1st S. IF Plate Dec.
C47	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	2nd S. IF Screen Byp.
C48	.05	400	HCT-1003	P488-05	GT485		TM-15	2nd S. IF Plate Dec.
C49	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	2nd S. IF Plate Dec.
C50	5000		HCC-1926	1467-005	1D5D5	811-005	29C1	2nd S. IF Fil. Bypass
C51	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	3rd S. IF Cath. Byp.
C52	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	3rd S. IF Screen Byp.
C53	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	3rd S. IF Fil. Byp.

ITEM No.	RATING		REPLACEMENT DATA		
	CAP.	VOLT	ANDREA PART No.	AEROVOX PART No.	CORN DUBILIER PART No.
C54	5000		HCC-1926	1467-005	1D5D5
C55	33		HCC-1928	1468-00004	5W5Q4
C56	1500	500	HCM-1618-1	1467-0015	1W5D1
C57	100	500	HCM-1601A	1468-0001	5W5T1
C58	100	500	HCM-1601A	1468-0001	5W5T1
C59	1000	500	HCM-1610C	1468-001	1W5D1
C60	.1	200	HCT-1013	P288-1	GT2P1
C61	.01	400	HCT-1022	P488-01	GT4S1
C62	.1	600	HCT-1002	P688-1	GT4P1
C63	.05	400	HCT-1003	P488-05	GT4S1
C64	250	500	HCM-1608AK	1468-00025	5W5T2
C65	.003	1200	HCT-1021	P1688-003	GT161
C66	1500		HCC-1914	1467-0015	1W5D1
C67	.1	200	HCT-1013	P288-1	GT2P1
C68	.01	600	HCT-1008	P688-01	GT6S1
C69	5000	500	HCM-1602A	1467-005	1D5D1
C70	5000	500	HCM-1602A	1467-005	1D5D1
C71	5000	1000	HCM-1603AK	1467-005	1D5D1
C72	5000	1000	HCM-1603AK	1467-005	1D5D1
C73	.1	600	HCT-1002	P688-1	GT6P1
C74	.1	600	HCT-1002	P688-1	GT6P1
C75	60	500	HCM-1612D		
C76	.015	400	HCT-1023	P488-015	GT6S1
C77	5000	500	HCM-1602A	1467-005	1D5D1
C78	.05	400	HCT-1003	P488-05	GT4S1
C79	5000	500	HCT-1602A	1467-005	1D5D1
C80	.015	400	HCT-1023	P488-015	GT6S1
C81	.05	400	HCT-1003	P488-05	GT4S1
C82	5000	500	HCM-1602A	1467-005	1D5D1
C83	.05	600	HCT-1012	P688-05	GT6S1
C84	500	1000	HCM-1609CK	1468-001	5W5T5
C85	.01	600	HCT-1008	P688-01	GT6S1
C86	500	1000	HCM-1617CK	1468-0005	5W5T5
C87	.01	600	HCT-1008	P688-01	GT6S1
C88	1.0	100	HCT-1027	484-1.0	GT2W1
C89	.1	600	HCT-1002	P688-1	GT6P1
C90	.035	1000	HCT-1026	P1088-033	GT161
C91	.05	1000	HCT-1026	P1088-05	GT161
C92	300	2000	HCM-1616C2K		
C93	500	10000	HCH-2701		
C94	.1	600	HCT-1002	P688-1	GT6P1
C95	.05	400	HCT-1003	P488-05	GT4S1

* Some models use 150MMF in this application.

ITEM No.	RATING		REPLACEMENT DATA		
	RESIST-ANCE	WATTS	ANDREA PART No.	IRC PART No.	CLAR PAR
R1	10KΩ	4	GRV-806-1		10-10
R2	20KΩ	4	GRV-817-1		10-20
R3A	10KΩ	4	GRV-818-1	Q14-116	AM-30
B			Not Req.	Not Req.	KSS-3
R4A	500KΩ	1/2	GRV-812-6	Q13-133X	AT-7
B			Not Req.	Not Req.	KSS-3
C			Not Req.	76-1	SW-A
R5	500KΩ	1/2	GRV-825		M-55
R6	250KΩ	1/2	GRV-822	Q11-130	M-55
R7	20Ω	1/2	GRV-810-1	W-20X10	58-2
R8	2 Meg.	1/2	GRV-812-1	Q11-139	M-83
R9	2000Ω	1/2	GRV-824	W-2000	58-2
R10	2 Meg.	1/2	GRV-812-1	Q11-139	M-83
R11	40Ω	1/2	GRV-823	W-40	43-4
R12	50KΩ	1/2	GRV-807-1	Q11-123	M-44
R13	50KΩ	1/2	GRV-807-1	Q11-123	M-44

ITEM No.	RATING		REPLACEMENT DATA	
	RESISTANCE	WATTS	ANDREA PART No.	IRC PART No.
R14	220Ω	1/2	GRC-218	
R15	100Ω	1/2	GRC-216	
R16	10KΩ 5%	1/2	GRC-263	
R17	12KΩ	1/2	GRC-272	
R18	12KΩ	1/2	GRC-272	
R19	100KΩ 20%	1/2	GRC-225	
R20	47Ω	1/2	GRC-211	
R21	68KΩ	1/2	GRC-204	
R22	2200Ω	1/2	GRC-219	
R23	12KΩ	1/2	GRC-272	
R24	10KΩ 5%	1/2	GRC-267	
R25	22KΩ	1/2	GRC-201	
R26	15KΩ	1/2	GRC-237	BTS-22K
R27	2700Ω	1/2	GRC-275	BT-2-15K
R28	2.2 Meg.	1/2	GRC-230	BTS-2700
R29	15KΩ 5%	1/2	GRC-223	BTS-2.2 Meg
R30	47Ω	1/2	GRC-211	
R31	47KΩ	1/2	GRC-207	
R32	22KΩ	1/2	GRC-238	
R33	100KΩ 20%	1/2	GRC-225	
R34	4700Ω 5%	1/2	GRC-273	
R35	47Ω	1/2	GRC-211	
R36	47KΩ	1/2	GRC-207	
R37	22KΩ 5%	1/2	GRC-238	
R38	15KΩ 5%	1/2	GRC-223	
R39	100Ω	1/2	GRC-216	
R40	10KΩ 5%	1/2	GRC-263	
R41	33KΩ 5%	1/2	GRC-260	BTS-33K-5%
R42	4700Ω	1/2	GRC-205	BTS-4700
R43	470KΩ	1/2	GRC-228	BTS-470K
R44	18KΩ 5%	1/2	GRC-261	BTS-18K-5%
R45	3900Ω 5%	1/2	GRC-262	BTA-3900-5%
R46	6800Ω	1/2	GRC-257	BT-2-6800
R47	470KΩ	1/2	GRC-228	BTS-470K
R48	220Ω	1/2	GRC-218	BW-1/2-220

PARTS LIST AND DESCRIPTIONS

CAPACITORS (CONT.)

ITEM No.	RATING		REPLACEMENT DATA					IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	ANDREA PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C54	5000		HCC-1926	1467-005	1D5D5	811-005	29C1	3rd S. IF Plate Dec.
C55	33		HCC-1928	1468-00004	5W5Q4	GP1K-33	LFM-44	Diode Load Cap.
C56	1500	500	HCM-1618-1	1467-0015	1W5D15	GP2L-0015	LFM-215	De-emphasis
C57	100	500	HCM-1601A	1468-0001	5W5T1	GP1K-100	LFM-31	Diode RF Filter
C58	100	500	HCM-1601A	1468-0001	5W5T1	GP1K-100	LFM-31	Diode RF Filter
C59	1000	500	HCM-1610C	1468-001	1W5D1	GP2L-001	LFM-21	Tone Comp.
C60	.1	200	HCT-1013	P288-1	GT2P1		TM-1	Tone Comp.
C61	.01	400	HCT-1022	P488-01	GT4S1	GP2-335-01	TM-11	Audio Coupling
C62	.1	600	HCT-1002	P688-1	GT4P1		TM-1	AF Plate Decoupling
C63	.05	400	HCT-1003	P488-05	GT4S5		TM-15	Audio Coupling
C64	250	500	HCM-1608AK	1468-00025	5W5T25	GP2K-250	LFM-325	Tone Comp.
C65	.003	1200	HCT-1021	P1688-003	GT16D3		MB-23	Output Plate Bypass
C66	1500		HCC-1914	1467-0015	1W5D15	GP2L-0015	LFM-215	RF Bypass
C67	.1	200	HCT-1013	P288-1	GT2P1		TM-1	Sync. Coupling
C68	.01	600	HCT-1008	P688-01	GT6S1	GP2-335-01	TM-11	Vert. Sync. Coupling
C69	5000	500	HCM-1602A	1467-005	1D5D5	GP2M-005	LFM-25	Integrator Net.
C70	5000	500	HCM-1602A	1467-005	1D5D5	GP2M-005	LFM-25	Integrator Net.
C71	5000	1000	HCM-1603AK	1467-005	1D5D5	GP2M-005	LFM-25	Integrator Net.
C72	5000	1000	HCM-1603AK	1467-005	1D5D5	GP2M-005	LFM-25	Vert. Osc. Grid Cap.
C73	.1	600	HCT-1002	P688-1	GT6P1		TM-1	Vert. Discharge
C74	.1	600	HCT-1002	P688-1	GT6P1		TM-1	Vert. Sweep Coupling
C75	.60	500	HCM-1612D	P488-015	GT6S15		TM-15	Hor. Sync. Coupling
C76	.015	400	HCT-1023	1467-005	1D5D5	GP2M-005	LFM-25	AFC Filter
C77	5000	500	HCM-1602A	1467-005	1D5D5	GP2M-005	LFM-25	AFC Filter
C78	.05	400	HCT-1003	P488-05	GT4S5		TM-15	AFC Filter
C79	5000	500	HCT-1602A	1467-005	1D5D5	GP2M-005	LFM-25	AFC Coupling
C80	.015	400	HCT-1023	P488-015	GT6S15		TM-15	Phase Shifter
C81	.05	400	HCT-1003	P488-05	GT4S5		TM-15	Hor. AFC Screen Byp.
C82	5000	500	HCM-1602A	1467-005	1D5D5	GP2M-005	LFM-25	Hor. Osc. Grid Cap.
C83	.05	600	HCT-1012	P688-05	GT6S5		TM-15	Hor. Osc. Screen Byp.
C84	500	1000	HCM-1609CK	1468-001	5W5T5		LFM-35	Differentiator Net.
C85	.01	600	HCT-1008	P688-01	GT6S1	GP2-335-01	TM-11	Hor. Sweep Coupling
C86	500	1000	HCM-1617CK	1468-0005	5W5T5		LFM-35	Hor. Discharge
C87	.01	600	HCT-1008	P688-01	GT6S1	GP2-335-01	TM-11	Hor. Sweep Coupling
C88	1.0	100	HCT-1027	484-1.0	GT2M1		TC-10	Hor. Output Cath. Byp.
C89	.1	600	HCT-1002	P688-1	GT6P1		TM-1	Hor. Output Screen Byp.
C90	.035	1000	HCT-1026	P1088-033	P1088-033		TR-15	Damper Filter
C91	.05	1000	HCT-1025	P1088-05	GT16S5			Damper Filter
C92	300	2000	HCM-1616C2K					Fixed Trimmer *
C93	500	10000	HCH-2701					HV Filter
C94	.1	600	HCT-1002	P688-1	GT6P1		TM-1	Acc. Anode Filter
C95	.05	400	HCT-1003	P488-05	GT4S5		TM-15	Video Coupling

* Some models use 150M μ F in this application.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA			INSTALLATION NOTES
	RESISTANCE	WATTS	ANDREA PART No.	IRC PART No.	CLAROSTAT PART No.	
R1	10K Ω	4	GRV-806-1		10-10,000	Focus Control, Wire Wound
R2	20K Ω	4	GRV-817-1		10-20,000	Brightness Control, Wire Wound
RAA	10K Ω	1/2	GRV-818-1	Q14-116	AM-30-V	Contrast Control
			B Shaft	Not Req.	KSS-3	Attach to R3A Per Instructions
			500K Ω	GRV-812-6	Q13-133X	Volume Control Tapped @ 100K Ω
			B Shaft	Not Req.	KSS-3	Attach to R4A Per Instructions
			C Switch	Not Req.	SW-A	Attach to R4A Per Instructions
R5	500K Ω	1/2	GRV-825		M-55-S	Tone Control and Dial Light Pushswitch
R6	250K Ω	1/2	GRV-822	Q11-130	M-55-S	Cathode Ray Tube Screen Control
R7	20 Ω	2	GRV-810-1	W-20X10	S8-20CT	Vert. Centering Control, Tapped @ 10 Ω
R8	2 Meg.	2	GRV-812-1	Q11-139	M-85-S	Vert. Linearity Control, Wire Wound
R9	2000 Ω	2	GRV-824	W-2000	S8-2000	Height Control
R10	2 Meg.	2	GRV-812-1	Q11-139	M-85-S	Horiz. Centering Control, Wire Wound
R11	40 Ω	2	GRV-823	W-40	43-40	Horiz. Hold Control
R12	50K Ω	2	GRV-807-1	Q11-123	M-44-S	Horiz. Drive Control
R13	50K Ω	2	GRV-807-1	Q11-123	M-44-S	Horiz. Drive Control

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	ANDREA PART No.	IRC PART No.	
R14	220 Ω	1/2	GRC-218		RF Cathode
R15	100 Ω	1/2	GRC-216		RF Grid
R16	10K Ω 5%	2	GRC-263		RF Plate
R17	12K Ω	1/2	GRC-272		RF Plate Coil Shunt
R18	12K Ω	1/2	GRC-272		Mixer Grid Coil Shunt
R19	100K Ω 20%	1/2	GRC-225		Mixer Grid
R20	47 Ω	1/2	GRC-211		Mixer Cathode
R21	68K Ω	1/2	GRC-204		Mixer Screen
R22	2200 Ω	1/2	GRC-219		Mixer Plate Decoupling
R23	12K Ω	2	GRC-272		Osc. Grid
R24	10K Ω 5%	2	GRC-267		Osc. Plate
R25	22K Ω	2	GRC-201	BTS-22K	AM Osc. Grid
R26	15K Ω	2	GRC-237	BT-2-15K	AM Osc. Anode
R27	2700 Ω	2	GRC-275	BTS-2700	AM Conv. Plate Decoupling
R28	2.2 Meg.	2	GRC-230	BTS-2.2 Meg.	AVC Network
R29	15K Ω 5%	2	GRC-223		1st Video IF Grid
R30	47 Ω	2	GRC-211		1st Video IF Cathode
R31	47K Ω	2	GRC-207		1st Video IF Screen See Note 1
R32	22K Ω	2	GRC-238		1st Video IF Plate
R33	100K Ω 20%	2	GRC-225		Voltage Divider See Note 3
R34	4700 Ω 5%	2	GRC-273		2nd Video IF Grid
R35	47 Ω	2	GRC-211		2nd Video IF Cathode
R36	47K Ω	2	GRC-207		2nd Video IF Screen
R37	22K Ω 5%	2	GRC-238		2nd Video IF Plate
R38	15K Ω 5%	2	GRC-223		3rd Video IF Grid
R39	100 Ω	2	GRC-216		3rd Video IF Cathode
R40	10K Ω 5%	2	GRC-263		3rd Video IF Plate
R41	33K Ω 5%	2	GRC-260	BTS-33K-5%	Peaking Coil Shunt
R42	4700 Ω	2	GRC-205	BTS-4700	Video Det. Diode Load
R43	470K Ω	2	GRC-228	BTS-470K	Video Amp. Grid
R44	18K Ω 5%	2	GRC-261	BTS-18K-5%	Peaking Coil Shunt
R45	3900 Ω 5%	1	GRC-262	BTA-3900-5%	Video Amp. Plate
R46	6800 Ω	2	GRC-257	BT-2-6800	Filter
R47	470K Ω	2	GRC-228	BTS-470K	Video Output Grid
R48	220 Ω	1/2	GRC-218	BW-1/2-220	Video Output Cathode

ITEM No.	RATING		ANDREA PART No.
	RESISTANCE	WATTS	
R49	10K Ω 5%	1	GRC-218
R50	3300 Ω	1	GRC-218
R51	4700 Ω 5%	1	GRC-218
R52	1 Meg.	1	GRC-218
R53	220K Ω	1	GRC-218
R54	47K Ω	1	GRC-218
R55	820K Ω	1	GRC-218
R56	150K Ω	1	GRC-218
R57	100K Ω 20%	1	GRC-218
R58	68 Ω	1	GRC-218
R59	33K Ω	1	GRC-218
R60	2200 Ω	1	GRC-218
R61	470 Ω	1	GRC-218
R62	68 Ω	1	GRC-218
R63	33K Ω	1	GRC-218
R64	2200 Ω	1	GRC-218
R65	120 Ω	1	GRC-218
R66	33K Ω	1	GRC-218
R67	2200 Ω	1	GRC-218
R68	220 Ω	1	GRC-218
R69	15K Ω 5%	1	GRC-218
R70	15K Ω 5%	1	GRC-218
R71	100K Ω 20%	1	GRC-218
R72	33K Ω	1	GRC-218
R73	47K Ω	1	GRC-218
R74	100K Ω 20%	1	GRC-218
R75	6800 Ω	1	GRC-218
R76	2200 Ω	1	GRC-218
R77	4.7Meg. 20%	1	GRC-218
R78	220K Ω	1	GRC-218
R79	150K Ω	1	GRC-218
R80	390 Ω	1	GRC-218
R81	1 Meg. 20%	1	GRC-218
R82	6800 Ω	1	GRC-218
R83	22K Ω	1	GRC-218
R84	15K Ω 5%	1	GRC-218
R85	6800 Ω	1	GRC-218
R86	6800 Ω	1	GRC-218
R87	1 Meg.	1	GRC-218
R88	470K Ω	1	GRC-218
R89	3300 Ω	1	GRC-218
R90	2.2Meg. 20%	1	GRC-218
R91	470 Ω	1	GRC-218
R92	10K Ω	1	GRC-218
R93	25 Ω	1	GRC-218
R94	2700 Ω	1	GRC-218
R95	2700 Ω	1	GRC-218
R96	1500 Ω	1	GRC-218
R97	100K Ω 20%	1	GRC-218
R98	1 Meg. 5%	1	GRC-218
R99	470K Ω	1	GRC-218
R100	470K Ω	1	GRC-218
R101	470K Ω	1	GRC-218
R102	22K Ω 5%	1	GRC-218
R103	560 Ω	1	GRC-218
R104	10 Ω 5%	1	GRC-218
R105	33K Ω	1	GRC-218
R106	22K Ω 5%	1	GRC-218
R107	68K Ω	1	GRC-218
R108	27K Ω	1	GRC-218
R109	15K Ω	1	GRC-218
R110	5000 Ω	1	GRC-218
R111	6800 Ω	1	GRC-218
R112	470K Ω	1	GRC-218
R113	1 Meg. 5%	1	GRC-218
R114	4700 Ω	1	GRC-218
R115	470K Ω	1	GRC-218
R116	100 Ω	1	GRC-218
R117	4700 Ω	1	GRC-218
R118	6000 Ω	25	GRC-218
R119	3.9 Ω	1	GRC-218
R120	680K Ω	1	GRC-218
R121	900 Ω 5%	20	GRC-218
R122	4000 Ω 5%	10	GRC-218
R123	6800 Ω	1	GRC-218
R124	1.5 Ω	20	GRC-218

Note 1. Some models use
Note 2. Some models use
Note 3. Not used in all

DESCRIPTIONS

(CONT.)

ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
811-005	29C1	3rd S. IF Plate Dec.
GP1K-33	LFM-44	Diode Load Cap.
GP2L-0015	LFM-215	De-emphasis
GP1K-100	LFM-31	Diode RF Filter
GP1K-100	LFM-31	Diode RF Filter
GP2L-001	LFM-21	Tone Comp.
	TM-1	Tone Comp.
GP2-335-01	TM-11	Audio Coupling
	TM-1	AF Plate Decoupling
	TM-15	Audio Coupling
GP2K-250	LFM-325	Tone Comp.
	MB-23	Output Plate Bypass
GP2L-0015	LFM-215	RF Bypass
	TM-1	Sync. Coupling
GP2-335-01	TM-11	Vert. Sync. Coupling
GP2M-005	LFM-25	Integrator Net.
GP2M-005	LFM-25	Integrator Net.
GP2M-005	LFM-25	Integrator Net.
GP2M-005	LFM-25	Integrator Net.
GP2M-005	LFM-25	Vert. Osc. Grid Cap.
	TM-1	Vert. Discharge
	TM-1	Vert. Sweep Coupling
	TM-1	Hor. Sync. Coupling
	TM-1	Fixed Trimmer
GP2M-005	LFM-25	APC Filter
	TM-15	APC Filter
GP2M-005	LFM-25	APC Coupling
	TM-15	Phase Shifter
	TM-15	Hor. AFC Screen Byp.
	LFM-25	Hor. Osc. Grid Cap.
	TM-15	Hor. Osc. Screen Byp.
	LFM-35	Differentiator Net.
GP2-335-01	TM-11	Hor. Sweep Coupling
	LFM-35	Hor. Discharge
GP2-335-01	TM-11	Hor. Sweep Coupling
	TC-10	Hor. Output Cath. Byp.
	TM-1	Hor. Output Screen Byp.
	TR-15	Damper Filter
	TR-15	Damper Filter
	TR-15	Fixed Trimmer *
	TR-15	HV Filter
	TM-1	Acc. Anode Filter
	TM-15	Video Coupling

RESISTORS (CONT.)

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	ANDREA PART No.	IRC PART No.	
R49	10KΩ	5%	GRC-222	BTS-10K-5%	Peaking Coil Shunt
R50	3300Ω		GRC-254	BTA-3300	Video Output Plate
R51	4700Ω	5%	GRC-273	BTS-4700-5%	Phase Correction
R52	1 Meg.		GRC-274	BTS-1 Meg.	Picture Tube Grid
R53	220KΩ		GRC-270	BTS-220K	DC Rest. Load
R54	47KΩ		GRC-207	BTS-47K	DC Rest. Load
R55	820KΩ		GRC-246	BTS-820K	Voltage Divider
R56	150KΩ		GRC-243	BTS-150K	Voltage Divider
R57	100KΩ	20%	GRC-225	BTS-100K	AVC Network
R58	68Ω		GRC-214		1st Sound IF Cathode
R59	33KΩ		GRC-281		1st Sound IF Screen
R60	2200Ω		GRC-219		1st Sound IF Plate Decoupling
R61	470Ω		GRC-282	BTA-470	Voltage Dropping
R62	68Ω		GRC-214		2nd Sound IF Cathode
R63	33KΩ		GRC-281		2nd Sound IF Screen
R64	2200Ω		GRC-219		2nd Sound IF Plate Decoupling
R65	120Ω		GRC-217		3rd Sound IF Cathode See Note 2
R66	33KΩ		GRC-203		3rd Sound IF Screen
R67	2200Ω		GRC-219		3rd Sound IF Plate Decoupling
R68	220Ω		GRC-219		Balancing
R69	15KΩ	5%	GRC-223	BW-4-220	Ratio Det. Diode Load
R70	15KΩ	5%	GRC-223	BTS-15K-5%	Ratio Det. Diode Load
R71	100KΩ	20%	GRC-225	BTS-100K	AVC Network
R72	33KΩ		GRC-203	BTS-33K	De-emphasis
R73	47KΩ		GRC-207	BTS-47K	Diode Filter
R74	100KΩ	20%	GRC-225	BTS-100K	Tone Compensation
R75	6800Ω		GRC-221	BTS-6800	Tone Compensation
R76	2200Ω		GRC-219	BTS-2200	Tone Compensation
R77	4.7Meg.	20%	GRC-242	BTS-4.7 Meg.	AF Grid
R78	220KΩ		GRC-270	BTS-220K	AF Plate
R79	150KΩ		GRC-243	BTS-150K	AF Plate Decoupling
R80	390Ω		GRC-277	BTA-390	Output Cathode
R81	1 Meg.	20%	GRC-274	BTS-1 Meg.	Vert. Buffer Grid
R82	6800Ω		GRC-257	BT-2-6800	Vert. Buffer Plate
R83	22KΩ		GRC-201	BTS-22K	Voltage Divider
R84	15KΩ	5%	GRC-223	BTS-15K-5%	Integrator
R85	6800Ω		GRC-221	BTS-6800	Integrator
R86	6800Ω		GRC-221	BTS-6800	Integrator
R87	1 Meg.		GRC-274	BTS-1 Meg.	Vert. Osc. Grid
R88	470KΩ		GRC-228	BTS-470K	Vert. Osc. Plate
R89	3300Ω		GRC-220	BTS-3300	Vert. Peaking
R90	2.2Meg.	20%	GRC-230	BTS-2.2 Meg.	Vert. Amp. Grid
R91	470Ω		GRC-213	BTS-470	Vert. Amp. Cathode
R92	10KΩ		GRC-263	BT-2-10K	Filter
R93	25Ω		GRW-511	AB-25	Voltage Divider Wire Wound
R94	2700Ω		GRC-275	BTS-2700	Bias Network
R95	2700Ω		GRC-275	BTS-2700	Bias Network
R96	1500Ω		GRC-259	BTS-1500	Bias Network
R97	100KΩ	20%	GRC-225	BTS-100K	Voltage Divider
R98	1 Meg.	5%	GRC-229	BTS-1 Meg.5%	Horiz. Phase Det. Load
R99	470KΩ		GRC-228	BTS-470K	Horiz. Phase Det. Load
R100	470KΩ		GRC-228	BTS-470K	Horiz. Phase Det. Load
R101	470KΩ		GRC-228	BTS-470K	Horiz. AFC Filter Network
R102	22KΩ	5%	GRC-238	BT-2-22K-5%	Filter
R103	560Ω		GRC-250	BTS-560	Horiz. AFC Grid
R104	10Ω	5%	GRC-253	BW-4-10-5%	Horiz. AFC Cathode
R105	33KΩ		GRC-203	BTS-33K	Horiz. AFC Screen
R106	22KΩ	5%	GRC-238	BT-2-22K-5%	Horiz. AFC Plate
R107	68KΩ		GRC-204	BTS-68K	Voltage Divider
R108	27KΩ		GRC-224	BTS-27K	Horiz. Osc. Grid
R109	15KΩ		GRC-237	BT-2-15K	Horiz. Osc. Screen
R110	5000Ω		GRW-509	AB-5000	Horiz. Osc. Plate Wire Wound
R111	6800Ω		GRC-221	BTS-6800	Differentiator
R112	470KΩ		GRC-228	BTS-470K	Horiz. Discharge Grid
R113	1 Meg.	5%	GRC-229	BTS-1 Meg.5%	Horiz. Discharge Plate
R114	4700Ω		GRC-205		Parasitic Supp.
R115	470KΩ		GRC-228	BTS-470K	Horiz. Output Grid
R116	100Ω		GRC-235	BW-2-100	Horiz. Output Cathode
R117	4700Ω		GRC-236	BT-2-4700	Horiz. Output Screen
R118	6000Ω	25	GRW-515		Damper Filter Wire Wound
R119	3.9Ω		GRC-278		HV Rect. Filament
R120	680KΩ		GRC-276		HV Filter
R121	900Ω	5%	GRW-512	DG-850	Filter Wire Wound
R122	4000Ω	5%	GRW-513	AB-4000	Filter Wire Wound
R123	6800Ω		GRC-221	BTS-6800	Voltage Divider
R124	1.5Ω		GRC-514		Filament Dropping Wire Wound

Note 1. Some models use 2200Ω resistor in this application.
 Note 2. Some models use 68Ω resistor in this application.
 Note 3. Not used in all models.

CONTROLS

INSTALLATION NOTES
Focus Control, Wire Wound
Brightness Control, Wire Wound
Contrast Control
Attach to R3A Per Instructions
Volume Control Tapped @ 100KΩ
Attach to R4A Per Instructions
Attach to R4A Per Instructions
Tone Control and Dial Light Pushswitch
Cathode Ray Tube Screen Control
Vert. Centering Control, Tapped @ 10Ω
Vert. Hold Control
Vert. Linearity Control, Wire Wound
Height Control
Horiz. Centering Control, Wire Wound
Horiz. Hold Control
Horiz. Drive Control

RESISTORS

IDENTIFICATION CODES
ALL RESISTORS ARE ± 10% UNLESS OTHERWISE STATED
1 Cathode
2 Grid
3 Plate
4 Plate Coil Shunt
5 Ixer Grid Coil Shunt
6 Ixer Grid
7 Ixer Cathode
8 Ixer Screen
9 Ixer Plate Decoupling
10 sc. Grid
11 sc. Plate
12 1 Osc. Grid
13 1 Osc. Anode
14 Conv. Plate Decoupling
15 VC Network
16 1st Video IF Grid
17 1st Video IF Cathode
18 1st Video IF Screen See Note 1
19 1st Video IF Plate
20 Voltage Divider See Note 3
21 2nd Video IF Grid
22 2nd Video IF Cathode
23 2nd Video IF Screen
24 2nd Video IF Plate
25 3rd Video IF Grid
26 3rd Video IF Cathode
27 3rd Video IF Plate
28 Peaking Coil Shunt
29 Video Det. Diode Load
30 Video Amp. Grid
31 Peaking Coil Shunt
32 Video Amp. Plate
33 Filter
34 Video Output Grid
35 Video Output Cathode

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	ANDREA PART No.	JENSEN PART No.	QUAM PART No.	
SP1	PM	3.8Ω	SL-4006	ST-117 + MOD.P8-T	8A31 +	+ Remount output transformer.
SP2	CONE DIA.	V. C. DIA.				
	7 1/4"	3/4"				

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	ANDREA PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC @ 2.4A	800VCT .20ADC 510VCT .114ADC	5VAC @ 3A	5VAC @ 3A	ST-3019			
		SEC. 4	SEC. 5					
		6.3VAC @ 6.3A	6.3VAC @ 3.6A					

**ANDREA MODELS BT-VK12,
 CVK-126, COVK-125, T-VK12, TVK-127B,M**

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	DC RESISTANCE		ANDREA PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.					
T2	44Ω CT	40Ω Tap @ 30Ω	SA-307				Hor. Osc. Trans.
T3	170Ω	1400Ω	ST-3020	A-8121	A-4000	TB0-2	Vert. Block Osc. Trans Hor. Output Trans.
T4	420Ω Tap @ 180Ω	SEC. 1 9Ω Tap @ .6Ω SEC. 2 0Ω	ST-3018	A-8117		TFB-1	
T5	580Ω	6.8Ω	ST-3010	A-8815	A-3035	TS0-1	Vert. Output Trans. Hor. Deflection Coil Vert. Deflection Coil Focus Coil
T6A	14Ω		ST-3013	DY-1			
T7	64Ω 6300Ω		ST-3014-2				

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		ANDREA PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T8	6000Ω	3.8Ω	415Ω	.5Ω	Part of SL-4006	A-3849	A-2902	RO-201	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 μ)	ANDREA PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.027A	500Ω	9 Henries	ST-3021	C-1215†	C-2976 †	R-1230†	† Drill one new mounting hole.
L2	.087A	200Ω	7 Henries	ST-3016	C-1709	C-2993 †	R-885 †	
L3	.200A	100Ω	5 Henries	ST-3017	C-2325	C-2991 †	TR-4200	

COILS (RF-IF)

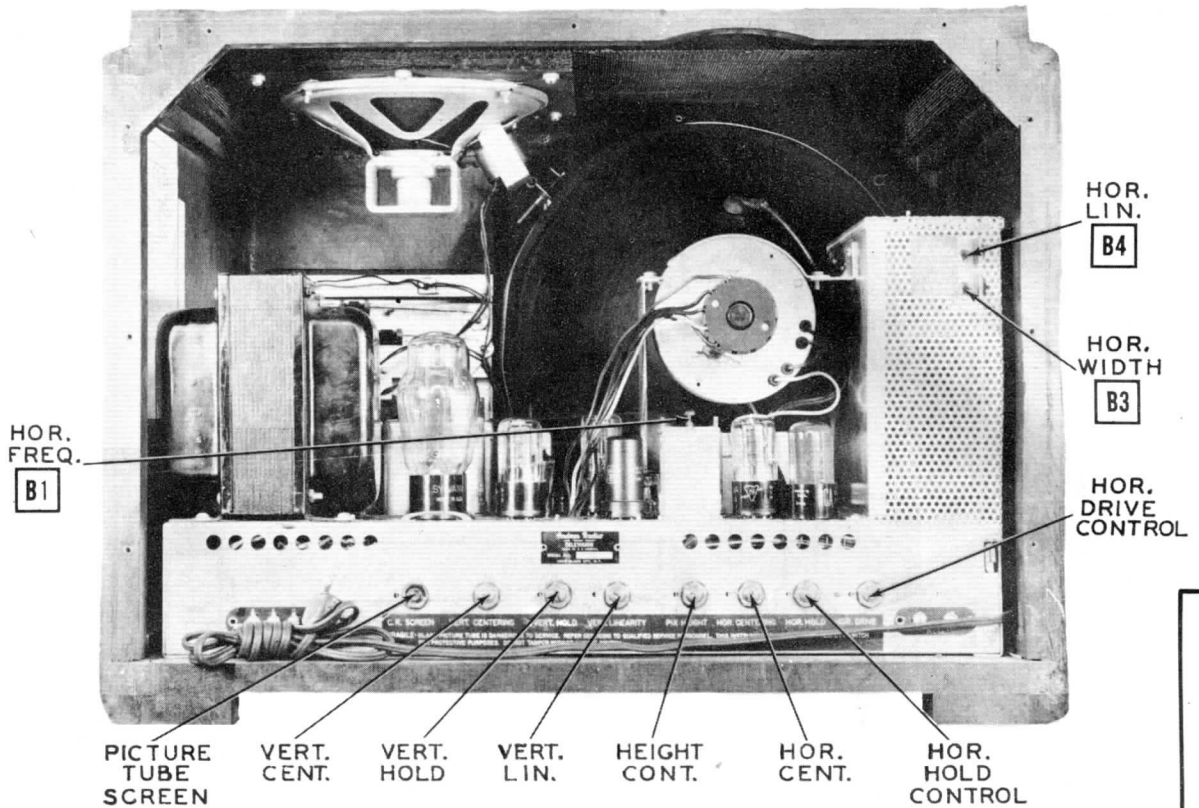
ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	ANDREA PART No.	MEISSNER PART No.	
		L4	Ant. Coil	.1Ω		
L5	RF End Inductor	0Ω		SA-319		Part of tuner.
L6	RF End Inductor	0Ω		SA-321		Part of tuner.
L7	RF Plate	0Ω				Part of inductuner.
L8	Band Pass	1Ω		SA-137		Part of tuner.
L9	Mixer End Inductor	0Ω		SA-284		Part of tuner.
L10	Mixer End Inductor	0Ω		SA-320		Part of tuner.
L11	Mixer Grid	0Ω				Part of inductuner.
L12	Osc. End Inductor	0Ω		SA-318		Part of tuner.
L13	Osc. Coil	0Ω				Part of inductuner.
L14	Osc. Shunt	0Ω		SA-316		Part of tuner.
L15	RF Choke	1Ω		SA-283		
L16	1st Video IF and Sound Take-Off	.5Ω	.1Ω	SA-289-1		
L17	2nd Video IF	.5Ω		SA-290-1		
L18	3rd Video IF	.5Ω		SA-291-1		
L19	4th Video IF	.5Ω		SA-287		
L20	5th Video IF	.5Ω		SA-292-1		
L21	Peaking	8.2Ω		SA-284		
L22	Peaking	7.5Ω		SA-285		
L23	Peaking	8.2Ω		SA-284		
L24	Peaking	8.2Ω		SA-284		
L25	Peaking	8.2Ω		SA-284		
L26	Peaking	6.5Ω		SA-286		
L27	1st Sound IF	.2Ω	.2Ω	SA-312		
L28	2nd Sound IF	.2Ω	.2Ω	SA-313		
L29	Ratio Det. Trans.	.2Ω	.2Ω	SA-311		
L30	AM RF Coil	35Ω	8Ω	SA-297-1		
L31	AM Osc.	1Ω	5.5Ω	SA-298-1	14-1060	
L32	1st AM IF	19.5Ω	19.5Ω	SA-309-A	16-6658	
L33	2nd AM IF	18.5Ω	18.5Ω	SA-310-D	16-6660	
L34	Width Control	.2Ω		SA-314		
L35	Hor. Linearity	44Ω		SA-315		
L36	Fil. Choke	.3Ω		SA-280		
L37	Fil. Choke	.3Ω		SA-280		
L38	Fil. Choke	.3Ω		SA-280		

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					ANDREA PART No.		
M1	Bayonet	6-8	.25	Blue			Type #44
M2	Bayonet	6-8	.25	Blue			Type #44
M3	Bayonet	6-8	.25	Blue			Type #44

MISCELLANEOUS

ITEM No.	PART NAME	ANDREA PART No.	NOTES
M4	RF Tuner	FM-5113	Inductuner only.
M5	Ion Trap	FM-5129	PM-used on 12LP4 only.
M6	Band Switch	FM-5111	Includes wafer and two snap switches.
M7	Tuning Cap	HCV-2112	(14-427MMF, 14-427MMF) WO/T



CABINET - REAR VIEW

HORIZONTAL OSCILLATOR ADJUSTMENTS

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

Turn the vertical hold control to "sync" the picture vertically.

Set the contrast control to slightly less than normal. The picture should be very thin and washed out.

Set the horizontal hold control to the mid position of its range.

Adjust the horizontal frequency slug (B1) to the center of the range over which the picture "syncs" horizontally.

If the picture shows a blanking bar or shows ripples in the picture adjust the horizontal phase slug (B2) until bar moves off of the screen, or until unstable condition disappears.

HORIZONTAL LINEARITY ADJUSTMENTS

These adjustments should be made with a test pattern received from a TV station.

Properly center the picture with the centering controls.

Turn the horizontal drive control until the extreme right and left edges of the picture are equal.

Adjust the horizontal linearity slug (B3) for best overall horizontal linearity.

Adjust the horizontal width slug (B4) for proper width of the picture.

Due to the interaction between the horizontal linearity adjustments, it is recommended that the entire procedure be repeated.

ANDREA MODELS BT-VK12,
CVK-126, COVK-125, T-VK12, TVK-127B,M